

# SHARP

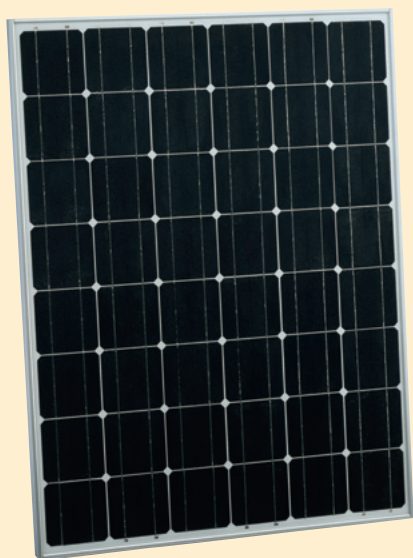
**NUS5E3E / NU185E1**  
**185 W**

Photovoltaic module monocrystalline



## MONOCRYSTALLINE SILICON PHOTOVOLTAIC MODULE WITH 185 W NOMINAL POWER

Sharp's NUS5E3E / NU185E1 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 (185 W) using 155.5 mm square monocrystalline silicon solar cells with 14.1 % 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.
- Using white tempered glass, EVA resin, and a weather-proof film along with an aluminium frame for extended outdoor use.
- Output terminal: Lead wire with waterproof connector.
- NUS5E3E: manufactured in Japan  
NU185E1: manufactured in UK  
Apart from the place of manufacture the models are identical in construction.
- Hail damage resistance tested by TÜV in accordance with IEC61215.

## Specifications NUS5E3E / NU185E1

Cell	Monocrystalline silicon solar cells, 155.5 mm square
No. of cells and connections	48 in series
Maximum system voltage	1,000 V DC
Nominal power	185 W
Dimensions	1,318 x 994 x 46 mm
Weight	16.0 kg
Type of output terminal	Lead wire with connector

## Ambient conditions

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

## Temperature coefficients

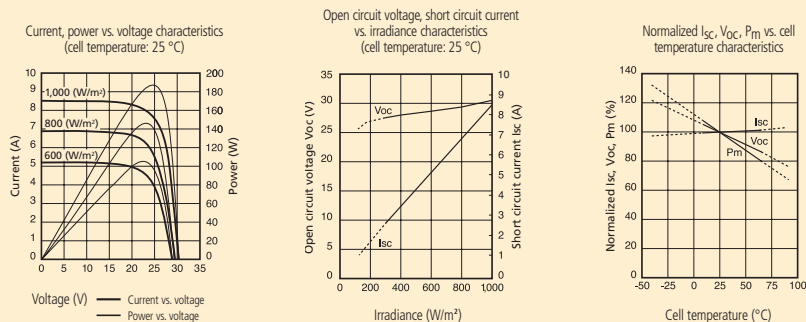
$\alpha P_m$	-0.485 % / °C
$\alpha I_{sc}$	+0.053 % / °C
$\alpha V_{oc}$	-104 mV / °C

## Electrical data

Parameters	Symbol	Min.	Typ.	Unit
Open circuit voltage	$V_{oc}$	—	30.2	V
Maximum power voltage	$V_{pm}$	—	24.0	V
Short circuit current	$I_{sc}$	—	8.54	A
Maximum power current	$I_{pm}$	—	7.71	A
Nominal power	$P_m$	175.8	185.0	W
Module efficiency	$\eta_m$	—	14.1	%

The electrical data applies under Standard Test Conditions (STC): Radiation 1,000 W/m<sup>2</sup> with a spectrum of AM 1.5 and at a cell temperature of 25 °C.

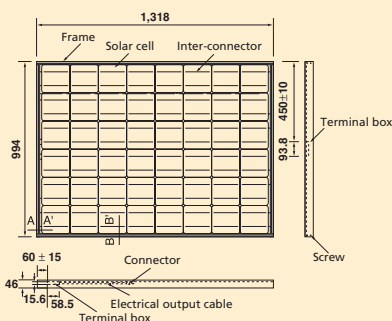
## Characteristics



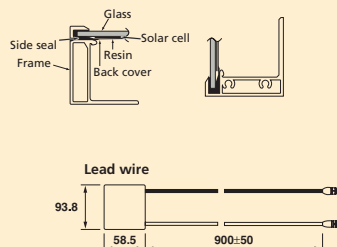
## Application options

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

## Outline dimensions



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



This module should not be connected to any direct load.

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.

# SHARP

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