

# LUMINOUS



COMPLETE  SOLAR SOLUTION  
INVERTER | BATTERY | PANEL

International Business | Export Portfolio

# LUMINOUS



## OVER 35 YEARS OF MAKING HOMES HAPPIER

With a legacy of over 35 years in powering households and empowering India, Luminous continues to challenge itself to exceed customers expectations and its true potential.



7 Factories



28 Sales Offices



60000+  
Channel Network



70+ Mn Happy  
Consumers



Expert  
Craftsmanship



Top-of-the-line  
Products

35<sup>+</sup> Years of  
**EXCELLENCE**

# LUMINOUS

## Off Grid



NXG+  
Inverter

500VA - 1500VA



NXT+ PCU

1.25 kVA - 12.5 kVA



## On Grid



NXi Grid Tie  
Inverter

1kW - 80kW

## Hybrid

## DC Solution



Shine  
Retrofit

12V - 120V



Solar Charge  
Controller

12V-6Amp,  
12V/24V-10Amp,  
20Amp & 25Amp

# WIDE RANGE OF SOLAR PRODUCTS

## Solarverter

2KVA/24V | 3KVA/48V



## Solarverter PRO PCU

2kVA, 3kVA



## Rayverter Off Grid

3KVA/24V | 5KVA/48V



## Rayverter Hybrid

3KVA/24V | 5KVA/48V



## Low Frequency Solar

3.75kVA

## Batteries & Panels



## Solar C10 Rated Batteries

150 Ah - 200 Ah



## Mono PERC and Polycrystalline Panels

40W - 395W

**LUMINOUS**



# OFF GRID



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## NXG INVERTER

### Off Grid

NXG range is a solar inverter range that intelligently uses grid and solar power. With ability to operate in a wide voltage range, NXG is the ideal starter solar solution for homes.



UPS Mode  
Sensitive Appliances



Maximized Solar  
Usage



User Defined  
Settings



#### ISOT Technology

Intelligent Solar Optimization Technique (ISOT) maximizes solar energy usage in both backup and charging mode of operation.



#### Fast Charging

I-charge technology allows batteries to be charged quickly. This is a user-defined setting.



#### ECO and UPS Mode

Choice between Eco mode that conserves battery (Ideal for low voltage areas) and UPS mode (Ideal for computer loads)



#### Safety and Protection

In-built protection against deep discharge, overcharge, excessive current and short-circuit.



#### Pure Sine Wave Output

Ensures noiseless operation and safety of connected appliances.



Scan QR Code for  
Product Video

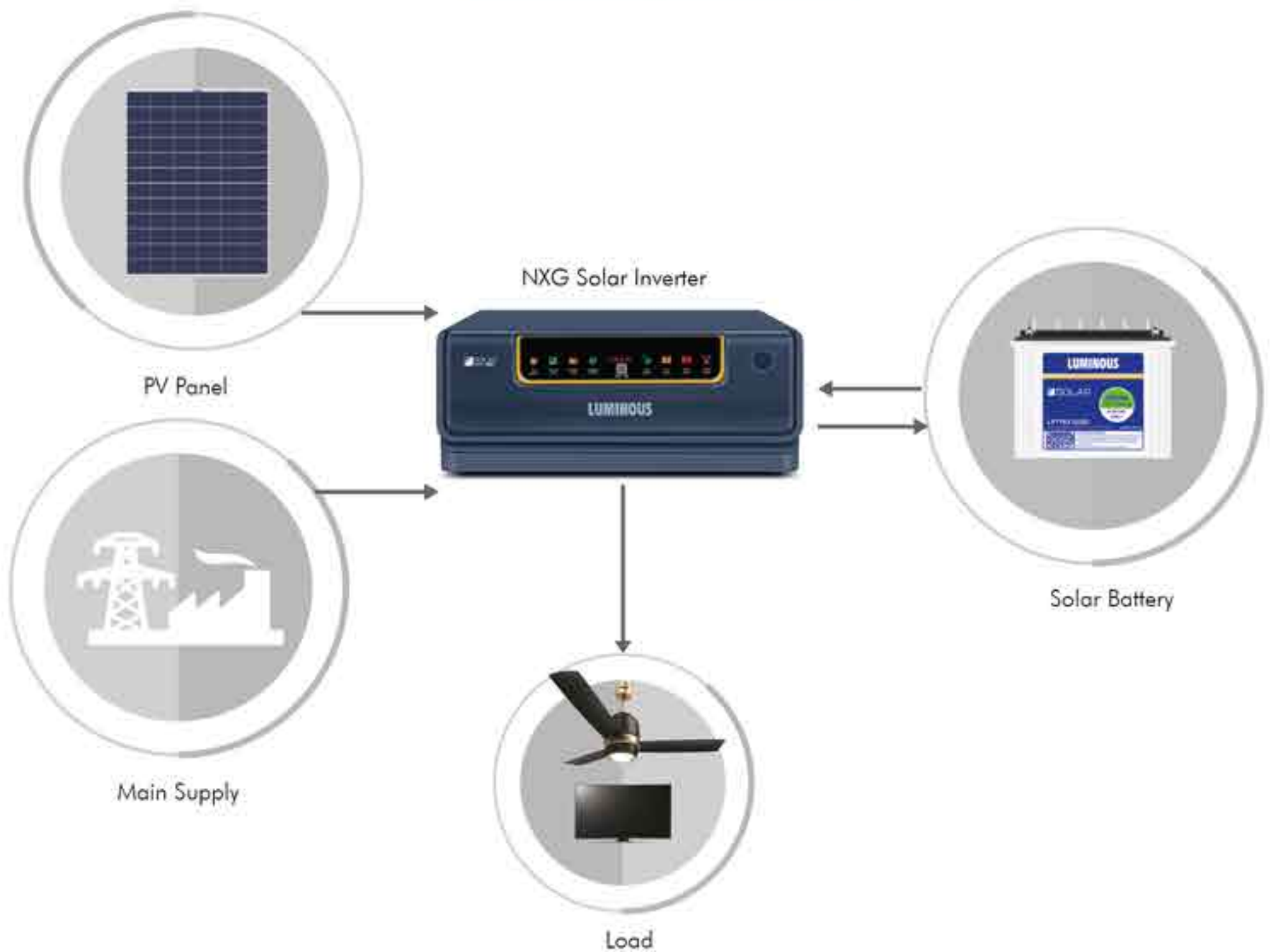


[youtube/c/LuminousGlobal](https://youtube.com/LuminousGlobal)

## Solar Estimation Chart

| Solution   |               |                 | Panel Connection Combination (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|------------|---------------|-----------------|------------------------------------------------|------------------------------------------|
| Solar UPS  | Solar Battery | PV Panel Watt   |                                                |                                          |
| NXG+ 850VA | 150 Ah x 1    | 170 Wp x 5 No.s | 5 (P)                                          | 80                                       |
| NXG 1100VA | 200 Ah x 1    | 170 Wp x 6 No.s | 6 (P)                                          | 80                                       |
| NXG 1500VA | 200 Ah x 2    | 375 Wp x 4 No.s | 4 (P)                                          | 100                                      |

## Schematic Representation



**Off Grid**

### Technical Specifications

| Model Name                             | NXG+ 850VA                                                                                     |                 | NXG 1100VA                                                                                                                   | NXG 1500VA       |
|----------------------------------------|------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------------|------------------|
| Nominal Battery Voltage (Vdc)          | 12V                                                                                            |                 | 12V                                                                                                                          | 24V              |
| Capacity (VA)                          | 850VA                                                                                          |                 | 1100VA                                                                                                                       | 1500VA           |
| Output Waveform                        | Sine Wave                                                                                      |                 |                                                                                                                              |                  |
| SOLAR PHOTOVOLTAIC INPUT               |                                                                                                |                 |                                                                                                                              |                  |
| Charge Controller Type                 | PWM                                                                                            |                 |                                                                                                                              |                  |
| Charge Controller Rating               | 40Amp/12V                                                                                      |                 | 40Amp/12V                                                                                                                    | 40Amp/24V        |
| Maximum PV Power                       | 12V upto 800 Wp                                                                                |                 | 12V upto 1000 Wp                                                                                                             | 24V upto 1000 Wp |
| Input Voltage range (Voc)              | 19-25                                                                                          |                 | 19-25                                                                                                                        | 38-50            |
| Input Voltage range (Vmp)              | 17-19                                                                                          |                 | 17-19                                                                                                                        | 34-39            |
| GRID INPUT                             |                                                                                                |                 |                                                                                                                              |                  |
| Operating Voltage Range                | 90V-290V                                                                                       |                 |                                                                                                                              |                  |
| GRID OUTPUT                            |                                                                                                |                 |                                                                                                                              |                  |
| No load output                         | 230V+/- 10V                                                                                    |                 |                                                                                                                              |                  |
| Output frequency battery mode          | 50Hz±0.5Hz                                                                                     |                 |                                                                                                                              |                  |
| Inverter Efficiency                    | >80%                                                                                           |                 |                                                                                                                              |                  |
| USER SELECTABLE SWITCHES               |                                                                                                |                 |                                                                                                                              |                  |
| Mode Selections                        | Solar/Solar+Grid/Grid+Solar                                                                    |                 |                                                                                                                              |                  |
| Battery Type Selections                | Tubular/Flat Plate/VRLA                                                                        |                 |                                                                                                                              |                  |
| MAINS CHARGING CURRENT                 |                                                                                                |                 |                                                                                                                              |                  |
| Solar Mode                             | 0A*                                                                                            |                 |                                                                                                                              |                  |
| Solar + Grid Mode                      | 15A±2A                                                                                         |                 |                                                                                                                              |                  |
| Grid + Solar Mode                      | 20A±2A                                                                                         |                 |                                                                                                                              |                  |
| BATTERY                                |                                                                                                |                 |                                                                                                                              |                  |
| No. of Batteries                       | 1                                                                                              |                 |                                                                                                                              | 2                |
| Battery Charging Current               | 0A, 15A, 20A                                                                                   |                 |                                                                                                                              |                  |
| Type of Battery Supported              | Tubular/Flat Plate/VRLA                                                                        |                 |                                                                                                                              |                  |
| PROTECTIONS                            |                                                                                                |                 |                                                                                                                              |                  |
| Overload                               | >105%                                                                                          |                 |                                                                                                                              |                  |
| Protections                            | Short circuit, Overload, Over temperature, Low Battery, No Load Shutdown                       |                 |                                                                                                                              |                  |
| Indications                            | Mains Available, Solar Charging, Grid Charging, Power Saving, System On, Low Battery, Overload |                 |                                                                                                                              |                  |
| DISPLAY INDICATIONS                    |                                                                                                | LED INDICATIONS | LCD DISPLAY                                                                                                                  |                  |
| System ON indication                   | System ON LED Steady                                                                           |                 | Mains Available, Power Saving, Solar Current, Solar Power, System On, Grid Charging, Low Battery, Overload, No Load Shutdown |                  |
| Mains ON indication                    | ON Mains LED steady                                                                            |                 |                                                                                                                              |                  |
| Charging ON indication                 | ON Mains LED steady + CHG. LED Steady                                                          |                 |                                                                                                                              |                  |
| Low battery pre-alarm indication       | System ON LED Steady + Battery Low LED Blinking                                                |                 |                                                                                                                              |                  |
| Low battery indication                 | Battery Low LED Steady                                                                         |                 |                                                                                                                              |                  |
| Battery Charged Indication             | ON Mains LED steady + CHG. LED Off                                                             |                 |                                                                                                                              |                  |
| Overload Indication                    | Overload LED Steady                                                                            |                 |                                                                                                                              |                  |
| Short circuit indication in UPS mode   | Overload LED Blinking/(ON Mains & Overload LED) Blinking                                       |                 |                                                                                                                              |                  |
| DC overload indication                 | ON Mains + Charge LED Blinking                                                                 |                 |                                                                                                                              |                  |
| Thermistor Open/Short Indication       | ON Mains LED & Overload LED Steady                                                             |                 |                                                                                                                              |                  |
| Output Feedback open/Reverse           | ON Mains LED & Overload LED Blinking                                                           |                 |                                                                                                                              |                  |
| Battery Charging Through Solar         | Solar Charging LED Blinking                                                                    |                 |                                                                                                                              |                  |
| Power Saving Mode                      | Power Saver Steady + Solar Chg. LED Blinking/Steady                                            |                 |                                                                                                                              |                  |
| Battery Charging Through Solar + Mains | LED + Charge LED Steady + Solar Charging LED Blinking                                          |                 |                                                                                                                              |                  |
| No Load Shutdown                       | System ON LED Blinking                                                                         |                 |                                                                                                                              |                  |
| Solar Over Current                     | Solar Charging LED Blink Faster                                                                |                 |                                                                                                                              |                  |
| GENERAL                                |                                                                                                |                 |                                                                                                                              |                  |
| Net Weight (Kg)                        | 11.8 kg                                                                                        |                 | 16.5 kg                                                                                                                      | 17.1 kg          |
| Gross weight (Kg)                      | 13 Kg                                                                                          |                 | 17.8 Kg                                                                                                                      | 18.5 kg          |
| Dimensions LxWxH (mm)                  | 455x405x210 mm                                                                                 |                 | 465x415x215 mm                                                                                                               |                  |



Off Grid

 SOLAR

# LUMINOUS

## NXT+ PCU

### Off Grid

The NXT+ range of PCUs is the ideal solution for Off-grid applications. Designed to offer control, the PCU intelligently optimizes battery charging and power to load among Solar, Battery and Grid power. Available in 3.75kVA and 12.5kVA.



