

Sharp 180W, Monocrystalline Photovoltaic Module (NUS0E3E)

Sharp's NUS0E3E photovoltaic module is designed for large electrical requirements. Based on the technology of crystal silicon solar cells cultivated for over 40 years, this module has superb durability to withstand rigorous operating conditions and is suitable for grid connected systems.

SPECIFICATIONS (NUS0E3E)

Cell	Monocrystalline silicon solar cells, 155.5mm square
No. of cells and connections	48 in series
Application	High voltage system
Maximum system voltage	DC 1,000V
Nominal power	180W
Dimensions	1,318 x 994 x 46mm
Weight	16.0kg
Type of output terminal	Lead wire with connector

ABSOLUTE MAXIMUM RATINGS

Parameters	Rating	Unit
Operating temperature	-40 to +90	°C
Storage temperature	-40 to +90	°C

TEMPERATURE COEFFICIENTS

αP_m	-0.485% / °C
αI_{sc}	+0.053% / °C
αV_{oc}	-104mV / °C



FEATURES

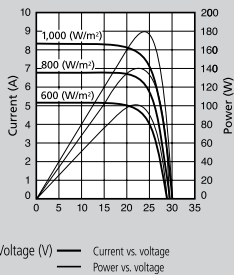
- » High-power module (180W) using 155.5mm square monocrystalline silicon solar cells with 13.7% module conversion efficiency.
- » Photovoltaic module with bypass diode minimises the power drop caused by shade. Textured cell surface to reduce the reflection of sunlight and BSF (Back Surface Field) structure to improve cell conversion efficiency: 15.7%
- » Using white tempered glass, EVA resin, and a weatherproof film along with an aluminium frame for extended outdoor use.
- » High-voltage output for grid-connected system.
- » Output terminal: Lead wire with waterproof connector

ELECTRO-OPTICAL CHARACTERISTICS

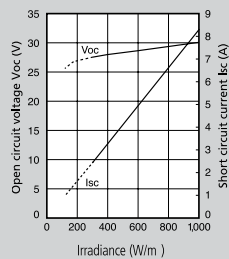
Parameters	Symbol	Min.	Typ.	Unit	Conditions
Open circuit voltage	V_{oc}	-	30.0	V	Standard test conditions (STC)
Maximum power voltage	V_{pm}	-	23.7	V	
Short circuit current	I_{sc}	-	8.37	A	
Maximum power current	I_{pm}	-	7.60	A	Irradiance: 1,000W/m ²
Maximum power	P_m	171.0	180.0	W	
Encapsulated solar cell efficiency	η_c	-	15.7	%	Module Temperature: 25 °c
Module efficiency	η_m	-	13.7	%	

Characteristics

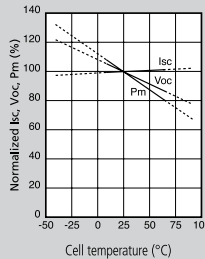
Current, power vs. voltage characteristics (module temperature: 25 °C)



Open circuit voltage, short circuit current vs. irradiance characteristics (module temperature: 25 °C)



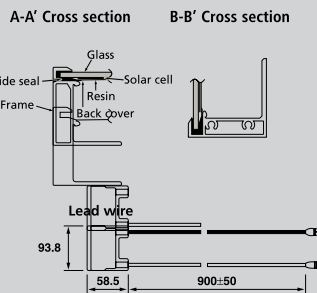
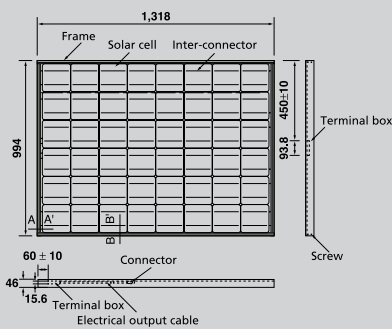
Normalized I_{sc} , V_{oc} , P_m vs. module temperature characteristics



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

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 catalogs, 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.

Warranty Period

The warranty period with respect to power output continues for a total of 25 years from date of purchase, the first ten years at 90% minimum rated power output and the balance of 15 year at minimum rated power output.

This warranty is transferable when the product remains installed in original location at the time of product warranty registration.

Warranty coverage does not apply when:

- The product is improperly installed;
- The product is installed in a mobile or marine environment, subject to improper voltage or power surges or abnormal environmental conditions (such as acid rain or other pollution);
- The components in the construction base on which the module is mounted are defective, external corrosion, mould discolouration or the like occurs.

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Phone our sales offices on 1300 727 151 for more information