

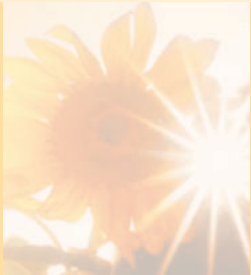
SHARP

..... *be sharp*

NUS0E3E

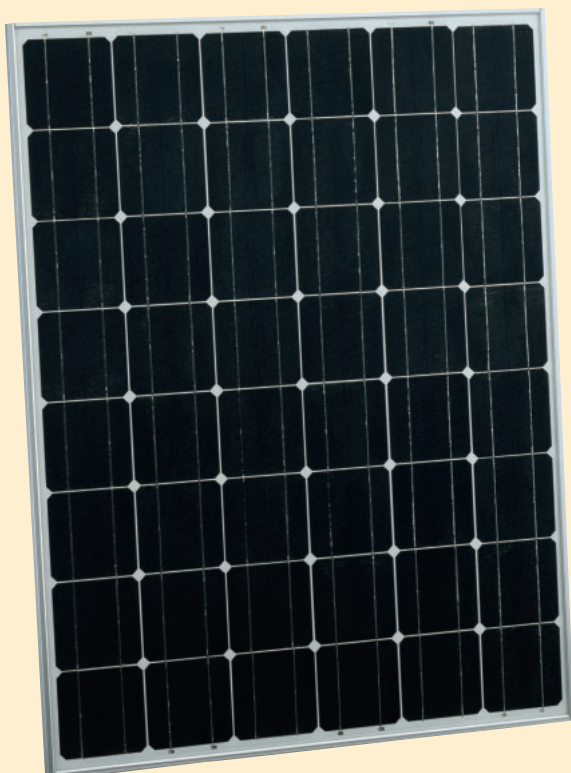
180 W

Photovoltaic module monocrystalline



MONOCRYSTALLINE SILICON PHOTOVOLTAIC MODULE WITH 180 W MAXIMUM POWER

Sharp's NUS0E3E photovoltaic module is designed for large electrical power 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.



Features

- High-power module (180 W) using 155.5 mm 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 weather-proof film along with an aluminium frame for extended outdoor use
- High-voltage output for grid-connected system
- Output terminal: Lead wire with waterproof connector

Specifications NUS0E3E

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

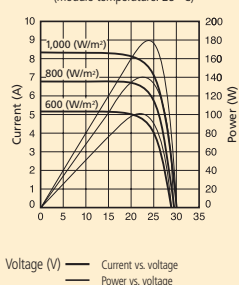
αP_m	-0.485% / °C
αI_{sc}	+0.053% / °C
αV_{oc}	-104 mV / °C

Electro-optical characteristics

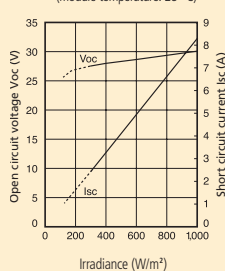
Parameters	Symbol	Min.	Typ.	Unit	Conditions
Open circuit voltage	V_{oc}	—	30.0	V	Standard test conditions (STC)
Maximum power voltage	V_{pm}	—	23.7	V	
Short circuit current	I_{sc}	—	8.37	A	Irradiance: 1,000 W/m ²
Maximum power current	I_{pm}	—	7.60	A	
Maximum power	P_m	171.0	180.0	W	AM 1.5
Encapsulated solar cell efficiency	η_c	—	15.7	%	Module temperature: 25 °C
Module efficiency	η_m	—	13.7	%	

Characteristics

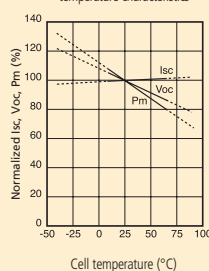
Current, power vs. voltage characteristics (module temperature: 25 °C)



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



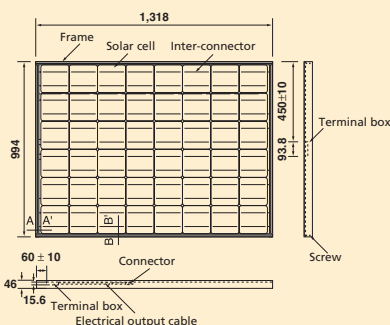
Normalized I_{sc} , V_{oc} , P_m vs. module temperature characteristics



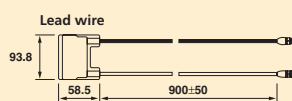
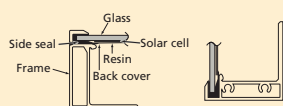
Applications

- 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



A-A' Cross section B-B' Cross section



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.

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