High Efficiency  
MPPT



User Controlled  
Settings



Long Power  
backup



#### Priority Settings

Priority settings allow the user to choose among reduced grid dependency & energy savings, enhanced backup and autonomy from grid.



#### User-friendly Display

A user friendly display communicates important parameters like discharge time, grid availability, selected priority setting etc.



#### Maximum Power Point Tracking

MPPTs extract 30% more power as compared to UPS with PWM charge controllers.



#### Guaranteed Safety

Comprehensive protection features include short-circuit, reverse polarity, battery over-charge etc.



**IEC Certified**  
Product certified as per  
IEC standards



Scan QR Code for  
Product Video



## Solar Estimation Chart

| Solution      |               |                 | Panel Connection Combination (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|---------------|---------------|-----------------|------------------------------------------------|------------------------------------------|
| Solar UPS     | Solar Battery | PV Panel Watt   |                                                |                                          |
| NXT+ 3.75 kVA | 200 Ah x 4    | 330Wp x 9 No.s  | 3 (S) 3 (P)                                    | 300                                      |
| NXT+ 12.5 kVA | 200 Ah x 10   | 330Wp x 30 No.s | 6 (S) 5 (P)                                    | 1000                                     |

## Schematic Representation



Off Grid

## Technical Specifications

| System Rating                                       | 3.75 KVA                                                                                                                                                                                                                                                        | 12.5 KVA   |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Photovoltaic Input                                  |                                                                                                                                                                                                                                                                 |            |
| Input Voltage range (Vmp)                           | 60-130                                                                                                                                                                                                                                                          | 160-230    |
| Maximum PV power (kW)                               | 3.3                                                                                                                                                                                                                                                             | 11         |
| MPPT Based Charge                                   |                                                                                                                                                                                                                                                                 |            |
| Type of Charger                                     | MPPT                                                                                                                                                                                                                                                            |            |
| Input Voltage range (Voc)                           | 80-165                                                                                                                                                                                                                                                          | 180-300    |
| Charging Stages                                     | Float, Bulk, Boost                                                                                                                                                                                                                                              |            |
| GRID INPUT                                          |                                                                                                                                                                                                                                                                 |            |
| Input Supply Phases                                 | Single Phase                                                                                                                                                                                                                                                    |            |
| Nominal Voltage & Voltage range                     | 230V AC (185V - 265V)                                                                                                                                                                                                                                           |            |
| Nominal Frequency & Range                           | 50 Hz (±3 Hz)                                                                                                                                                                                                                                                   |            |
| BATTERY                                             |                                                                                                                                                                                                                                                                 |            |
| Nominal Battery Bank Voltage                        | 48V                                                                                                                                                                                                                                                             | 120V       |
| Battery recharge current range from Grid Side (A)   | 12-30                                                                                                                                                                                                                                                           | 0-30       |
| Battery recharge current range from Array Side (A)  | 0-60                                                                                                                                                                                                                                                            | 0-80       |
| UPS                                                 |                                                                                                                                                                                                                                                                 |            |
| Switching Element                                   | MOSFET                                                                                                                                                                                                                                                          | IGBT       |
| Control                                             | 32 Bit DSP controlled                                                                                                                                                                                                                                           |            |
| Nominal Output V <sub>AC</sub>                      | 230V ± 1% , Single Phase                                                                                                                                                                                                                                        |            |
| Output waveform                                     | Pure Sine Wave                                                                                                                                                                                                                                                  |            |
| Nominal Frequency                                   | 50 Hz                                                                                                                                                                                                                                                           |            |
| Power Factor                                        | 0.8 lag to 0.8 lead                                                                                                                                                                                                                                             |            |
| Nominal Output Current (A)                          | 13                                                                                                                                                                                                                                                              | 44         |
| Overload at nominal output voltage                  | 110% for 10 Minutes, 200% for 5 Secs                                                                                                                                                                                                                            |            |
| SYSTEM DATA                                         |                                                                                                                                                                                                                                                                 |            |
| Noise @ 1 meter (dBA ± 2dBA)                        | <58dBA                                                                                                                                                                                                                                                          | <62dBA     |
| Transfer Time                                       | <20 mS                                                                                                                                                                                                                                                          |            |
| Protection                                          | Under/Over voltage protection for Input, Output, Battery & Array; Reverse polarity protection for Array & Battery; Protection for Output Overload, Short circuit and Over Temperature; MCB & Surge protection at Grid/DG Input, Battery, Array Path and PCU O/P |            |
| Display Parameters                                  | Voltage/Current: Array, Battery, Grid, Output; Day kWh, Cumulative kWh, Date, Time                                                                                                                                                                              |            |
| Indications                                         | Battery Charging/ Discharging, Grid ON, Load ON, UPS ON, Array ON, Fault LED Indicator (For Overload, Low Battery, Over Temperature),                                                                                                                           |            |
| Setting                                             | Battery type, Battery voltage (Boost & Float), Priority (SGB/SBG), Charging Current from Grid                                                                                                                                                                   |            |
| ENVIRONMENT                                         |                                                                                                                                                                                                                                                                 |            |
| IP Protection Level                                 | IP-21                                                                                                                                                                                                                                                           |            |
| Operating Temperature (°C)                          | 0-50 °C without any degradation                                                                                                                                                                                                                                 |            |
| Max. Relative humidity @ 25°C                       | Up to 95% (non-condensing)                                                                                                                                                                                                                                      |            |
| Max. Altitude above sea level without de-rating (m) | 1000 m                                                                                                                                                                                                                                                          |            |
| STANDARD COMPLIANCE                                 |                                                                                                                                                                                                                                                                 |            |
| Certifications                                      | IEC 61683, IEC 60068-2 (1.2 14,30)                                                                                                                                                                                                                              |            |
| GENERAL                                             |                                                                                                                                                                                                                                                                 |            |
| Dimension (W*D*H) [mm]                              | 300x504x515                                                                                                                                                                                                                                                     | On Request |
| Net Weight (Kg)                                     | 50                                                                                                                                                                                                                                                              | On Request |



**Off Grid**

 **SOLAR**

# LUMINOUS

## SOLARVERTER

### Off Grid

Solarverter is a PWM technology Solar Inverter that has innovative hybrid charging from both Solar & mains with an advanced feature of charging solar & mains with priority to solar. It ensure lesser charging time and minimal commercial mains Utilization.



ECO/UPS  
Mode



Smart Solar  
optimization



User Controller  
Settings



#### Smart Solar Optimization

Gives priority to solar in both backup and charging mode of operation thereby maximizing solar energy utilization.



#### ECO and UPS Mode

Choice between Eco mode that conserves battery (Ideal for low voltage areas) and UPS mode (Ideal for computer loads)



#### User friendly LCD Display

Makes it convenient for user to easily monitor various performance parameters.

#### Guaranteed Safety

Comprehensive protection features include short circuit, reverse polarity, surge protection, etc.



#### IEC Certified

Product certified as per IEC standards



Scan QR Code for  
Product Video



[youtube/c/LuminousGlobal](https://youtube.com/LuminousGlobal)

## Solar Estimation Chart

| Solarverter 2KVA   24V |                           |                             | Solarverter 3KVA   36V |                           |                             |
|------------------------|---------------------------|-----------------------------|------------------------|---------------------------|-----------------------------|
| Panel Wattages         | No. of Series Connections | No. of Parallel Connections | Panel Wattages         | No. of Series Connections | No. of Parallel Connections |
| 165Wp                  | 2                         | 6                           | 165Wp                  | 4                         | 4                           |
| 195Wp                  | 2                         | 5                           | 195Wp                  | 4                         | 4                           |
| 325Wp                  | 1                         | 6                           | 325Wp                  | 2                         | 4                           |
| 375Wp                  | 1                         | 5                           | 375Wp                  | 2                         | 4                           |



**Off Grid**

 **SOLAR**

## Technical Specifications

| Model Name                   | SOLARVERTER 2KVA                                |                                            | SOLARVERTER 3KVA                 |
|------------------------------|-------------------------------------------------|--------------------------------------------|----------------------------------|
| INPUT                        |                                                 |                                            |                                  |
| Rated Voltage                | 230V AC                                         |                                            |                                  |
| Undervoltage                 | 140±5V                                          |                                            |                                  |
| Undervoltage Restoration     | 150±5V                                          |                                            |                                  |
| Overvoltage                  | 290±5V                                          |                                            |                                  |
| Overvoltage Restoration      | 280±5V                                          |                                            |                                  |
| INPUT                        |                                                 |                                            |                                  |
| Rated Voltage (UPS Mode)     | 230V AC                                         |                                            |                                  |
| Voltage (Mains Mode)         | SAME AS INPUT                                   |                                            |                                  |
| Frequency (UPS Mode)         | 50±1 Hz                                         |                                            |                                  |
| Frequency (Mains Mode)       | SAME AS INPUT (47-53 Hz)                        |                                            |                                  |
| Overload                     | > 100%                                          |                                            |                                  |
| Transfer Time (typical a.s.) | < 20ms.                                         |                                            |                                  |
| BATTERY                      |                                                 |                                            |                                  |
| Capacity*                    | 65Ah-220Ah TUBULAR / FLAT / SMF                 |                                            |                                  |
| No. of Batteries             | 2                                               | 4                                          |                                  |
| Typical Recharge Time        | 8-10 hours approx.                              |                                            |                                  |
| Battery Boost Voltage        | 28.8V-29.4±0.5V                                 | 58.2V-59.2±0.5V                            |                                  |
| Protection                   | LOW BATTERY                                     |                                            |                                  |
| PHYSICAL                     |                                                 |                                            |                                  |
| Net weight (Kg.)             | 25.0 kg approx                                  | 31.5kg approx                              |                                  |
| Gross weight (Kg.)           | 27.0 kg approx                                  | 34.5kg approx                              |                                  |
| Dimension (L*W*H) (mm)       | 300x326x284                                     | 300x352x429                                |                                  |
| SOLAR                        |                                                 |                                            |                                  |
| Solar Panel                  | PV Panel of 2400Wp, Voc 60V Max                 |                                            | PV Panel of 3600Wp, Voc 120V Max |
| Front LCD Displays           |                                                 |                                            |                                  |
| Solar Overload               | Displays "SoLd"                                 |                                            |                                  |
| Solar Over Temperature       | Displays "SoT°"                                 |                                            |                                  |
| Solar Priority               | Sigr                                            |                                            |                                  |
| Load Percentage              | Displays "L085%"                                |                                            |                                  |
| Time to Charge & Discharge   | Display time to charge or discharge in HH:MM    |                                            |                                  |
| Overload                     | Displays "Old"                                  |                                            |                                  |
| Short Circuit                | Displays "sct"                                  |                                            |                                  |
| No Load                      | Displays "nL:dL"                                |                                            |                                  |
| Overtemperature              | Displays "otp"                                  |                                            |                                  |
| Battery Low                  | Displays "Lbt" when batt. completely discharged |                                            |                                  |
| Battery High Cut             | Displays "btHl" when battery voltage > 31V      | Displays "btHl" when battery voltage > 62V |                                  |
| Temp. Sensor Failed          | Displays "tSFL" When internal failure           |                                            |                                  |
| Battery Level Symbol         | Displays battery level available                |                                            |                                  |
| Charging Symbol              | Displays when battery is charging               |                                            |                                  |
| Mains Symbol                 | Displays plug symbol                            |                                            |                                  |
| Fault Symbol                 | Displays if there any fault or trip condition   |                                            |                                  |

## Technical Specifications

| Model Name            | SOLARVERTER 2KVA                                | SOLARVERTER 3KVA |
|-----------------------|-------------------------------------------------|------------------|
| ALARMS                |                                                 |                  |
| UPS ON                | 2 Beep of 1 Seconds each                        |                  |
| Low Battery Cut       | 1 Beep of 10 Seconds                            |                  |
| Battery High Cut      | Continues Beep of 0.5 Seconds until fault reset |                  |
| No Load shutdown      | 1 Beep of 5 Seconds                             |                  |
| Short Circuit         | 1 Beep of 10 Seconds                            |                  |
| Overload shutdown     | 1 Beep for 10 Seconds Retry -5times             |                  |
| Low Battery Warning   | 1 Beep for 0.5 Seconds for every 30 Seconds     |                  |
| Over Temperature      | Single Beep for 10 Seconds                      |                  |
| Temp. Sensor Failed   | Single Beep for 10 Seconds                      |                  |
| ENVIRONMENT           |                                                 |                  |
| Operating Temperature | 0-45°C (32-113°F)                               |                  |
| Storage Temperature   | 0-45°C (32-113°F)                               |                  |
| Humidity              | 0 – 95% RH No condensing                        |                  |

Due to continuous product improvement, the specifications are subject to change without notice.

\*AC (Air Conditioner) Operating Mode : For Normal AC, unit to be used in UPS Mode only. \* TDR ON Time of SOLARVERTER 3KVA-48V is 60-120second and it can add additional 2min. delay in AC startup during power failure.

• Recommended AC rating upto: 1 Ton. • Recommended AC current upto: 9Aac.

# LUMINOUS

## SOLARVERTER PRO PCU

### Off Grid

Solarverter PRO range from Luminous allows smart management of Solar Power, Grid Supply and Battery to deliver uninterrupted power for all electrical applications. Designed for high performance against the typically tough grid conditions, Solarverter PRO is available from 2kVA to 10kVA.



