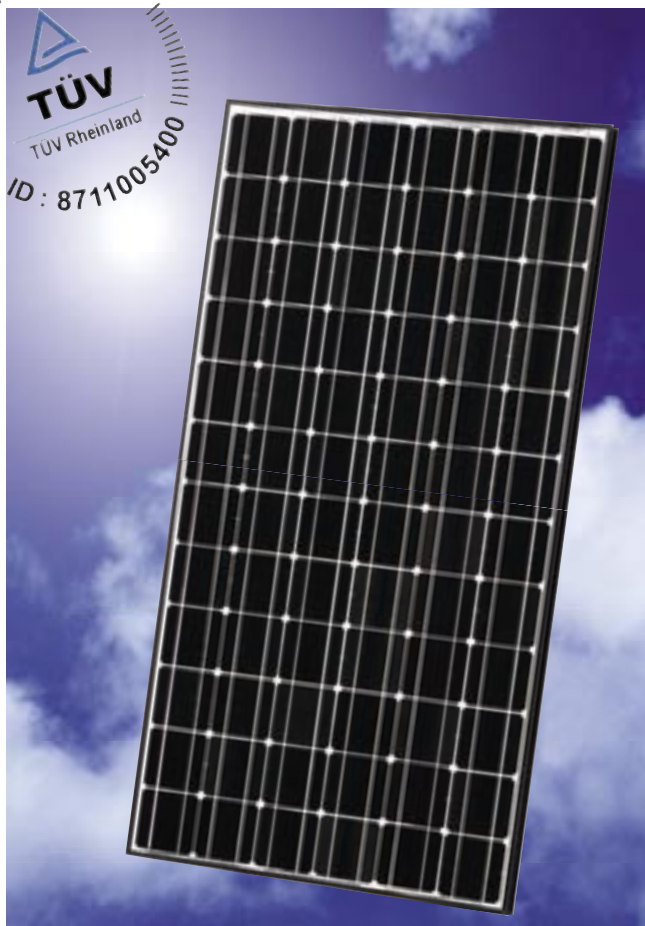


# HIT PHOTOVOLTAIC MODULE



## HIP-215NHE5, HIP-210NHE5, HIP-205NHE5

The SANYO HIT (**H**eterojunction with **I**ntrinsic **T**hin 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.



### Benefit in Terms of Performance

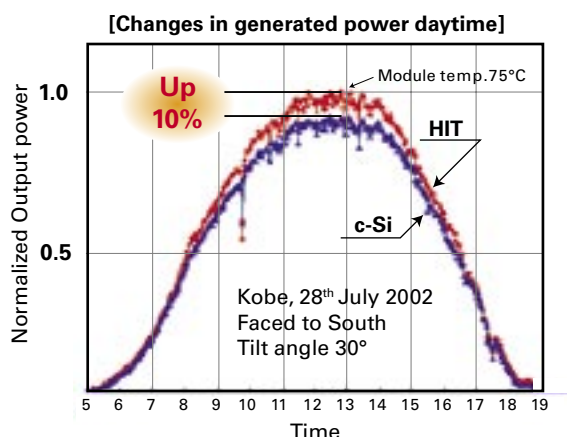
High efficiency cell

Model	Cell Efficiency	Module Efficiency
HIP-215NHE5	19.3%	17.2%
HIP-210NHE5	18.7%	16.8%
HIP-205NHE5	18.2%	16.4%

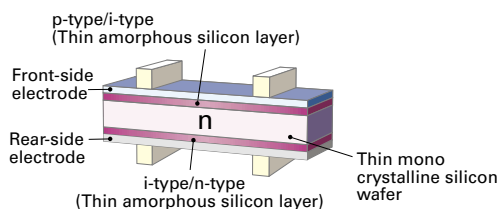
The HIT cell and module have the world's highest level of conversion efficiency in mass production.

### 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



Development of HIT solar cell was supported in part by the New Energy and Industrial Technology Development Organization (NEDO).

### Environmental Friendly Solar Cell

#### More Clean Energy

HIT can generate more annual power output per unit area than other conventional crystalline silicon 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.

### Benefit in Terms of Quality

#### High quality in accordance with ISO 9001 and 14001 standards

HIT solar cell and modules are subject to strict inspections and measurements to ensure compliance with electrical, mechanical and visual criteria.

