

LUMINOUS

Jis Pe Desh Kare Bharosa



For Home UPS &
Inverter Battery Category

SOLAR PHOTOVOLTAIC MODULES



LUMINOUS SOLAR PHOTOVOLTAIC MODULES

The PV modules offered by Luminous are specially designed to meet the requirements of the market and are available in various ranges, from 3W onwards, using proven and field tested technology of crystalline silicon solar cells. These are high quality and high performance modules suitable for power generation and tested visually, mechanically and electrically according to the standard test conditions applicable worldwide.



The PV modules use high-efficiency Mono and Poly Crystalline Silicon Solar Cells & have Anti Reflective Coating and Back Surface Field (BSF) structure to improve cell conversion efficiency. The Strong, Lightweight Aluminum frame design offers high torsion resistance against wind and snow loads. The High-transparency low-iron tempered glass is enhanced with stiffness and impact resistance while Advance EVA encapsulation system with multilayer back sheet is provided for better module protection.

SALIENT FEATURES

- Uses high-efficiency mono and poly crystalline silicon solar cells.
- Anti reflection coating and Back Surface Field (BSF) structure to improve cell conversion efficiency.
- Optical, mechanical and electrical testing during and after production process.
- Strong, lightweight aluminum frame design offer high torsion resistance against wind and snow loads.
- High-transparency low-iron tempered glass with enhanced stiffness and impact resistance.
- Advance EVA encapsulation system with multilayer back sheets for better module protection.



On 90%
of the Nominal Power



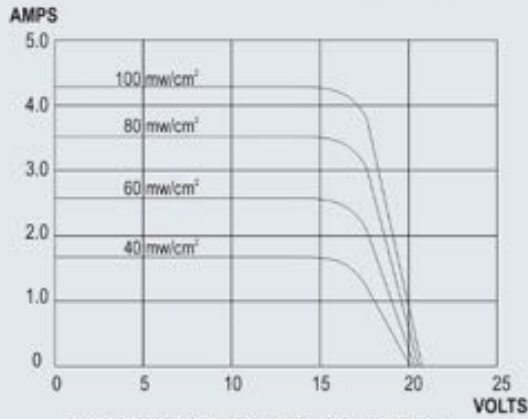
On 80%
of the Nominal Power

SOLAR PHOTOVOLTAIC APPLICATIONS

- Power supply for remote telecommunication equipment
- Monitoring systems for the oil and gas industry
- Traffic, security, environment, signaling systems and other remote monitoring
- Water pumping systems
- Rural electrification and Small home power systems
- Battery charging systems
- Residential roof-top systems
- Commercial/Industrial building roof-top systems
- Large on and off-grid solar stations
- Other industrial and commercial applications