High Efficiency  
MPPT



Smart Solar  
optimization



User Controller  
Settings



#### Smart Solar Optimization

Gives priority to solar in both backup and charging mode of operation thereby maximizing solar energy utilization.



#### Maximum Power Point Tracking

MPPTs to extract up to 30% more power from the panels, minimizing impact of shading and increasing efficiency.



#### User friendly LCD Display

Makes it convenient for user to easily monitor various performance parameters.

#### Guaranteed Safety

Comprehensive protection features include short circuit, reverse polarity, surge protection, etc.



#### IEC Certified

Product certified as per IEC standards



Scan QR Code for  
Product Video



## Solar Estimation Chart

| Solution               |               |                 | Panel Connection Combination (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|------------------------|---------------|-----------------|------------------------------------------------|------------------------------------------|
| Solar UPS              | Solar Battery | PV Panel Watt   |                                                |                                          |
| SOLARVERTER PRO 2KVA   | 150Ah x 2     | 330Wp x 6 Nos.  | 2 (S) 3 (P)                                    | 200                                      |
| SOLARVERTER PRO 3KVA   | 150Ah x 3     | 330Wp x 9 Nos.  | 3 (S) 3 (P)                                    | 300                                      |
| SOLARVERTER PRO 5KVA   | 150Ah x 4     | 330Wp x 15 Nos. | 3 (S) 5 (P)                                    | 500                                      |
| SOLARVERTER PRO 7.5KVA | 150Ah x 8     | 330Wp x 20 Nos. | 4 (S) 5 (P)                                    | 700                                      |
| SOLARVERTER PRO 10KVA  | 150Ah x 10    | 330Wp x 30 Nos. | 6 (S) 5 (P)                                    | 1000                                     |

## Schematic Representation



**Off Grid**

 **SOLAR**

## Technical Specifications

| Model Name                                    | SOLARVERTER PRO 2KVA                                                                                                                                                                                       | SOLARVERTER PRO 3KVA | SOLARVERTER PRO 5KVA  |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------------------|
| Capacity                                      | 2KVA                                                                                                                                                                                                       | 3KVA                 | 5KVA                  |
| Nominal Battery Voltage (Vdc)                 | 24V                                                                                                                                                                                                        | 36V                  | 48V                   |
| Output Waveform                               | Sine Wave                                                                                                                                                                                                  |                      |                       |
| SOLAR PHOTOVOLTAIC INPUT                      |                                                                                                                                                                                                            |                      |                       |
| Type of Charger                               | MPPT                                                                                                                                                                                                       |                      |                       |
| Maximum PV power (kW)                         | 2500W                                                                                                                                                                                                      | 3500W                | 5000W                 |
| Solar Input Voltage (Voc)                     | 57V-100V                                                                                                                                                                                                   | 75V-150V             | 130V-220V             |
| Solar Input Voltage range (Vmp)               | 45V-85V                                                                                                                                                                                                    | 60V-120V             | 110V-180V             |
| Max. PV Input Current (Imp)                   | 38A                                                                                                                                                                                                        | 38A                  | 40A                   |
| Nominal Battery Charging Current (At STC)     | 91A±2A                                                                                                                                                                                                     | 12-14 A (By default) | 10-12 A (By default)  |
| Max. Battery Charging Current (Regulation)    | 22-23 A                                                                                                                                                                                                    |                      |                       |
| No. of MPPT Channels                          | 1                                                                                                                                                                                                          |                      |                       |
| GRID INPUT                                    |                                                                                                                                                                                                            |                      |                       |
| Input Supply Phases                           | Single Phase                                                                                                                                                                                               |                      |                       |
| Input Voltage Mains mode (Regulated UPS Mode) | 180-260 Vac                                                                                                                                                                                                |                      |                       |
| Mains mode ( Unregulated UPS Mode)            | 110-280Vac                                                                                                                                                                                                 |                      | 140-280Vac            |
| Input Protection                              | MCB                                                                                                                                                                                                        |                      |                       |
| BATTERY                                       |                                                                                                                                                                                                            |                      |                       |
| No. of Batteries                              | 2                                                                                                                                                                                                          | 3                    | 4                     |
| Charging Stages                               | Boost, Absorption, Float                                                                                                                                                                                   |                      |                       |
| Battery Charging Current                      | 0-4 to 20A                                                                                                                                                                                                 |                      |                       |
| Type of Battery                               | Tubular/SMF/Flat                                                                                                                                                                                           |                      |                       |
| UPS                                           |                                                                                                                                                                                                            |                      |                       |
| Switching Element                             | MOSFET                                                                                                                                                                                                     |                      | IGBT                  |
| Control                                       | 16 Bit DSP controlled                                                                                                                                                                                      |                      | 32 Bit DSP controlled |
| Nominal Output Voltage (V)                    | 230V ± 2%                                                                                                                                                                                                  |                      | 230V ± 10%            |
| Output Supply Phase                           | 1 Phase 3 Wire                                                                                                                                                                                             |                      | 1 Phase 2 Wire        |
| Nominal Frequency                             | 50 Hz                                                                                                                                                                                                      |                      |                       |
| Nominal Output Current                        | 7.5A                                                                                                                                                                                                       | 11A                  | 17.5A+/- 1A           |
| Output Voltage Distortion(THD)                | <= 3%                                                                                                                                                                                                      |                      | <= 5%                 |
| SYSTEM DATA                                   |                                                                                                                                                                                                            |                      |                       |
| Transfer Time                                 | <20 mS                                                                                                                                                                                                     |                      |                       |
| Protection                                    | Overload Mains Load, Overload on Battery, Reverse Polarity, Short Circuit, Over Temperature, Low Battery                                                                                                   |                      |                       |
| Display Parameters                            | UPS On, Battery Low, Mains On, Smart Charge/ Boost Charging, Battery Charged/ Float Charge, Overload, Over Temperature Protection, Short Circuit under Battery Mode, MCB Trip/ Short Circuit in Mains Mode |                      |                       |
| Indications                                   | UPS On, Battery Low, Mains On, Smart Charge/ Boost Charging, Battery Charged/ Float Charge, Overload, Over Temperature Protection, Short Circuit under Battery Mode, MCB Trip/ Short Circuit in Mains Mode |                      |                       |
| ENVIRONMENT                                   |                                                                                                                                                                                                            |                      |                       |
| IP Protection Level                           | IP-21                                                                                                                                                                                                      |                      | IP20                  |
| Operating Temperature                         | 0-45 °C                                                                                                                                                                                                    |                      |                       |
| Storage Temperature                           | 0-45°C                                                                                                                                                                                                     |                      |                       |
| Cooling                                       | Forced Air Cooling                                                                                                                                                                                         |                      |                       |
| Max. Relative Humidity @ 25 °C                | Up to 95% (non-condensing)                                                                                                                                                                                 |                      |                       |
| GENERAL                                       |                                                                                                                                                                                                            |                      |                       |
| Dimension (L*W*H) (mm)                        | 300x417x452                                                                                                                                                                                                |                      | 511x300x484           |
| Net Weight (Kg)                               | 25kg                                                                                                                                                                                                       | 32.5kg               | 54kg                  |

Technical specifications are subject to change without prior notice.

## Technical Specifications

| Model Name                                    | SOLARVERTER PRO 7.5KVA                                                                                                                                                                                     | SOLARVERTER PRO 10KVA |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Capacity                                      | 7.5KVA                                                                                                                                                                                                     | 10KVA                 |
| Nominal Battery Voltage (Vdc)                 | 96V                                                                                                                                                                                                        | 120V                  |
| Output Waveform                               | Sine Wave                                                                                                                                                                                                  |                       |
| SOLAR PHOTOVOLTAIC INPUT                      |                                                                                                                                                                                                            |                       |
| Type of Charger                               | MPPT                                                                                                                                                                                                       |                       |
| Maximum PV power (kW)                         | 7500W                                                                                                                                                                                                      | 10000W                |
| Solar Input Voltage (Voc)                     | 250V-480V                                                                                                                                                                                                  | 300V-500V             |
| Solar Input Voltage range (Vmp)               | 200V-400V                                                                                                                                                                                                  | 250V-450V             |
| Max. PV Input Current (Imp)                   | 45-50A                                                                                                                                                                                                     | 40A                   |
| Nominal Battery Charging Current (At STC)     | 12-14 A (By default)                                                                                                                                                                                       | 10-12 A (By default)  |
| Max. Battery Charging Current (Regulation)    | 22-23 A                                                                                                                                                                                                    |                       |
| No. of MPPT Channels                          | 1                                                                                                                                                                                                          |                       |
| GRID INPUT                                    |                                                                                                                                                                                                            |                       |
| Input Supply Phases                           | Single Phase                                                                                                                                                                                               |                       |
| Input Voltage Mains mode (Regulated UPS Mode) | 180-260 Vac                                                                                                                                                                                                |                       |
| Mains mode ( Unregulated UPS Mode)            | 110-280Vac                                                                                                                                                                                                 |                       |
| Input Protection                              | MCB                                                                                                                                                                                                        |                       |
| BATTERY                                       |                                                                                                                                                                                                            |                       |
| No. of Batteries                              | 8                                                                                                                                                                                                          | 10                    |
| Charging Stages                               | Boost, Absorption, Float                                                                                                                                                                                   |                       |
| Battery Charging Current                      | 0-4 to 20A                                                                                                                                                                                                 | 0-4 to 20A            |
| Type of Battery                               | Tubular/SMF/Flat                                                                                                                                                                                           |                       |
| UPS                                           |                                                                                                                                                                                                            |                       |
| Switching Element                             | IGBT                                                                                                                                                                                                       |                       |
| Control                                       | 32 Bit DSP controlled                                                                                                                                                                                      |                       |
| Nominal Output Voltage (V)                    | 230V ± 10%                                                                                                                                                                                                 |                       |
| Output Supply Phase                           | 1 Phase 2 Wire                                                                                                                                                                                             |                       |
| Nominal Frequency                             | 50 Hz                                                                                                                                                                                                      |                       |
| Nominal Output Current                        | 26+/-1A                                                                                                                                                                                                    | 34+/-1A               |
| Output Voltage Distortion(THD)                | ≤ 5%                                                                                                                                                                                                       |                       |
| SYSTEM DATA                                   |                                                                                                                                                                                                            |                       |
| Transfer Time                                 | <20 mS                                                                                                                                                                                                     |                       |
| Protection                                    | Overload Mains Load, Overload on Battery, Reverse Polarity, Short Circuit, Over Temperature, Low Battery                                                                                                   |                       |
| Display Parameters                            | UPS On, Battery Low, Mains On, Smart Charge/ Boost Charging, Battery Charged/ Float Charge, Overload, Over Temperature Protection, Short Circuit under Battery Mode, MCB Trip/ Short Circuit in Mains Mode |                       |
| Indications                                   | UPS On, Battery Low, Mains On, Smart Charge/ Boost Charging, Battery Charged/ Float Charge, Overload, Over Temperature Protection, Short Circuit under Battery Mode, MCB Trip/ Short Circuit in Mains Mode |                       |
| ENVIRONMENT                                   |                                                                                                                                                                                                            |                       |
| IP Protection Level                           | IP-20                                                                                                                                                                                                      |                       |
| Operating Temperature                         | 0-45 °C                                                                                                                                                                                                    |                       |
| Storage Temperature                           | 0-50°C                                                                                                                                                                                                     |                       |
| Cooling                                       | Forced Air Cooling                                                                                                                                                                                         |                       |
| Max. Relative Humidity @ 25 °C                | Up to 95% (non-condensing)                                                                                                                                                                                 |                       |
| GENERAL                                       |                                                                                                                                                                                                            |                       |
| Dimension (L*W*H) (mm)                        | 690x400x500                                                                                                                                                                                                | 740x400x500           |
| Net Weight (Kg)                               | 25kg                                                                                                                                                                                                       | 32.5kg                |

# LUMINOUS

## RAYVERTER

### Off Grid High Frequency

It is a multi-functional inverter/charger combining the functions of an inverter, a solar charger, and a battery to offer uninterruptible power support in a compact size.



