

## ND-L3E6E

Multi-Crystalline Silicon  
Photovoltaic Module  
with 123W Maximum Power

### GENERAL DESCRIPTION

SHARP's ND-L3E6E photovoltaic module is designed for large electrical power requirements. Based on the technology of crystal silicon solar cells cultivated for over 35 years, this module has superb durability to withstand rigorous operating conditions and is suitable for grid connected systems.



### FEATURES

- 1 High-power module (123W) using 155mm square multi - crystal silicon solar cells with 12.6% module conversion efficiency.
- 2 Photovoltaic module with bypass diode minimises the power drop caused by shade.  
Anti Reflection coating and BSF (Back Surface Field) structure to improve cell conversion efficiency: 14%.
- 3 Using white tempered glass, EVA resin, and a weatherproof film along with an aluminum frame for extended outdoor use.
- 4 DC 12V system
- 5 Output terminal: Lead wire with waterproof connector

FINDING ENERGY FOR THE FUTURE

## SPECIFICATIONS

Cell	Multi-crystalline silicon solar cells, 155mm square
No. of cells and connections	36 in series
Application	DC 12V system
Maximum system voltage	DC 600V
Series fuse rating	10A
Maximum power	116.9 W (Min.)
Dimensions	1499 (h) x 662 (w) x 46mm (d)
Weight	14Kg

## ABSOLUTE MAXIMUM RATINGS

Parameters	Rating	Unit
Operating temperatures	-40 to +90	°C
Storage temperature	-40 to +90	°C
Dielectric voltage withstood	2200 max.	V-DC

## OUTPUT TERMINAL

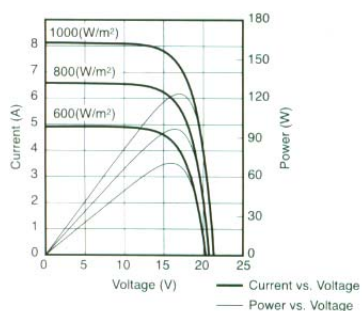
Type of output terminal	Lead wire with connector
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## ELECTRO-OPTICAL CHARACTERISTICS

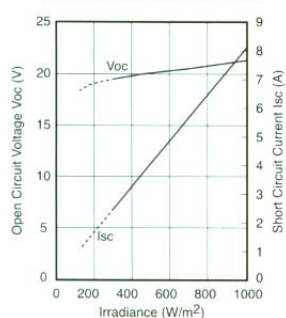
Model		ND-L3E6E			
Parameters	Symbol	Min.	Typ.	Unit	Condition
Open circuit voltage	Voc	-	21.3	V	Irradiance: 1000 W/m <sup>2</sup>
Maximum power voltage	Vpm	-	17.2	V	
Short circuit current	Isc	-	8.12	A	
Maximum power current	Ipm	-	7.16	A	Module temperature: 25°C
Maximum power	Pm	116.9	123.0	W	
Encapsulated solar cell efficiency	$\eta_c$	-	14.1	%	
Module efficiency	$\eta_m$	-	12.4	%	

## CHARACTERISTICS

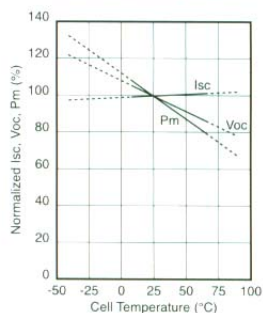
Current, Power vs. Voltage Characteristics (Module temperature: 25°C)



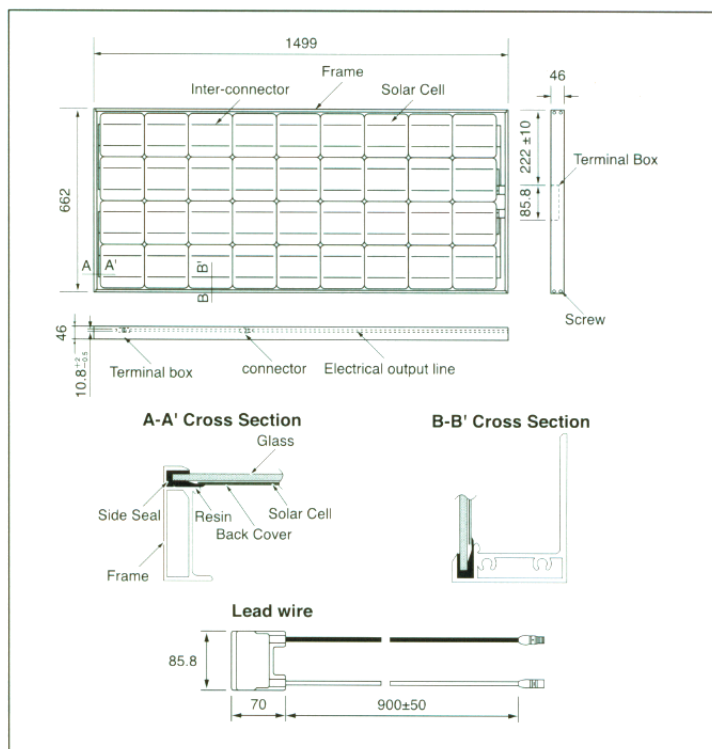
Open Circuit Voltage, Short Circuit Current vs. Irradiance Characteristics (Module temperature: 25°C)



Normalized Isc, Voc, Pm vs. Module Temperature Characteristics



## OUTLINE DIMENSIONS



In the absence of confirmation by specification sheets, SHARP takes no responsibility for any defects that may occur in equipment using any SHARP products shown in catalogues, data books, etc. Contact SHARP in order to obtain the latest specification sheets before using any SHARP products.

- Specifications are subject to change without notice.

## APPLICATIONS

- Grid connected residential systems
- Office buildings
- Solar power stations
- Solar villages
- Villas, mountain cottages
- Pumps
- Lighting equipment
- Traffic signs
- Radio relay stations
- Beacons
- Telemeter systems
- Telecommunication systems

# SHARP

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For further details visit the Solar Power section at: [www.sharp.co.uk](http://www.sharp.co.uk)