SHARP



GENERAL DESCRIPTION

SHARP's NT-R5E3E 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

- High-power module (175W) using 125mm square single-crystal silicon solar cells with 13.5% module conversion efficiency.
- 2 Photovoltaic module with bypass diode minimizes 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: 16.4%.
- 3 Using white tempered glass, EVA resin, and a weatherproof film along with an aluminum frame for extended outdoor use
- 4 DC 24V system and high-voltage output for grid-connected system
- 5 Output terminal: Lead wire with waterproof connector

SPECIFICATIONS

Cell	Single-crystalline silicon solar cells,		
Cen	125mm square		
No. of cells and connections	72 in series		
Application	DC 24V system		
Maximum system voltage	DC 1000V		
Series fuse rating	10A		
Maximum power	166.3 W (Min.)		
Dimensions	1575 × 826 × 46mm		
Weight	17.0kg		

ABSOLUTE MAXIMUM RATINGS

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

OUTPUT TERMINAL

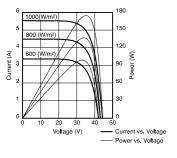
Type of output terminal	Lead wire with connector

ELECTRO-OPTICAL CHARACTERISTICS

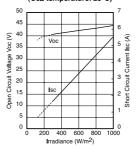
Model		NT-R5E3E			
Parameters	Symbol	Min.	Тур.	Unit	Condition
Open circuit voltage	Voc	_	44.4	V	
Maximum power voltage	Vpm	_	35.4	V	Irradiance:
Short circuit current	Isc	_	5.55	A	1000 W/m ²
Maximum power current	Ipm	_	4.95	A	M- 4-1-
Maximum power	Pm	166.3	175.0	W	Module temperature:
Encapsulated solar cell efficiency	ης	_	16.4	%	25°C
Module efficiency	ηm	_	13.5	%	

CHARACTERISTICS

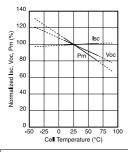
Current, Power vs. Voltage Characteristics (Cell temperature: 25°C)



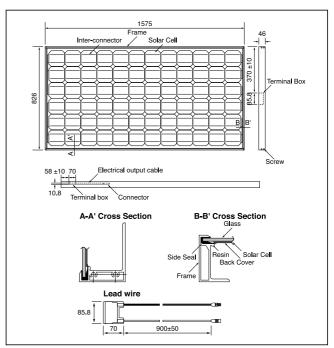
Open Circuit Voltage, Short Circuit Current vs. Irradiance Characteristics (Cell temperature: 25°C)



Normalized Isc, Voc, Pm vs. Cell 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 catalogs, data books, etc. Contact SHARP in order to obtain the latest specification sheets before using any SHARP products.

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



[·] Specifications are subject to change without notice.