LCD Display Panel



Supports USB



Wall Mounted



**Detachable LCD control**  
module with various commu-  
nications



**Battery independent**  
design



**Supports USB**  
on the go function



**Reserved communication**  
port (RS485, CAN-BUS or  
RS232) for BMS



**Battery equalization**  
Extends Lifecycle



Scan QR Code for  
Product Video

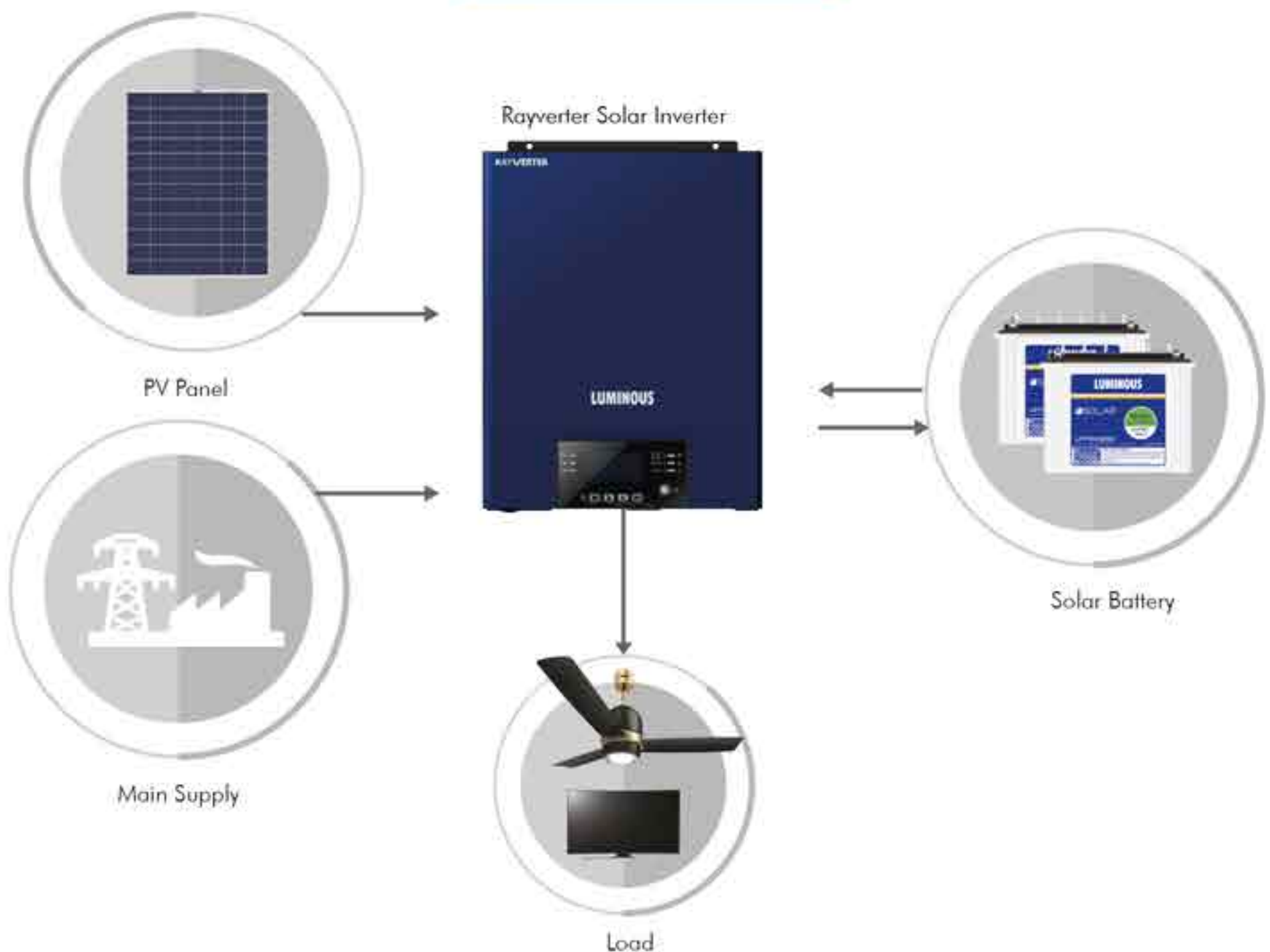


[youtube/c/LuminousGlobal](https://youtube.com/LuminousGlobal)

## Solar Estimation Chart

| Solution               |               |                | Panel Connection Combination (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|------------------------|---------------|----------------|------------------------------------------------|------------------------------------------|
| Solar UPS              | Solar Battery | PV Panel Watt  |                                                |                                          |
| Solar Offgrid 3KVA/24V | 200Ah x 2     | 330Wp x 12 Nos | 3(S)4(P)                                       | 400                                      |
| Solar Offgrid 4KVA/24V | 200Ah x 2     | 330Wp x 15 Nos | 3(S)5(P)                                       | 550                                      |
| Solar Offgrid 5KVA/48V | 200Ah x 4     | 330Wp x 15 Nos | 3(S)5(P)                                       | 550                                      |
| Solar Offgrid 6KVA/48V | 200Ah x 4     | 500Wp x 12 Nos | 3(S)4(P)                                       | 650                                      |

## Schematic Representation



Off Grid

 SOLAR

## Technical Specifications

| Model Name                            | Rayverter<br>Lite Connect  | Rayverter<br>Pro Connect  | Rayverter<br>Pro BLE + Connect  |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|                                       | 3KVA/24V                                                                                                     | 3KVA/24V                                                                                                     | 3KVA/24V                                                                                                           |
| Rated Power                           | 3000VA/3000W                                                                                                 | 3000VA/3000W                                                                                                 | 3000VA/3000W                                                                                                       |
| <b>INPUT</b>                          |                                                                                                              |                                                                                                              |                                                                                                                    |
| Voltage                               | 230 VAC                                                                                                      | 230 VAC                                                                                                      | 230 VAC                                                                                                            |
| Selectable Voltage Range              | 170 VAC (For Personal Computers)<br>90-280 VAC (For Home Appliances)                                         | 170 VAC (For Personal Computers)<br>90-280 VAC (For Home Appliances)                                         | 170 VAC (For Personal Computers)<br>90-280 VAC (For Home Appliances)                                               |
| Frequency Range                       | 50 Hz/60 Hz (Auto sensing)                                                                                   | 50 Hz/60 Hz (Auto sensing)                                                                                   | 50 Hz/60 Hz (Auto sensing)                                                                                         |
| <b>OUTPUT</b>                         |                                                                                                              |                                                                                                              |                                                                                                                    |
| AC Voltage Regulation (Batt. Mode)    | 230VAC $\pm$ 5%                                                                                              | 230VAC $\pm$ 5%                                                                                              | 230VAC $\pm$ 5%                                                                                                    |
| Surge Power                           | 6000VA                                                                                                       | 6000VA                                                                                                       | 6000VA                                                                                                             |
| Efficiency (Peak)                     | 93%                                                                                                          | 93%                                                                                                          | 90% - 93%                                                                                                          |
| Transfer Time                         | 10 ms (For Personal Computers)<br>20 ms (For Home Appliances)                                                | 10 ms (For Personal Computers)<br>20 ms (For Home Appliances)                                                | 15 ms (For Personal Computers)<br>20 ms (For Home Appliances)                                                      |
| Waveform                              | Pure sine wave                                                                                               | Pure sine wave                                                                                               | Pure sine wave                                                                                                     |
| <b>BATTERY</b>                        |                                                                                                              |                                                                                                              |                                                                                                                    |
| Battery Voltage                       | 24 VD                                                                                                        | 24 VD                                                                                                        | 24 VDC                                                                                                             |
| Floating Charge Voltage               | 27 VD                                                                                                        | 27 VD                                                                                                        | 27 VDC                                                                                                             |
| Overcharge Protection                 | 33 VD                                                                                                        | 32 VD                                                                                                        | 33 VDC                                                                                                             |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |                                                                                                              |                                                                                                              |                                                                                                                    |
| Solar Charger type                    | MPPT                                                                                                         | MPPT                                                                                                         | MPPT                                                                                                               |
| Maximum PV Array Power                | 1500W                                                                                                        | 3000W                                                                                                        | 3000W                                                                                                              |
| MPPT Range @ Operating Voltage        | 30 - 115 VD                                                                                                  | 60 - 400 VD                                                                                                  | 120 - 450 VDC                                                                                                      |
| Maximum PV Array Open Circuit Voltage | 500 VD                                                                                                       | 145 VDC                                                                                                      | 500 VDC                                                                                                            |
| Maximum Solar Charge Current          | 60A                                                                                                          | 80A                                                                                                          | 100A                                                                                                               |
| Maximum AC Charge Current             | 60A                                                                                                          | 80A                                                                                                          | 100A                                                                                                               |
| Maximum Charge Current                | 120A                                                                                                         | 80A                                                                                                          | 100A                                                                                                               |
| <b>PHYSICAL</b>                       |                                                                                                              |                                                                                                              |                                                                                                                    |
| Dimension, D*W*H (mm)                 | 100x300x440                                                                                                  | 100x288x390                                                                                                  | 115x300x400                                                                                                        |
| Net Weight (Kg)                       | 9.5                                                                                                          | 8                                                                                                            | 9                                                                                                                  |
| Communication Interface               | USB/RS232                                                                                                    | S232                                                                                                         | USB/RS232/RSS485/Bluetooth<br>Dry-contact                                                                          |
| <b>OPERATING ENVIRONMENT</b>          |                                                                                                              |                                                                                                              |                                                                                                                    |
| Humidity                              | 5% to 95% Relative Humidity<br>(Non-condensing)                                                              | 5% to 95% Relative Humidity<br>(Non-condensing)                                                              | 5% to 95% Relative Humidity<br>(Non-condensing)                                                                    |
| Operating Temperature                 | -10°C to 50°C                                                                                                | -10°C to 50°C                                                                                                | -1°C to 5°C                                                                                                        |
| Storage Temperature                   | -15°C to 60°C                                                                                                | -15°C to 60°C                                                                                                | -15°C to 6°C                                                                                                       |

\* Product specifications are subject to change without further notice.

## Technical Specifications

| Model Name                            | Rayverter<br>Pro BLE + Connect  | Rayverter<br>Smart + Connect  |              | Rayverter<br>MAX BLE                                                     |              |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------|--------------------------------------------------------------------------|--------------|
|                                       | 5KVA/48V                                                                                                          | 3KVA/24V                                                                                                         | 6KVA/48V     | 5KVA/48V                                                                 | 6KVA/48V     |
| Rated Power                           | 5000VA/5000W                                                                                                      | 4000VA/4000W                                                                                                     | 6000VA/6000W | 5000VA/5000W                                                             | 6000VA/6000W |
| INPUT                                 |                                                                                                                   |                                                                                                                  |              |                                                                          |              |
| Voltage                               | 230 VAC                                                                                                           | 230 VAC                                                                                                          |              | 230 VAC                                                                  |              |
| Selectable Voltage Range              | 170 VAC (For Personal Computers)<br>90-280 VAC (For Home Appliances)                                              | 170-280 VAC (For Personal Computers)                                                                             |              | 170-280 VAC (For Personal Computers)<br>90-280 VAC (For Home Appliances) |              |
| Frequency Range                       | 50 Hz/60 Hz (Auto sensing)                                                                                        | 50 Hz/60 Hz (Auto sensing)                                                                                       |              | 50 Hz/60 Hz (Auto sensing)                                               |              |
| OUTPUT                                |                                                                                                                   |                                                                                                                  |              |                                                                          |              |
| AC Voltage Regulation (Batt. Mode)    | 230VAC ± 5%                                                                                                       | 230VAC ± 10%                                                                                                     |              | 230VAC ± 5%                                                              |              |
| Surge Power                           | 10000VA                                                                                                           | 8000VA                                                                                                           | 12000VA      |                                                                          |              |
| Efficiency (Peak)                     | 90% – 93%                                                                                                         | 90%                                                                                                              | 93%          | 90%                                                                      |              |
| Transfer Time                         | 15 ms (For Personal Computers)<br>20 ms (For Home Appliances)                                                     | 10 ms (For Personal Computers)<br>20 ms (For Home Appliances)                                                    |              | 10 ms (For Personal Computers)<br>20 ms (For Home Appliances)            |              |
| Waveform                              | Pure sine wave                                                                                                    | Pure sine wave                                                                                                   |              | Pure sine wave                                                           |              |
| BATTERY                               |                                                                                                                   |                                                                                                                  |              |                                                                          |              |
| Battery Voltage                       | 48 VDC                                                                                                            | 24 VD                                                                                                            | 48 VD        | 48 VD                                                                    |              |
| Floating Charge Voltage               | 54 VDC                                                                                                            | 27 VD                                                                                                            | 54 VD        | 54 VD                                                                    |              |
| Overcharge Protection                 | 63 VDC                                                                                                            | 33 VD                                                                                                            | 63 VD        | 66 VD                                                                    |              |
| SOLAR CHARGER & AC CHARGER            |                                                                                                                   |                                                                                                                  |              |                                                                          |              |
| Solar Charger type                    | MPPT                                                                                                              | MPPT                                                                                                             |              | MPPT                                                                     |              |
| Maximum PV Array Power                | 5000W                                                                                                             | 5000VA                                                                                                           | 6000VA       | 5000VA                                                                   | 6000VA       |
| MPPT Range @ Operating Voltage        | 120 – 450 VDC                                                                                                     | 60 – 450 VD                                                                                                      |              | 120 – 430 VD                                                             |              |
| Maximum PV Array Open Circuit Voltage | 500 VDC                                                                                                           | 500 VD                                                                                                           |              | 500 VD                                                                   |              |
| Maximum Solar Charge Current          | 100A                                                                                                              | 120A                                                                                                             |              | 100A                                                                     | 120A         |
| Maximum AC Charge Current             | 100A                                                                                                              | 100A                                                                                                             |              | 100A                                                                     | 120A         |
| Maximum Charge Current                | 100A                                                                                                              | 120A                                                                                                             |              | 100A                                                                     | 120A         |
| PHYSICAL                              |                                                                                                                   |                                                                                                                  |              |                                                                          |              |
| Dimension, D*W*H (mm)                 | 115x300x400                                                                                                       | 119x313.6x457.5                                                                                                  |              | 140x295x468                                                              |              |
| Net Weight (Kg)                       | 10                                                                                                                | 10                                                                                                               | 12           | 12                                                                       |              |
| Communication Interface               | USB/RS232/RS485/Bluetooth/Dry-contact                                                                             | S232                                                                                                             |              | USB, RS232, RS485, Bluetooth                                             |              |
| OPERATING ENVIRONMENT                 |                                                                                                                   |                                                                                                                  |              |                                                                          |              |
| Humidity                              | 5% to 95% Relative Humidity<br>(Non-condensing)                                                                   | 5% to 95% Relative Humidity<br>(Non-condensing)                                                                  |              | 5% to 95% Relative Humidity<br>(Non-condensing)                          |              |
| Operating Temperature                 | -1°C to 5°C                                                                                                       | -10°C to 50°C                                                                                                    |              | -10°C to 50°C                                                            |              |
| Storage Temperature                   | -15°C to 6°C                                                                                                      | -15°C to 60°C                                                                                                    |              | -15°C to 60°C                                                            |              |

\* Product specifications are subject to change without further notice.