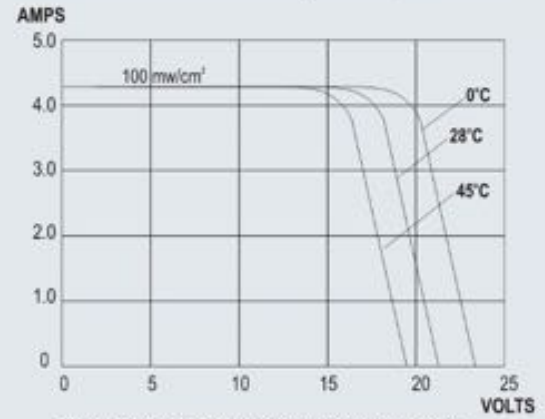


I-V curves under different irradiancies, AM 1.5; 25°C

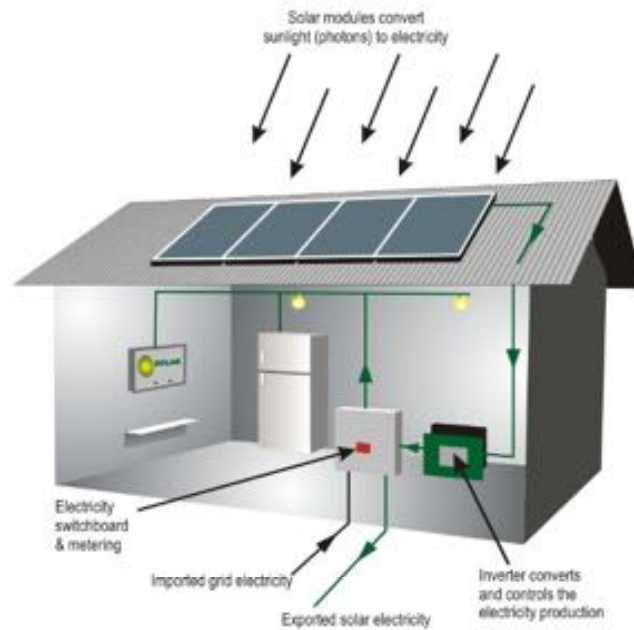


This graph demonstrates the effect on power output of varying light intensities at a cell temperature of 25°C

I-V curves under different temperatures, 100 mw/cm^2



This graph demonstrates low peak power and voltage are affected by changes in cell temperature.



HOW DOES SOLAR PACK WORKS?

Technical Specifications

Power Rating	3 W	5 W	10 W	20 W	37 W	40 W	60 W	75 W	80 W	100 W	125 W	150 W
Electrical Characteristics												
Maximum Power Pmax	3 W	5 W	10 W	20 W	37 W	40 W	60 W	75 W	80 W	100 W	125 W	150 W
Voltage at Max. Power Vmp	8.2 V	17-18 V	17-18 V	17-18 V	17-18 V	17-18 V	17-18 V	17-18 V	17-18 V	17-18 V	17.6 V	17.6 V
Current at max. Power Imp	0.37 A	0.29 A	0.59 A	1.18 A	2.18 A	2.35 A	3.53 A	4.41 A	4.71 A	5.88 A	7.10 A	8.50 A
Open Circuit Voltage Voc	10.5 V	21.0 V	21.0 V	21.0 V	21.0 V	21.0 V	21.0 V	21.0 V	21.0 V	21.0 V	22.00 V	22.00 V
Short Circuit Current Isc	0.42 A	0.33 A	0.67 A	1.29 A	2.49 A	2.59 A	3.90 A	4.75 A	5.36 A	6.71 A	7.68 A	9.09 A
Power Tolerance	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%	±3%
Max. System Voltage	600 V	600 V	600 V	600 V	600 V	600 V	600 V	600 V	600 V	600 V	600 V	1000 V
NOCT (approx.)	45°C	45°C	45°C	45°C	45°C	45°C	45°C	45°C	45°C	45°C	45°C	45°C
Temp. Coefficient Voc	-0.34% / K											
	+0.03% / K											
Cell Information												
Cell material	Crystalline Silicon											
Number of Cells	18	36	36	36	36	36	36	36	36	36	36	72
Mechanical Specifications												
Dimensions ((approx.) (mm))	215x180	250x280	290x345	545x340	655x530	655x530	935x655	935x655	935x655	1205x655	1485x655	1315x990
Weight (approx.) (Kg.)	0.54	0.87	1.18	2.35	4.10	4.10	7.08	7.08	7.08	9.22	12.34	16.14

Note: Technical specifications of additional ratings are available on request.

Founded in 1988, Luminous Power Technologies (P) Limited today is a leading company with a differentiated portfolio of solutions for packaged power, diversified generation, electrical control & safety and energy optimisation.

With over 5000+ employees, 7 manufacturing units, 28 sales offices and more than 50000 channel partners; Luminous apart from its dominating position in the domestic market also has a strong foothold worldwide. Awarded with the 'Global Superbrands' status for the year 2011-12, ISO 50001:2011 certification and MNRE:CRISIL recognition, Luminous is passionately committed to bring uninterrupted and alternate power solutions to the customers that makes their life comfortable and efficient.



Rating 'A+ Stable - CRISIL, the renowned credit rating agency has rated the bank facilities of Rs. 283 crores (incl. proposed limits) enjoyed by LPT as 'A+ Stable' based on audited results of FY 2007-08, estimates of FY 2008-09 and projections for 2 years (only company with this rating)



Quality Systems as per ISO 9001-2000 "Quality approvals from many Telecom, Government, Defense and Computer companies in India."



Luminous received the highly coveted Frost & Sullivan Award, marking its global presence



Winner of Three Consecutive Consumer World Awards*



*inverter category

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