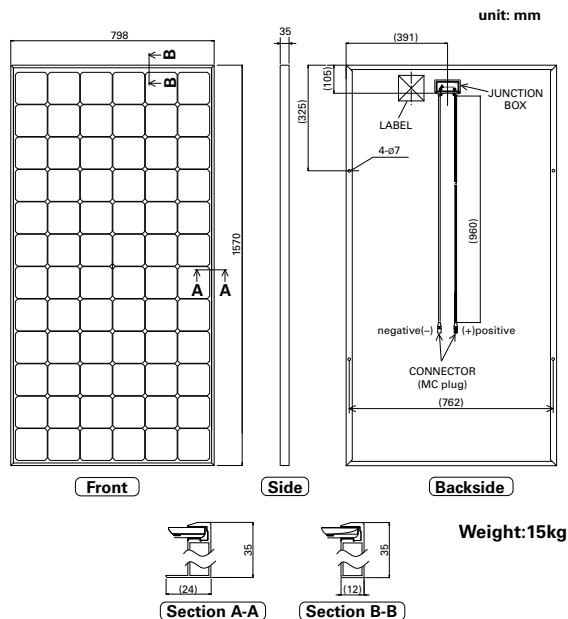
# Electrical and Mechanical Characteristics

## HIP-215NHE5, HIP-210NHE5, HIP-205NHE5

Models HIP-xxxNHE5			
Electrical data	215	210	205
Maximum power (Pmax) [W]	215	210	205
Max. power voltage (Vpm) [V]	42.0	41.3	40.7
Max. power current (Ipm) [A]	5.13	5.09	5.05
Open circuit voltage (Voc) [V]	51.6	50.9	50.3
Short circuit current (Isc) [A]	5.61	5.57	5.54
Warranted minimum power (Pmin) [W]	204.3	199.5	194.8
Output power tolerance [%]	+10/-5		
Maximum system voltage [Vdc]	1000		
Temperature coefficient of Pmax [%/°C]	-0.3		
Voc [V/°C]	-0.129	-0.127	-0.126
Isc [mA/°C]	1.68	1.67	1.66

Note 1: Standard test conditions: Air mass 1.5, Irradiance = 1000W/m<sup>2</sup>, Cell temperature = 25°C  
 Note 2: The values in the above table are nominal.

### Dimensions and weight



### Warranty

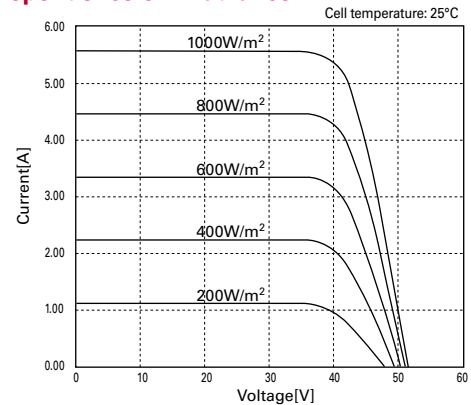
Power output: 20 years (80% of minimum output power (Pmin))  
 Product workmanship: 2 years  
 (Based on contract terms)

**CAUTION!** Please read the operating instructions carefully before using the products.

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

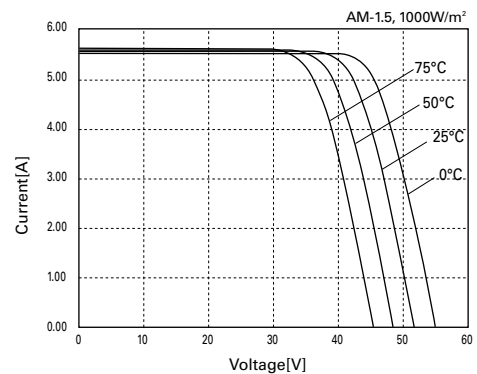
Reference data for model HIP-215NHE5

### Dependence on irradiance

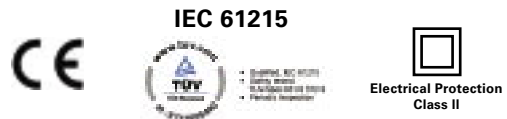


Reference data for model HIP-215NHE5

### Dependence on temperature



### Certificates



Please consult your local dealer for more information.

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**SANYO**

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 Clean Energy Company

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