HIT® photovoltaic module

HIT-N240SE10
HIT-N235SE10
HIT-N230SE10

R&D technology adaptation

Improvement of the cell efficiency to reduce
- Carrier recombination loss
- Optical absorption loss
- Resistance loss

New tab design

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

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/m²

* For HIT-N240SE10

HIT cell technology

The SANYO HIT(Heterojunction with Intrinsic Thin layer) solar cell is made of a thin mono crystalline 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

More Clean Energy
HIT can generate more clean Energy than other conventional crystalline solar cells.

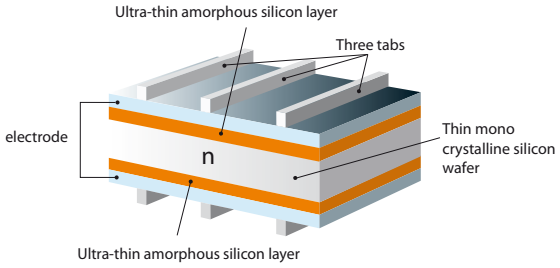
Special Features

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

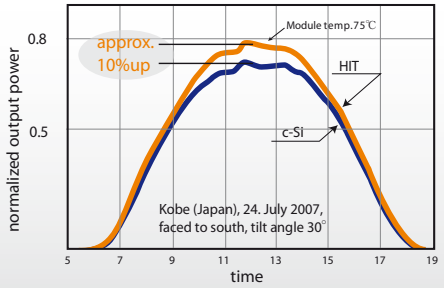
High performance at high temperatures

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

HIT® Solar Cell Structure



Changes in generated power daytime



HIT® Photovoltaic Module

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

Model	Cell Efficiency	Module Efficiency	Output / m²
HIT-N240SE10	21.6%	19.0%	190 W/m²
HIT-N235SE10	21.1%	18.6%	186 W/m²
HIT-N230SE10	20.7%	18.2%	182 W/m²

HIT® Photovoltaic Module

Electrical and Mechanical Characteristics

HIT-N240SE10, HIT-N235SE10, HIT-N230SE10

EN

Electrical data (at STC)

	Models HIT-NxxxSE10		
	240	235	230
Maximum power (Pmax) [W]	240	235	230
Max. power voltage (Vmp) [V]	43.7	43.0	42.3
Max. power current (Imp) [A]	5.51	5.48	5.45
Open circuit voltage (Voc) [V]	52.4	51.8	51.2
Short circuit current (Isc) [A]	5.85	5.84	5.83
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/m², cell temperature = 25°C
* All modules measured by SANYO facility have output with positive tolerance

Temperature characteristics	240	235	230
Temperature (NOCT) [°C]	44.0	44.0	44.0
Temperature coefficient of Pmax [%/°C]	-0.30	-0.30	-0.30
Temperature coefficient of Voc [V/°C]	-0.131	-0.130	-0.128
Temperature coefficient of Isc [mA/°C]	1.76	1.75	1.75

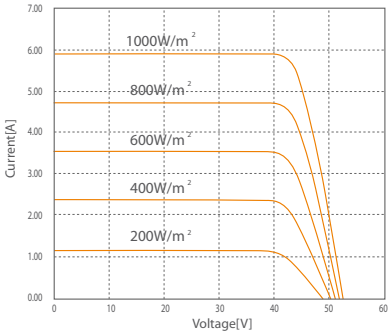
At NOCT	240	235	230
Maximum power (Pmax) [W]	182	179	175
Max. power voltage (Vmp) [V]	41.1	40.5	39.9
Max. power current (Imp) [A]	4.44	4.41	4.38
Open circuit voltage (Voc) [V]	49.4	48.9	48.3
Short circuit current (Isc) [A]	4.71	4.70	4.70

Note: Nominal Operating Cell Temperature : Air mass 1.5 spectrum, Irradiance = 800W/m², Air temperature = 20°C , wind speed 1 m/s

At low irradiance	235	235	230
Maximum power (Pmax) [W]	45.9	44.7	43.8
Max. power voltage (Vmp) [V]	41.7	41.0	40.6
Max. power current (Imp) [A]	1.10	1.09	1.08
Open circuit voltage (Voc) [V]	49.0	48.4	47.8
Short circuit current (Isc) [A]	1.17	1.17	1.17

Note: Low irradiance: Air mass 1.5 spectrum, Irradiance = 200W/m², cell temperature = 25°C

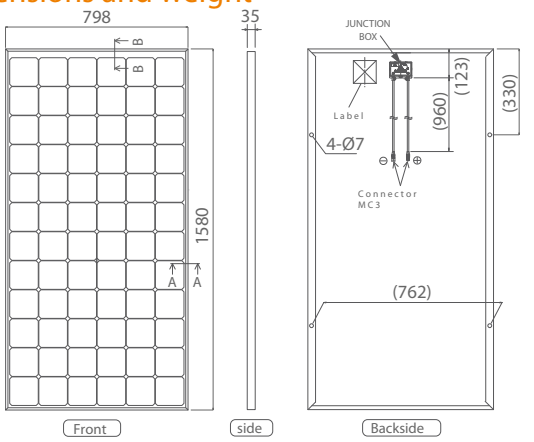
Dependence on irradiance



Reference data for model HIT-N240E10
(Cell temperature: 25°C)

Dimensions and weight

unit: mm



Weight: 15 Kg
Weight/m²: 11,9 Kg/m²

Guarantee

Power output: 10 years (90% of Pmin) 25 years (80% of Pmin)
Product workmanship: 5 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

TÜVRheinland
- Safety tested, IEC 61730
- Periodic Inspection

IEC 61730
IEC 61215

Electrical Protection Class II

CE

Member of

PV CYCLE

Please consult your local dealer for more information.

⚠ 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.

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