# LUMINOUS



# ON GRID



# LUMINOUS

## NXI GRID TIE INVERTER

### On Grid

The NXi range from Luminous is available in single and three phase configurations. With its best-in-class reliability and compliance to safety standards, the inverters are available in capacities from 1kW to 110 kW.



Parallel  
Connectivity



> 97%  
Efficiency



Connectivity  
Options



### MPPT

#### Maximum Power Point Tracking

MPPTs to extract up to 30% more power from the panels, minimizing impact of shading and increasing efficiency.



#### IP65 Protection

Designed to work in tough weather conditions. Flawless operation despite dust, rain or extreme temperature variations



#### Remote Monitoring

Multiple modes of connectivity (GSM/Wi-fi) for remote monitoring enables proactive maintenance.

#### Anti-Islanding Protection

Disconnects the inverter from grid during power failure, preventing any electrical shock to the linemen at work.



#### IEC Compliance

Complies with MNRE recommended standards  
IEC - 61683, IEC - 60068,  
IEC - 61000, IEC - 61727,  
IEC - 62116



Scan QR Code for  
Product Video



[youtube/c/LuminousGlobal](https://youtube.com/LuminousGlobal)

## Solar Estimation Chart

| Solution  |                 | No. of MPPT | Panel Connection Combination per MPPT (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|-----------|-----------------|-------------|---------------------------------------------------------|------------------------------------------|
| Solar UPS | PV Panel Watt   |             |                                                         |                                          |
| NXI 1kW   | 330Wp x 3 No.s  | 1           | 3 (S)                                                   | 100                                      |
| NXI 2kW   | 330Wp x 6 No.s  | 1           | 6 (S)                                                   | 200                                      |
| NXI 3kW   | 330Wp x 10 No.s | 1           | 10 (S)                                                  | 300                                      |
| NXI 4kW   | 330Wp x 12 No.s | 2           | 6 (S)                                                   | 400                                      |
| NXI 5kW   | 330Wp x 16 No.s | 2           | 8 (S)                                                   | 500                                      |
| NXI 6kW   | 330Wp x 20 No.s | 2           | 10 (S)                                                  | 600                                      |
| NXI 10kW  | 330Wp x 32 No.s | 2           | 16 (S)                                                  | 1000                                     |

## Schematic Representation



**On Grid**

**SOLAR**

## Single Phase

| MODEL                                | Nxi 110                                                                                                                                                                                                                                          | Nxi 120  | Nxi 130 | Nxi 140          | Nxi 150 |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|------------------|---------|
| Input DC                             |                                                                                                                                                                                                                                                  |          |         |                  |         |
| Max. DC Input Power (kW)             | 1.2                                                                                                                                                                                                                                              | 2.3      | 3.5     | 4.6              | 5.8     |
| Max. DC Input Voltage (V)            | 600                                                                                                                                                                                                                                              |          |         |                  |         |
| Start-up Voltage [V]                 | 60                                                                                                                                                                                                                                               | 90       |         | 120              |         |
| MPPT Voltage range (V)               | 50-500                                                                                                                                                                                                                                           | 80 - 500 |         | 100 - 500        |         |
| Max Input current per MPPT (A)       | 11A                                                                                                                                                                                                                                              |          |         | 11A+11A          |         |
| Number of MPPT                       | 1                                                                                                                                                                                                                                                |          |         | 2                |         |
| Max Input Strings Number             | 1                                                                                                                                                                                                                                                |          |         | 2                |         |
| Output (AC)                          |                                                                                                                                                                                                                                                  |          |         |                  |         |
| Rated output power (kW)              | 1                                                                                                                                                                                                                                                | 2        | 3       | 4                | 5       |
| Max. output power [kW]               | 1.1                                                                                                                                                                                                                                              | 2.2      | 3.3     | 4.4              | 5       |
| Max. output Current [A]              | 5.2                                                                                                                                                                                                                                              | 10.5     | 15.7    | 21               | 25      |
| Grid voltage range (V)               | 160-285                                                                                                                                                                                                                                          |          |         |                  |         |
| Grid Frequency range (Hz)            | 50/60 Hz                                                                                                                                                                                                                                         |          |         |                  |         |
| Power Factor (at rated output power) | 0.8 ...1... 0.8                                                                                                                                                                                                                                  |          |         |                  |         |
| Total harmonic distortion [THDi]     | < 1.5%                                                                                                                                                                                                                                           |          |         |                  |         |
| Feed-in phase/connection phase       | Single Phase                                                                                                                                                                                                                                     |          |         |                  |         |
| Efficiency                           |                                                                                                                                                                                                                                                  |          |         |                  |         |
| Max. Efficiency                      | >97.2%                                                                                                                                                                                                                                           |          | 97.5%   | > 98.1%          |         |
| MPPT Efficiency                      | >99.5%                                                                                                                                                                                                                                           |          |         |                  |         |
| Protection                           |                                                                                                                                                                                                                                                  |          |         |                  |         |
| Inbuilt Protections                  | DC Reverse Polarity Protection, Short Circuit Protection, O/P Over Current Protection, O/P Over voltage protection, Insulation resistance monitoring, Residual current detection, surge protection, Islanding Protection, Temperature Protection |          |         |                  |         |
| Interface                            |                                                                                                                                                                                                                                                  |          |         |                  |         |
| DC Connection                        | MC4 Connectors                                                                                                                                                                                                                                   |          |         |                  |         |
| Display                              | LCD 2X 20 Z                                                                                                                                                                                                                                      |          |         |                  |         |
| Datalogger & Communication           | RS485/GSM/Wifi* (Optional)                                                                                                                                                                                                                       |          |         |                  |         |
| General Data                         |                                                                                                                                                                                                                                                  |          |         |                  |         |
| Topology                             | Transformerless                                                                                                                                                                                                                                  |          |         |                  |         |
| Consumption @ night                  | < 1 W                                                                                                                                                                                                                                            |          |         |                  |         |
| Operating Temperature Range          | -25°C to 60°C                                                                                                                                                                                                                                    |          |         |                  |         |
| Cooling Method                       | Natural Convention                                                                                                                                                                                                                               |          |         |                  |         |
| Relative Humidity                    | 0 - 100 %                                                                                                                                                                                                                                        |          |         |                  |         |
| Max. Operational Altitude            | 4000m                                                                                                                                                                                                                                            |          |         |                  |         |
| Noise [dBA]                          | <20dBA                                                                                                                                                                                                                                           |          | <30dba  | <30 dba          |         |
| Designed Lifetime                    | > 20 years                                                                                                                                                                                                                                       |          |         |                  |         |
| Ingress Protection                   | IP65                                                                                                                                                                                                                                             |          |         |                  |         |
| Dimensions (W*H*D) [mm]              | 310W*373H*160D(mm)                                                                                                                                                                                                                               |          |         | 310W *543H *160D |         |
| Net weight (Kg)                      | 7.4                                                                                                                                                                                                                                              |          | 7.7     | 11.5             |         |
| Standards                            |                                                                                                                                                                                                                                                  |          |         |                  |         |
| Safety/EMC                           | IEC62109-1/-2, NB/T 32004, EN61000-6-1, EN61000-6-3                                                                                                                                                                                              |          |         |                  |         |

\* Check availability of GSM or wifi dongle before ordering.

Technical specifications are subject to change without prior notice.

## Three Phase

| MODEL                                | Nxi 305                                                                                                                                                                                                                                                                           | Nxi 306 | Nxi 308 | Nxi 310 | Nxi 312                           | Nxi 315 |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------|---------|-----------------------------------|---------|
| Input DC                             |                                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Max. DC Input Power (kW)             | 6.0                                                                                                                                                                                                                                                                               | 7.2     | 9.6     | 12      | 14.5                              | 18      |
| Max. DC Input Voltage (V)            | 1000                                                                                                                                                                                                                                                                              |         |         |         |                                   |         |
| Start-up Voltage [V]                 | 180                                                                                                                                                                                                                                                                               |         |         |         |                                   |         |
| MPPT Voltage range (V)               | 160 - 1000                                                                                                                                                                                                                                                                        |         |         |         |                                   |         |
| Max input current per MPPT (A)       | 11A + 11A                                                                                                                                                                                                                                                                         |         |         |         | 22A+22A                           |         |
| Number of MPPT                       | 2                                                                                                                                                                                                                                                                                 |         |         |         |                                   |         |
| Max Input Strings Number             | 2                                                                                                                                                                                                                                                                                 |         |         |         | 4                                 |         |
| Output (AC)                          |                                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Rated output power (kW)              | 5                                                                                                                                                                                                                                                                                 | 6       | 8       | 10      | 12                                | 15      |
| Max. output power [kW]               | 5.5                                                                                                                                                                                                                                                                               | 6.6     | 8.8     | 11      | 13.2                              | 16.5    |
| Max. output Current [A]              | 8.4                                                                                                                                                                                                                                                                               | 10      | 13.4    | 16.7    | 20.1                              | 25.1    |
| Grid voltage range (V)               | 313 - 470                                                                                                                                                                                                                                                                         |         |         |         |                                   |         |
| Grid Frequency range (Hz)            | 50/60 Hz                                                                                                                                                                                                                                                                          |         |         |         |                                   |         |
| Power Factor (at rated output power) | 0.8 ...1... 0.8                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Total harmonic distortion [THDi]     | <2%                                                                                                                                                                                                                                                                               |         |         |         |                                   |         |
| Feed-In phase/connection phase       | Three Phase                                                                                                                                                                                                                                                                       |         |         |         |                                   |         |
| Efficiency                           |                                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Max. Efficiency                      | 98.30%                                                                                                                                                                                                                                                                            |         |         |         | 98.60%                            |         |
| MPPT Efficiency                      | 99.5%                                                                                                                                                                                                                                                                             |         |         |         |                                   |         |
| Protection                           |                                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Inbuilt Protections                  | DC Reverse Polarity Protection, Short Circuit Protection, O/P Over Current Protection, O/P Over voltage protection, Insulation resistance monitoring, Residual current detection, surge protection, Islanding Protection, Temperature Protection, Integrated DC Switch (optional) |         |         |         |                                   |         |
| Interface                            |                                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| DC Connection                        | MC4 Connectors                                                                                                                                                                                                                                                                    |         |         |         |                                   |         |
| Display                              | LCD 2X 20Z                                                                                                                                                                                                                                                                        |         |         |         |                                   |         |
| Datalogger & Communication           | 4 pins RS485 connector                                                                                                                                                                                                                                                            |         |         |         | 4 pins RS485 connector            |         |
| General Data                         |                                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Topology                             | Transformerless                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Consumption @ night                  | < 1 W                                                                                                                                                                                                                                                                             |         |         |         |                                   |         |
| Operating Temperature Range          | -25°C to 60°C                                                                                                                                                                                                                                                                     |         |         |         |                                   |         |
| Cooling Method                       | Natural Convention                                                                                                                                                                                                                                                                |         |         |         | Intelligent redundant fan cooling |         |
| Relative Humidity                    | 0 to 100%                                                                                                                                                                                                                                                                         |         |         |         |                                   |         |
| Max. Operational Altitude            | 4000m                                                                                                                                                                                                                                                                             |         |         |         |                                   |         |
| Noise [dBA]                          | <30 dBA                                                                                                                                                                                                                                                                           |         |         |         |                                   |         |
| Designed Lifetime                    | > 20 years                                                                                                                                                                                                                                                                        |         |         |         |                                   |         |
| Ingress Protection                   | IP65                                                                                                                                                                                                                                                                              |         |         |         |                                   |         |
| Dimensions (W*H*D) [mm]              | 310W*563H*129D                                                                                                                                                                                                                                                                    |         |         |         | 310W*608H*219D                    |         |
| Net weight (Kg)                      | 14.1                                                                                                                                                                                                                                                                              |         |         |         | 19.9                              |         |
| Standards                            |                                                                                                                                                                                                                                                                                   |         |         |         |                                   |         |
| Safety/EMC                           | IEC 62109-1, 62109-2: AS3100                                                                                                                                                                                                                                                      |         |         |         |                                   |         |

\* Check availability of GSM or wifi dongle before ordering.  
Technical specifications are subject to change without prior notice.

