

# HIT<sup>®</sup> photovoltaic module

Magyarországi forgalmazó:

GIA Hungária Kft.

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HIT-N240SE10  
HIT-N235SE10

NE

**R&D technology adaptation**

Improvement of cell efficiency to reduce

- carrier recombination loss
- optical absorption loss
- resistance loss

Application of three tabs

- Reducing electrical loss between the cell fingers and tabs
- Making the tab width thinner to expand the light receiving surface

**New tab design**

**Anti-reflection glass**

Light capturing technology

- Reducing reflection and scattering of incoming light
- Improving generated electricity levels in morning and evening times

19.0%\*

190 W/m<sup>2</sup>



\* For HIT-N240SE10

### HIT cell technology

The SANYO HIT (Heterojunction with Intrinsic Thin layer) solar cell is made of a thin monocrystalline silicon wafer surrounded by ultra-thin amorphous silicon layers. This product provides the industry's leading performance and value using state-of-the-art manufacturing techniques.

### Environmentally friendly solar cell

HIT can generate more clean energy than other conventional crystalline solar cells.

### Special features

SANYO HIT solar modules are 100% emission free, have no moving parts and produce no noise. The dimensions of the HIT modules enable a space saving installation and the achievement of maximum output power possible on a given roof area.

### High performance at high temperatures

Even at high temperatures, the HIT solar cell can maintain higher efficiency than a conventional crystalline silicon solar cell.

### HIT<sup>®</sup> solar cell structure

### Changes in generated power daytime

# HIT<sup>®</sup>

## Photovoltaic Module

HIT is a registered trademark of SANYO Electric Co., Ltd. The name "HIT" comes from "Heterojunction with intrinsic Thin-layer" which is an original technology of SANYO Electric Co., Ltd.

The HIT cell and module have very high conversion efficiency in mass production.

Model	Cell Efficiency	Module Efficiency	Output/m <sup>2</sup>
HIT-N240SE10	21.6%	19.0%	190 W/m <sup>2</sup>
HIT-N235SE10	21.1%	18.6%	186 W/m <sup>2</sup>

### Electrical data (at STC)

Models HIT-NxxxSE10

	240	235
Maximum power (Pmax) [W]	240	235
Max. power voltage (Vmp) [V]	43.7	43.0
Max. power current (Imp) [A]	5.51	5.48
Open circuit voltage (Voc) [V]	52.4	51.8
Short circuit current (Isc) [A]	5.85	5.84
Maximum over current rating [A]	15	
Output power tolerance [%]	+10/-5*	
Maximum system voltage [V]	1000	

Note: Standard Test Conditions: Air mass 1.5, Irradiance = 1000W/m<sup>2</sup>, cell temperature = 25°C  
 \* All modules measured by SANYO facility have output with positive tolerance

#### Temperature characteristics

	240	235
Temperature (NOCT) [°C]	44.0	44.0
Temperature coefficient of Pmax [%/°C]	-0.30	-0.30
Temperature coefficient of Voc [V/°C]	-0.131	-0.130
Temperature coefficient of Isc [mA/°C]	1.76	1.75

#### At NOCT

	240	235
Maximum power (Pmax) [W]	182	179
Max. power voltage (Vmp) [V]	41.1	40.5
Max. power current (Imp) [A]	4.44	4.41
Open circuit voltage (Voc) [V]	49.4	48.9
Short circuit current (Isc) [A]	4.71	4.70

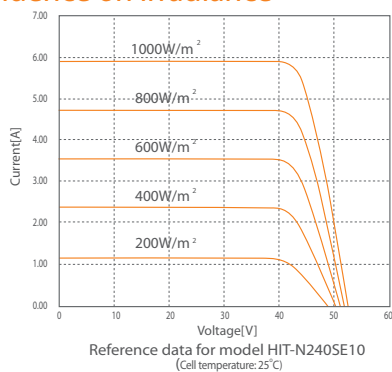
Note: Nominal Operating Cell Temperature : Air mass 1.5 spectrum, Irradiance = 800W/m<sup>2</sup>, Air temperature = 20°C, wind speed 1 m/s

#### At low irradiance

	240	235
Maximum power (Pmax) [W]	45.9	44.7
Max. power voltage (Vmp) [V]	41.7	41.0
Max. power current (Imp) [A]	1.10	1.09
Open circuit voltage (Voc) [V]	49.0	48.4
Short circuit current (Isc) [A]	1.17	1.17

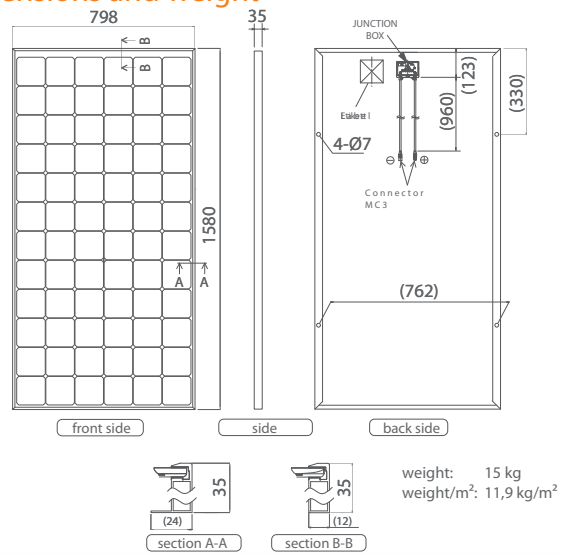
Note: Low irradiance: Air mass 1.5 spectrum, Irradiance = 200W/m<sup>2</sup>, cell temperature = 25°C

### Dependence on irradiance



### Dimensions and weight

unit: mm



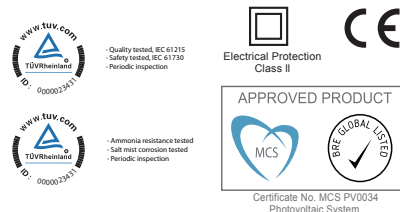
### Guarantee

Power output: 10 years (90% of Pmin), 25 years (80% of Pmin)  
 Product workmanship: 10 years  
 (Based on guarantee document)

### Materials

Cell material: 5 inch HIT cells  
 Glass material: AR coated tempered glass  
 Frame materials: Black anodized aluminium  
 Connectors type: MC3

### Certificates



### Member of



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**CAUTION!** Please read the installation manual carefully before using the products.

Due to our policy of continual improvement the products covered by this brochure may be changed without notice.