## Three Phase

| MODEL                                | Nxi 320                                                                                                                                                                                                                                                                           | Nxi 325                                         | Nxi 330 | Nxi 350                                                             | Nxi 3600                         | Nxi 380                                   |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|---------|---------------------------------------------------------------------|----------------------------------|-------------------------------------------|
| Input DC                             |                                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Max. DC Input Power (kW)             | 24                                                                                                                                                                                                                                                                                | 33                                              | 39      | 55                                                                  | 72                               | 112                                       |
| Max. DC Input Voltage (V)            | 1000                                                                                                                                                                                                                                                                              | 1100                                            |         |                                                                     | 1100                             |                                           |
| Start-up Voltage (V)                 | 180                                                                                                                                                                                                                                                                               |                                                 |         | 200                                                                 |                                  |                                           |
| MPPT Voltage range (V)               | 160 - 1000                                                                                                                                                                                                                                                                        | 200 - 1000                                      |         |                                                                     |                                  | 180 - 1000                                |
| Max input current per MPPT (A)       | 22A+22A                                                                                                                                                                                                                                                                           | 26A + 26A + 26A                                 |         | 28.5A + 28,5A<br>+ 28.5A + 28.5A                                    | 28.5A + 28.5A<br>+ 28.5A + 28.5A | 26A+26A+26A+26A<br>+26A+26A+26A+26A       |
| Number of MPPT                       | 2                                                                                                                                                                                                                                                                                 | 3                                               |         | 4                                                                   | 4                                | 8                                         |
| Max Input Strings Number             | 4                                                                                                                                                                                                                                                                                 | 6                                               |         | 12                                                                  | 12                               | 16                                        |
| Output (AC)                          |                                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Rated output power (kW)              | 20                                                                                                                                                                                                                                                                                | 25                                              | 30      | 50                                                                  | 60                               | 80                                        |
| Max. output power [kW]               | 22                                                                                                                                                                                                                                                                                | 27.5                                            | 33      | 55                                                                  | 66                               | 88                                        |
| Max. output Current [A]              | 33.3                                                                                                                                                                                                                                                                              | 27.5                                            | 33      | 83.3                                                                | 100                              | 88                                        |
| Grid voltage range (V)               | 313 - 470                                                                                                                                                                                                                                                                         | 220-400                                         |         | 304-460                                                             |                                  | 230-480                                   |
| Grid Frequency range (Hz)            | 50/60 Hz                                                                                                                                                                                                                                                                          |                                                 |         | 47-52 or 57-62                                                      |                                  | 50/60 Hz                                  |
| Power Factor (at rated output power) | 0.8 ...1... 0.8                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Total harmonic distortion [THDi]     | <2%                                                                                                                                                                                                                                                                               | <3%                                             |         |                                                                     | <2%                              | <3%                                       |
| Feed-In phase/connection phase       | Three Phase                                                                                                                                                                                                                                                                       |                                                 |         |                                                                     |                                  |                                           |
| Efficiency                           |                                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Max. Efficiency                      | 98.60%                                                                                                                                                                                                                                                                            | 98.8%                                           |         |                                                                     |                                  | 99%                                       |
| MPPT Efficiency                      | 99.5%                                                                                                                                                                                                                                                                             | >99.5%                                          |         |                                                                     |                                  | 99.5%                                     |
| Protection                           |                                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Inbuilt Protections                  | DC Reverse Polarity Protection, Short Circuit Protection, O/P Over Current Protection, O/P Over voltage protection, Insulation resistance monitoring, Residual current detection, surge protection, Islanding Protection, Temperature Protection, Integrated DC Switch (optional) |                                                 |         |                                                                     |                                  |                                           |
| Interface                            |                                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| DC Connection                        | MC4 Connectors                                                                                                                                                                                                                                                                    |                                                 |         |                                                                     |                                  |                                           |
| Display                              | LCD 2X 20Z                                                                                                                                                                                                                                                                        |                                                 |         |                                                                     |                                  |                                           |
| Datalogger & Communication           | 4 pins RS485 connector                                                                                                                                                                                                                                                            | 4 pins RS485, Ethernet                          |         | 4 pins RS485 connector, 2 RJ45 connector, 2 Group of terminal block |                                  | 4 pins RS485, Ethernet                    |
| General Data                         |                                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Topology                             | Transformerless                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Consumption @ night                  | < 1 W                                                                                                                                                                                                                                                                             |                                                 |         |                                                                     | < 2 W                            |                                           |
| Operating Temperature Range          | -25°C to 60°C                                                                                                                                                                                                                                                                     |                                                 |         |                                                                     |                                  |                                           |
| Cooling Method                       | Natural Convention                                                                                                                                                                                                                                                                |                                                 |         | Intelligent redundant fan cooling                                   |                                  | fan cooling                               |
| Relative Humidity                    | 0 to 100%                                                                                                                                                                                                                                                                         |                                                 |         |                                                                     |                                  |                                           |
| Max. Operational Altitude            | 4000m                                                                                                                                                                                                                                                                             |                                                 |         |                                                                     |                                  |                                           |
| Noise [dBA]                          | <30 dBA                                                                                                                                                                                                                                                                           |                                                 |         | <60 dBA                                                             |                                  | <55 dBA                                   |
| Designed Lifetime                    | > 20 years                                                                                                                                                                                                                                                                        |                                                 |         |                                                                     |                                  |                                           |
| Ingress Protection                   | IP65                                                                                                                                                                                                                                                                              |                                                 |         |                                                                     |                                  | IP66                                      |
| Dimensions (W*H*D) [mm]              | 310W*608H*219D                                                                                                                                                                                                                                                                    | 647W*629H*252D                                  |         | 630W*700H*357D                                                      |                                  | 1050W*567H*286.5D                         |
| Net weight (Kg)                      | 19.9                                                                                                                                                                                                                                                                              | 45                                              |         | 63                                                                  | 69                               | 85                                        |
| Standards                            |                                                                                                                                                                                                                                                                                   |                                                 |         |                                                                     |                                  |                                           |
| Safety/EMC                           | IEC 62109-1,<br>62109-2: AS3100                                                                                                                                                                                                                                                   | IEC/EN 62109-1/-2,<br>IEC/EN 61000-6-1/-2/-3/-4 |         | IEC62109-1/-2, AS3100,<br>EN61000-6-1, EN61000-6-3                  |                                  | IEC62109-1/-2 EN61000-6-1,<br>EN61000-6-3 |

\* Check availability of GSM or wifi dongle before ordering.

Technical specifications are subject to change without prior notice.

## Three Phase

| MODEL                                | Nxi 3100                                                                           | Nxi 3110          |
|--------------------------------------|------------------------------------------------------------------------------------|-------------------|
| Input DC                             |                                                                                    |                   |
| Max. DC Input Power (kW)             | 110                                                                                | 121               |
| Max. DC Input Voltage (V)            | 1100                                                                               |                   |
| Start-up Voltage [V]                 | 195                                                                                |                   |
| MPPT Voltage range (V)               | 180 - 1000                                                                         |                   |
| Max input current per MPPT (A)       | 22A+22A                                                                            |                   |
| Number of MPPT                       | 2                                                                                  |                   |
| Max Input Strings Number             | 20                                                                                 |                   |
| Output (AC)                          |                                                                                    |                   |
| Rated output power (kW)              | 100                                                                                | 110               |
| Max. output power [kW]               | 110                                                                                | 121               |
| Max. output Current [A]              | 167.1                                                                              | 183.8             |
| Grid voltage range (V)               | 220 - 400                                                                          |                   |
| Grid Frequency range (Hz)            | 50/60 Hz                                                                           |                   |
| Power Factor (at rated output power) | 0.8 ...1... 0.8                                                                    |                   |
| Total harmonic distortion [THDi]     | <3%                                                                                |                   |
| Feed-in phase/connection phase       | Three Phase                                                                        |                   |
| Efficiency                           |                                                                                    |                   |
| Max. Efficiency                      | 99%                                                                                |                   |
| MPPT Efficiency                      | 99.50%                                                                             |                   |
| Protection                           |                                                                                    |                   |
| Inbuilt Protections                  | DC Reverse Polarity Protection                                                     |                   |
| Interface                            |                                                                                    |                   |
| DC Connection                        | MC4 Connectors                                                                     |                   |
| Display                              | LCD 2X 20Z                                                                         |                   |
| Datalogger & Communication           | 4 pins RS485 connector                                                             |                   |
| General Data                         |                                                                                    |                   |
| Topology                             | Transformerless                                                                    |                   |
| Consumption @ night                  | < 2 W                                                                              |                   |
| Operating Temperature Range          | -25°C to 60°C                                                                      |                   |
| Cooling Method                       | fan cooling                                                                        |                   |
| Relative Humidity                    | 0 to 100%                                                                          |                   |
| Max. Operational Altitude            | 4000m                                                                              |                   |
| Noise [dBA]                          | <55 dBA                                                                            | <65 dBA           |
| Designed Lifetime                    | > 20 years                                                                         |                   |
| Ingress Protection                   | IP66                                                                               |                   |
| Dimensions (W*H*D) [mm]              | 1050W*567H*286.5D                                                                  | 1065W*567H*344.5D |
| Net weight (Kg)                      | 85                                                                                 | 84                |
| Standards                            |                                                                                    |                   |
| Safety/EMC                           | IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, IEC 61683, IEC 60068, IEC 61727, IEC 62116 |                   |

\* Check availability of GSM or wifi dongle before ordering.  
Technical specifications are subject to change without prior notice.

# LUMINOUS

## RAYVERTER

### Hybrid High Frequency

Enjoy the technology as it offers high flexibility for future power expansion and with the battery independence feature, it will keep the inverter running whether it is connected or not.



Pure sine  
wave output



Self-Consumption



Monitoring  
Software



**Programmable supply**  
priority for PV, Battery or Grid



**Programmable multiple**  
operation modes: Grid-tie,  
off-grid and grid-tie with  
backup



**Wall Mounted**  
Saves space and is easy to  
access

**User-adjustable charging**  
current and voltage



**Parallel operation**  
up to 9 units only for 3KW  
and 5KW models



Scan QR Code for  
Product Video



[youtube/c/LuminousGlobal](https://youtube.com/LuminousGlobal)

## Solar Estimation Chart

| Solution              |               |                | Panel Connection Combination (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|-----------------------|---------------|----------------|------------------------------------------------|------------------------------------------|
| Solar UPS             | Solar Battery | PV Panel Watt  |                                                |                                          |
| Solar Hybrid 3KVA/24V | 200Ah X 2     | 330Wp X 12 Nos | 3(S)4(P)                                       | 400                                      |
| Solar Hybrid 5KVA/48V | 200Ah X 4     | 330Wp X 15 Nos | 3(S)5(P)                                       | 550                                      |

## Schematic Representation



Hybrid

 SOLAR

## Technical Specifications

| Model Name                                     | Solar Hybrid 3KVA/24V                           | Solar Hybrid 5KVA/48V |
|------------------------------------------------|-------------------------------------------------|-----------------------|
| PHASE                                          | 1-phase in / 1-phase out                        |                       |
| Maximum PV Input Power                         | 4000W                                           | 5000W                 |
| Rated Out Power                                | 3000W                                           | 5000W                 |
| Maximum Charging Power                         | 2880W                                           | 5000W                 |
| GRID-TIE OPERATION                             |                                                 |                       |
| PV INPUT (DC)                                  |                                                 |                       |
| Nominal DC Voltage / Maximum DC Voltage        | 360 VDC / 450 VDC                               | 360 VDC / 450 VDC     |
| Start-up Voltage / Initial Feeding Voltage     | 130 VDC / 150 VDC                               | 130 VDC / 150 VDC     |
| MPP Voltage Range                              | 120 VDC ~ 430 VDC                               | 120 VDC ~ 430 VDC     |
| Number of MPP Trackers/ Maximum Input Current  | 1 / 18A                                         | 1 / 18A               |
| GRID OUTPUT (AC)                               |                                                 |                       |
| Nominal Output Voltage                         | 220/230/240 VAC                                 |                       |
| Output Voltage Range                           | 184 - 264.5 VAC or 195.5 - 253 VAC (Selectable) |                       |
| Nominal Output Current                         | 13A                                             | 21.7A                 |
| Power Factor                                   | >0.99                                           |                       |
| EFFICIENCY                                     |                                                 |                       |
| Maximum Conversion Efficiency (DC/AC)          | 95%                                             | 95%                   |
| OFF-GRID OPERATION                             |                                                 |                       |
| AC INPUT                                       |                                                 |                       |
| AC Start-up Voltage / Auto Restart Voltage     | 120 - 14 VAC / 180 VAC                          |                       |
| Acceptable Input Voltage Range                 | 90 - 280 VDC or 170 - 280 VAC                   |                       |
| Frequency Range                                | 50 Hz/60 Hz (Auto sensing)                      |                       |
| Maximum AC Input Current                       | 40A                                             | 40A                   |
| PV INPUT (DC)                                  |                                                 |                       |
| Maximum DC Voltage                             | 450 VDC                                         | 450 VDC               |
| MPP Voltage Range                              | 120 VDC ~ 430 VDC                               | 120 VDC ~ 430 VDC     |
| Number of MPP Trackers/ Maximum Input Current  | 1 / 18A                                         | 1 / 18A               |
| BATTERY MODE OUTPUT (AC)                       |                                                 |                       |
| Nominal Output Voltage                         | 220/230/240 VAC                                 |                       |
| Output Waveform                                | Pure sine wave                                  |                       |
| Efficiency (DC to AC)                          | 93%                                             |                       |
| HYBRID OPERATION                               |                                                 |                       |
| PV INPUT (DC)                                  |                                                 |                       |
| Nominal DC Voltage / Maximum DC Voltage        | 360 VDC / 450 VDC                               | 360 VDC / 450 VDC     |
| Start-up Voltage / Initial Feeding Voltage     | 130 VDC / 150 VDC                               | 130 VDC / 150 VDC     |
| MPP Voltage Range                              | 120 VDC ~ 430 VDC                               | 120 VDC / 430 VDC     |
| Number of MPP Trackers / Maximum Input Current | 1 / 18A                                         | 1 / 18A               |

## Technical Specifications

| Model Name                                 | Solar Hybrid 3KVA/24V                           | Solar Hybrid 5KVA/48V |
|--------------------------------------------|-------------------------------------------------|-----------------------|
| GRID OUTPUT (AC)                           |                                                 |                       |
| Nominal Output Voltage                     | 220/230/240 VAC                                 |                       |
| Output Voltage Range                       | 184 - 264.5 VAC Or 195.5 - 253 VAC (Selectable) |                       |
| Nominal Output Current                     | 13A                                             | 21.7A                 |
| AC INPUT                                   |                                                 |                       |
| AC Start-up Voltage / Auto Restart Voltage | 120 - 140 VAC / 180 VAC                         |                       |
| Acceptable Input Voltage Range             | 90 - 280 VAC or 170 - 280 VAC                   |                       |
| Maximum AC Input Current                   | 40 A                                            | 40 A                  |
| BATTERY MODE OUTOUT (AC)                   |                                                 |                       |
| Nominal Output Voltage                     | 220/230/240 VAC                                 |                       |
| Output Wavvform                            | Pure sine wave                                  |                       |
| Efficiency (DC to AC)                      | 93%                                             |                       |
| BATTERY & CHAGER                           |                                                 |                       |
| Nominal DC Voltage                         | 24 VDC                                          | 48 VDC                |
| Maximum Solar Charging Current             | 60 A                                            | 100 A                 |
| Maximum AC Charging Current                | 60 A                                            | 100 A                 |
| Maximum Charging Current                   | 60 A                                            | 100 A                 |
| GENERAL                                    |                                                 |                       |
| PHYSICAL                                   |                                                 |                       |
| Dimension, D*W*H                           | 120x295x468                                     | 120x295x468           |
| Net Weight (kgs)                           | 11                                              | 12                    |
| INTERFACE                                  |                                                 |                       |
| Parallel Function                          | Yes, 9 units                                    | Yes, 9 units          |
| Communication Port                         | USB or RS-232/Dry Contact                       |                       |
| ENVIRONMENT                                |                                                 |                       |
| Humidity                                   | 0 - 90% RH (No condensing)                      |                       |
| Operating Temperature                      | - 10°C to 50°C                                  |                       |

# LUMINOUS

## HYBRID TX

### Hybrid Low Frequency

The Luminous hybrid inverter range combines on-grid and off-grid inverters, making it more versatile than other solar inverters and helping to lower your electricity bills while protecting against power outages. It can supply solar power to run your electrical appliances, store electricity in batteries required during power outages, and export excess power generated to the grid. It is available in 3.75kVA and 5kVA capacities.



Remote  
Monitoring



Savings &  
Backup Together



Safe and  
Reliable



#### Export Excess Power Generated & Also Get Backup

Store electricity in batteries for backup as well as export excess electricity to the grid.



#### User Selectable Priority Settings

Allows users to choose among reduced grid dependency & energy savings, enhanced backup and autonomy from grid and export access power when required



#### Anti-Islanding protection

During a power outage, disconnects the inverter from the grid, preventing any electrical shock to the linemen on the job.



#### Energy Independence

In case of grid unavailability, the system automatically switches over to battery supply, continuing to operate independently from the grid.



#### Remote Monitoring

Multiple modes of connectivity (GSM/WIFI) for remote monitoring enables keeping track of solar generation and proactive maintenance



Scan QR Code for  
Product Video



[youtube/c/LuminousGlobal](https://youtube.com/LuminousGlobal)

## Solar Estimation Chart

| Solution          |               |                 | Panel Connection Combination (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|-------------------|---------------|-----------------|------------------------------------------------|------------------------------------------|
| Solar UPS         | Solar Battery | PV Panel Watt   |                                                |                                          |
| HYBRID TX 3.75KVA | 200Ah x 4     | 330Wp x 9 Nos.  | 3 (S) 3 (P)                                    | 300                                      |
| HYBRID TX 5KVA    | 200Ah x 4     | 330Wp x 12 Nos. | 3 (S) 4 (P)                                    | 350-400                                  |

## Schematic Representation



## Technical Specifications

| Model                                      | HYBRID TX 3.75kVA                                          |  | HYBRID TX 5kVA |  |
|--------------------------------------------|------------------------------------------------------------|--|----------------|--|
| Nominal Battery Voltage (Vdc)              | 48V                                                        |  |                |  |
| Output Waveform                            | Pure Sine Wave                                             |  |                |  |
| SOLAR PHOTOVOLTAIC INPUT                   |                                                            |  |                |  |
| Type of Charger                            | MPPT                                                       |  |                |  |
| Maximum PV Power (kW)                      | 3KW                                                        |  | 4KW            |  |
| Input Voltage Range (Voc)                  | 65V - 165 V                                                |  |                |  |
| Input Voltage Range (Vmp)                  | 65V - 130 V                                                |  |                |  |
| Maximum I/P Current (Array)                | 46A                                                        |  | 61A            |  |
| Maximum MPPT Output current (A)            | 60A                                                        |  | 80A            |  |
| Maximum Conversion Efficiency (%)          | 93%                                                        |  |                |  |
| GRID INPUT                                 |                                                            |  |                |  |
| Input Supply Phase                         | Single Phase                                               |  |                |  |
| Grid Voltage Range                         | 180V - 270V                                                |  |                |  |
| Nominal Grid Current (import)              | 21A                                                        |  | 29A            |  |
| GRID OUTPUT                                |                                                            |  |                |  |
| Grid Current (export)                      | 12A ± 2A                                                   |  | 16A ± 2A       |  |
| BATTERY                                    |                                                            |  |                |  |
| Nominal Battery Voltage                    | 48VDC                                                      |  |                |  |
| Charging Stages                            | Boost, Float, Absorption                                   |  |                |  |
| INVERTER                                   |                                                            |  |                |  |
| Switching Element                          | MOSFET                                                     |  |                |  |
| Control                                    | 32 Bit DSP controlled                                      |  |                |  |
| Nominal Output Voltage (V) & Voltage range | 230 V ± 2%                                                 |  |                |  |
| Output Supply Phase                        | 1 Phase 2 Wire                                             |  |                |  |
| Output waveform                            | Pure Sine Wave                                             |  |                |  |
| Nominal Frequency (Hz)                     | 50 Hz                                                      |  |                |  |
| Power Factor                               | 0.9 lag to 0.9 lead                                        |  |                |  |
| Nominal Output Current (A)                 | 13A                                                        |  | 17A            |  |
| Output Voltage Distortion (THD)            | <4%                                                        |  |                |  |
| Overload at nominal output voltage         | 110% for 10 minutes, 125% for 1 minute, 200% for 5 seconds |  |                |  |

## Technical Specifications

| Model                      | HYBRID TX 3.75kVA                                                                                                                                                                                                                                                                            | HYBRID TX 5kVA  |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|
| SYSTEM DATA                |                                                                                                                                                                                                                                                                                              |                 |
| Transfer Time              | < 20 mS                                                                                                                                                                                                                                                                                      |                 |
| Protection                 | Under/Over voltage protection for Input/Output, Battery & Array; Reverse polarity protection for Array & Battery; Protection for Output Overload, Short circuit and Over Temperature; MCB & Surge protection at Grid/DG Input, Battery, Wrong Wiring, Low Battery, Anti-Islanding Protection |                 |
| Display Parameters         | "Voltage/Current: Array, Battery, Grid, Output; Day kWh, Cumulative kWh, Date, Time "                                                                                                                                                                                                        |                 |
| Indications                | Battery Charging/ Discharging, Grid Available, Grid Select, Solar Available, Inverter On, Load On, System on Battery, Low Battery Pre-alarm, Wrong Wiring, Short Circuit Trip, Fault LED Indicator<br>(For Overload, Low Battery, Over Temperature)                                          |                 |
| Settings                   | "Battery type, Battery voltage (Boost, Float, Absorption), Priority (SGB/SBG/Solar Only/Grid Feed), Charging Current from Grid, Zero feed/Allow feed in GFM Current Settings"                                                                                                                |                 |
| INTERFACE                  |                                                                                                                                                                                                                                                                                              |                 |
| DC Connection              | MC4 Connectors                                                                                                                                                                                                                                                                               |                 |
| Datalogger & Communication | 4 pins RS485 connector                                                                                                                                                                                                                                                                       |                 |
| GENERAL                    |                                                                                                                                                                                                                                                                                              |                 |
| Display / Indications      | LCD Display (20*4) / LED Indications                                                                                                                                                                                                                                                         |                 |
| Dimensions (WxDxH in mm)   | 300 x 504 x 515                                                                                                                                                                                                                                                                              | 350 x 635 x 589 |
| Net Weight (kg)            | 50 kg                                                                                                                                                                                                                                                                                        | 64 kg           |
| Mounting                   | Surface Mount                                                                                                                                                                                                                                                                                |                 |
| Cooling                    | Air Cooling                                                                                                                                                                                                                                                                                  |                 |
| Enclosure Protection       | IP21                                                                                                                                                                                                                                                                                         |                 |
| Galvanic Isolation         | Inbuilt Isolation Transformer                                                                                                                                                                                                                                                                |                 |
| Operating Temperature      | 0°C - 45°C                                                                                                                                                                                                                                                                                   |                 |

**LUMINOUS**



# DC SOLUTION



# LUMINOUS

## SHINE RETROFIT

### DC Solution

Shine Retrofit is a smart upgrade that converts existing inverter into a solar inverter without any change in existing wiring. Ideal for small to large systems <10KVA



Solar Optimization



User Friendly Display



#### Solar Optimization Technique

Solar optimization technique extracts maximum power by intelligently prioritizing solar over grid.



#### LCD Display

User friendly displays communicates information like battery Charging Status, Charging Source, Total unit savings etc.



#### Four Stage Charging

4-stage smart charging ensures fast, safe & efficient charging and longer battery life.



#### MCB Protection

World-Class MCB ensures your UPS and connected loads stay protected from short circuits.



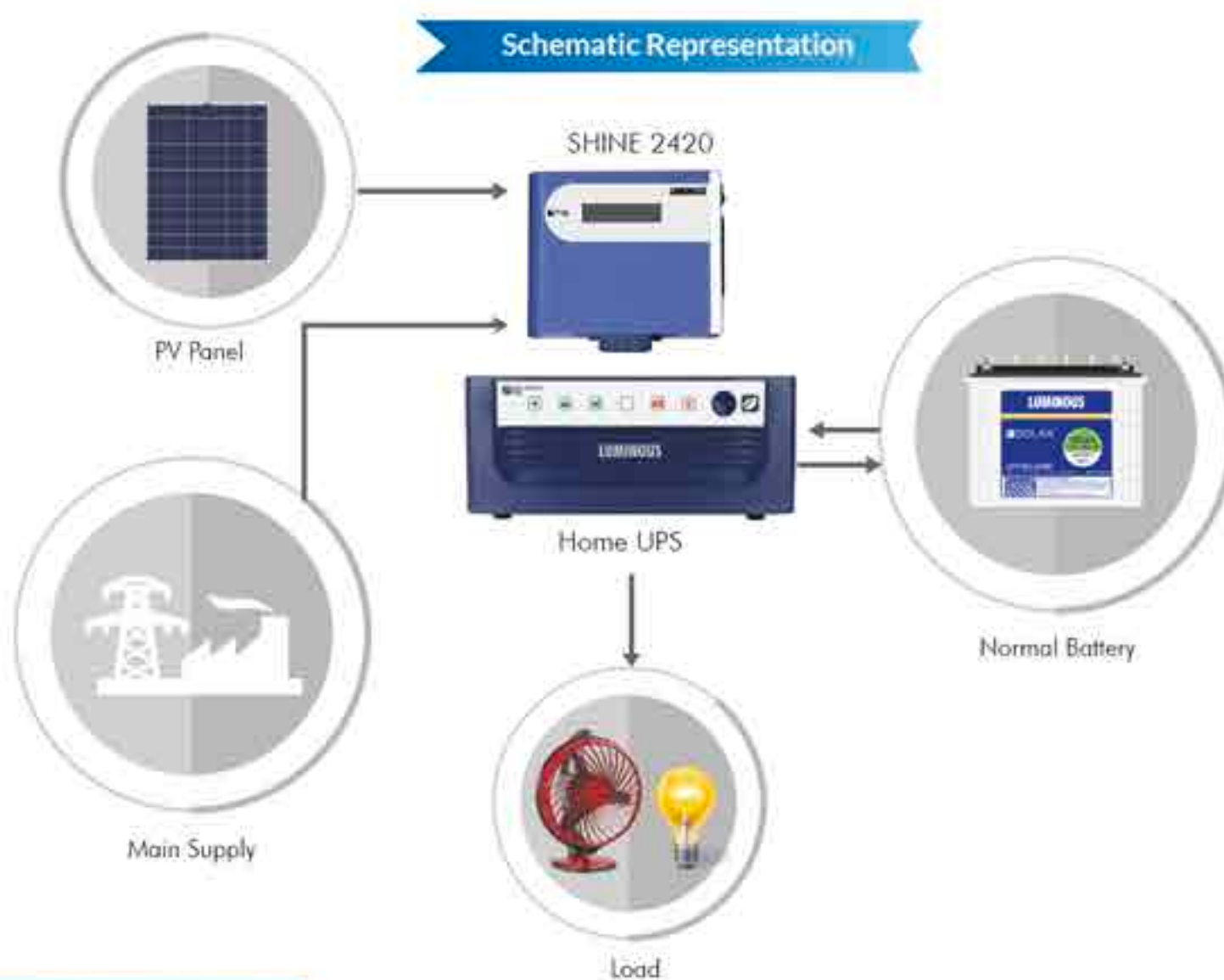
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## Solar Estimation Chart

| Solution  |                |                 | Panel Connection Combination (Series-Parallel) | Approx. Roof Top Area Required (Sq. ft.) |
|-----------|----------------|-----------------|------------------------------------------------|------------------------------------------|
| Solar UPS | Solar Retrofit | PV Panel Watt   |                                                |                                          |
| 12V UPS   | SHINE 1220     | 165Wp x 2 No.s  | 2 (P)                                          | 40                                       |
| 24V UPS   | SHINE 2420     | 330Wp x 2 No.s  | 2 (P)                                          | 80                                       |
| 24V UPS   | SHINE 3650     | 330Wp x 5 No.s  | 5 (P)                                          | 200                                      |
| 36V UPS   | SHINE 3650     | 165Wp x 15 No.s | 3 (S) 5 (P)                                    | 300                                      |
| 48V UPS   | SHINE 4850     | 330Wp x 8 No.s  | 2 (S) 4 (P)                                    | 300                                      |
| 96V UPS   | SHINE 9650     | 330Wp x 16 No.s | 4 (S) 4 (P)                                    | 600                                      |
| 120V UPS  | SHINE 12050    | 330Wp x 20 No.s | 5 (S) 4 (P)                                    | 700                                      |



## Technical Specifications

| Model Name                     | Shine 1220               | Shine 2420                            | Shine 3650                               | Shine 4850                | Shine 9650   | Shine 12050  |
|--------------------------------|--------------------------|---------------------------------------|------------------------------------------|---------------------------|--------------|--------------|
| Specifications                 | Parameters               |                                       |                                          |                           |              |              |
| System rating                  | 20A @12V                 | 20A @12V/24V                          | 50A@24V/36V                              | 50A @48V                  | 50A @96V     | 50A @120V    |
| Solar panel compatible wattage | 100Wp-400Wp @ 12V        | 100Wp-400Wp @ 12V<br>200Wp-800Wp @24V | 100Wp-1200Wp @ 24V<br>1000Wp-2400Wp @36V | Upto 2800 Wp              | Upto 5600 Wp | Upto 7000 Wp |
| Maximum solar panel voltage    | 25V                      | 45V                                   | 55V/75V                                  | 90V                       | 180V         | 230V         |
| Operating temperature range    | 0°C to + 45°C            | 0°C to + 45°C                         | 45°C                                     | 0°C to + 45°C             |              |              |
| Power connection               | 30A Terminal Block       | 30A Terminal Block                    | 60A Terminal Block                       | 60A Terminal Block        |              |              |
| Wire size                      | 6mm <sup>2</sup> Maximum | 6mm <sup>2</sup> Maximum              | 16mm <sup>2</sup> Maximum                | 16mm <sup>2</sup> Maximum |              |              |
| Dimension (mm)                 | 178x71x159               |                                       | 280x130x205                              | 375x315x135               |              |              |
| Weight (kg)                    | 1.2                      | 1.2                                   | 2.88                                     | 4.5                       |              |              |

Technical specifications are subject to change without prior notice.

# LUMINOUS

## SOLAR CHARGE CONTROLLER

### DC Solution

Luminous PWM Charge controllers have efficiency of upto 98%. They charge batteries from solar panels without permitting overcharge and also prevent reverse current flow at night.



Automatic selection of  
12V/24V battery



Aesthetic & compact  
design



USB port



Fuseless electronic &  
software controlled  
protection



Load controller with LVD



Max. utilization of  
solar power



20% extra power  
handling capability



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Product Video



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## Technical Specifications

| Model Name                  | SCC1206NM                 | SCC1210NM*              | SCC1220NM               | SCC1225NM               |
|-----------------------------|---------------------------|-------------------------|-------------------------|-------------------------|
| System rating               | 6A @ 12V                  | 10A @ 12V / 24V         | 20A @ 12V / 24V         | 25A @ 12V / 24V         |
| Technology                  | PWM                       |                         |                         |                         |
| Maximum solar panel wattage | 125Wp @ 12V               | 200Wp @ 12V/400Wp @ 24V | 400Wp @ 12V/800Wp @ 24V | 500Wp @ 12V/900Wp @ 24V |
| Maximum solar panel voltage | 25V                       | 25V/45V                 |                         |                         |
| Low voltage disconnect      |                           |                         |                         |                         |
| A) By state of charge       | N.A                       | Available               |                         |                         |
| B) Controlled by voltage    | Available                 |                         |                         |                         |
| Battery type selection      | Lead Acid & SMF           |                         |                         |                         |
| Self consumption            | Less than 10mA            |                         |                         |                         |
| Efficiency:                 |                           |                         |                         |                         |
| A) Charging                 | 98.5%                     |                         | 96%                     | 96%                     |
| B) Load                     | 98%                       |                         | 96%                     | 96%                     |
| Operating temperature range | 0°C to 50°C               |                         |                         |                         |
| Power connections           | 30 Ampere Terminal        |                         |                         |                         |
| Wire size                   | Recommended 2.5 sq. mm    | Recommended 4 sq. mm    | Recommended 6 sq. mm    | Recommended 4 sq. mm    |
| Enclosure                   | ABS Plastic, IP21         |                         |                         |                         |
| Dimensions (mm)             | 40 x 60 x 135 (L x W x H) |                         |                         |                         |
| Net weight                  | 275 gms                   | 300 gms                 | 350 gms                 | 350 gms                 |

\* Available with dusk to dawn feature

**LUMINOUS**



# BATTERIES & PANELS



# LUMINOUS

## PV PANELS

### Designed For High Performance

Luminous has both Monocrystalline and Polycrystalline PV modules with performance warranty of up to 25 Yrs. They are certified for compliance to IEC standard.

Range available with us is from 165 Watt to 670 Watt catering to wide range of applications from rural to urban projects.



10 Years Warranty on  
90% of the Nominal Power



25 Years Warranty on  
80% of the Nominal Power



Robust  
Mechanical Design



#### Best in class conversion efficiency

Higher cell efficiency means optimum output



#### Optically, mechanically and electrically tested

Frame reduces resistance and thus improves cell efficiency



#### Strong light weight Aluminum frame design

Offers high torsion resistance against wind load and snow loads



#### Anti reflective coating and back surface field (BSF)

More light absorption



#### Advance EVA encapsulation

Multi layer encapsulation provides better module protection



Compliance to IEC standards IEC 61215 & 61730

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Product Video



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### Technical Specification of Mono PV Panels

| Model         | Wattage Wp | Cell Type          | Number of Cells | Max-power Voltage Vmp (V) | Open Circuit Voltage Voc (V) | Max-power Current Imp (A) | Short Circuit Current Isc (A) | Module Efficiency (%) | Panel Dimension (mm) LxWxH |
|---------------|------------|--------------------|-----------------|---------------------------|------------------------------|---------------------------|-------------------------------|-----------------------|----------------------------|
| LUM 200MP-36  | 200W       | Mono PERC          | 36              | 20.14                     | 24.28                        | 9.94                      | 10.51                         | 19.37                 | 1505x686x35 mm             |
| LUM 375MP-66  | 375W       | Mono PERC          | 66              | 36.96                     | 45.28                        | 10.01                     | 10.56                         | 20.84                 | 1820x1002x35 mm            |
| LUM 400MP-72  | 400W       | Mono PERC          | 72              | 19.97                     | 24.27                        | 20.04                     | 21.10                         | 20.12                 | 1986x1001x35 mm            |
| LUM 400MP-72  | 400W       | Mono PERC          | 72              | 39.95                     | 48.55                        | 10.02                     | 10.55                         | 20.12                 | 1986x1001x35 mm            |
| LUM 410MP-54  | 410W       | Mono PERC half cut | 108             | 31.84                     | 37.68                        | 12.88                     | 13.59                         | 20.99                 | 1722x1134x35 mm            |
| LUM 450MP-60  | 450W       | Mono PERC half cut | 120             | 41.33                     | 34.70                        | 13.86                     | 12.97                         | 20.80                 | 1908x1134x35 mm            |
| LUM 540MP-144 | 540W       | Mono PERC half cut | 144             | 41.92                     | 49.40                        | 12.89                     | 13.72                         | 20.89                 | 2279x1134x35 mm            |
| LUM 550MP-144 | 550W       | Mono PERC half cut | 144             | 41.95                     | 49.80                        | 13.12                     | 13.98                         | 21.28                 | 2279x1134x35 mm            |
| LUM 550MP-72  | 550W       | Mono PERC half cut | 144             | 40.83                     | 49.60                        | 13.48                     | 14.04                         | 21.28                 | 2279x1134x35 mm            |
| LUM 550MP-55  | 550W       | Mono PERC half cut | 110             | 31.62                     | 37.95                        | 17.40                     | 18.52                         | 21.05                 | 2394x1096x35 mm            |
| LUM 600MP-60  | 600W       | Mono PERC half cut | 120             | 34.42                     | 41.52                        | 17.44                     | 18.52                         | 21.20                 | 2172x1303x35 mm            |
| LUM 670MP-66  | 670W       | Mono PERC half cut | 132             | 38.02                     | 46.05                        | 17.63                     | 18.75                         | 21.57                 | 2384x1303x35 mm            |

\*STC (Standard test condition) Irradiance: 1000W/m<sup>2</sup>, cell temperature 25C, spectral range AM 1.5

### Technical Specification of Poly PV Panels

| Model       | Wattage Wp | Number of Cells | Max-power Voltage Vmp (V) | Open Circuit Voltage Voc (V) | Max-power Current Imp (A) | Short Circuit Current Isc (A) | Module Efficiency (%) | Panel Dimension (mm) LxWxH |
|-------------|------------|-----------------|---------------------------|------------------------------|---------------------------|-------------------------------|-----------------------|----------------------------|
| LUM 165P-36 | 165W       | 36              | 19.11                     | 23.40                        | 8.60                      | 9.07                          | 16.76                 | 1480x665x30 mm             |
| LUM 170P-36 | 170W       | 36              | 18.86                     | 23.01                        | 9.02                      | 9.61                          | 16.46                 | 1505x686x35 mm             |
| LUM 275P-60 | 275W       | 60              | 31.65                     | 38.91                        | 8.69                      | 9.20                          | 16.90                 | 1640x992x35 mm             |
| LUM 330P-72 | 330W       | 72              | 37.80                     | 46.90                        | 8.70                      | 9.14                          | 17.01                 | 1956x992x35 mm             |
| LUM 330P-72 | 330W       | 72              | 38.03                     | 45.53                        | 8.68                      | 9.22                          | 16.85                 | 1976x996x35 mm             |
| LUM 335P-72 | 335W       | 72              | 38.08                     | 46.02                        | 8.80                      | 9.43                          | 16.85                 | 1986x1001x35 mm            |
| LUM 340P-72 | 340W       | 72              | 19.08                     | 23.17                        | 17.82                     | 18.94                         | 17.10                 | 1986x1001x35 mm            |
| LUM 340P-72 | 340W       | 72              | 38.17                     | 46.34                        | 8.91                      | 9.47                          | 17.10                 | 1986x1001x35 mm            |

\*STC (Standard test condition) Irradiance: 1000W/m<sup>2</sup>, cell temperature 25C, spectral range AM 1.5

# LUMINOUS

## SOLAR BATTERY

### Harness the Power of Sun

Now harness the power of Sun with Luminous Solar batteries. Luminous Solar Batteries are C10-rated deep-cycle batteries that are specially designed for longer backup and are the most reliable in terms of performance and design.



**Very Low Maintenance**  
Topping up frequency:  
Once in 8 to 10 months



**Long Design Life**  
Long cycles  
(1500@80% DOD, 5000  
@20% DOD)



**High Temperature Performance**  
Can handle extreme weather conditions



**High Charge acceptance**  
Rugged Performance



### Technical Specifications

| Model Name   | Nominal Voltage | Rated C20 Capacity at 27°C | Dimension of Battery |          |          | Height upto Terminal | Electrolyte Volume | Charging Current |           |              |          | Weight |
|--------------|-----------------|----------------------------|----------------------|----------|----------|----------------------|--------------------|------------------|-----------|--------------|----------|--------|
|              |                 |                            | Length               | Width    | Height   |                      |                    | Boost Mode       |           | Trickle Mode |          |        |
|              |                 |                            |                      |          |          |                      |                    | Starting         | Finishing | Min          | Max      |        |
|              |                 |                            |                      |          |          |                      |                    |                  |           |              |          |        |
| (V)          | (Ah)            | mm (±3%)                   | mm (±3%)             | mm (±3%) | mm (±5%) | Ltrs. (±5%)          | Amps               | Amps             | (mA)      | (mA)         | Kg (±5%) |        |
| LPTTEX 12150 | 12              | 150                        | 502                  | 191      | 397      | 415                  | 20.4               | 18.0             | 9.0       | 150          | 600      | 60.00  |
| LPTTEX 12200 | 12              | 200                        | 502                  | 191      | 397      | 415                  | 21.8               | 24.0             | 12.0      | 200          | 800      | 68.00  |

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**35<sup>+</sup>** Years of  
**EXCELLENCE**

# LUMINOUS

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