

# HIT photovoltaic module

HIP-215NKHE5  
HIP-210NKHE5  
HIP-205NKHE5

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.



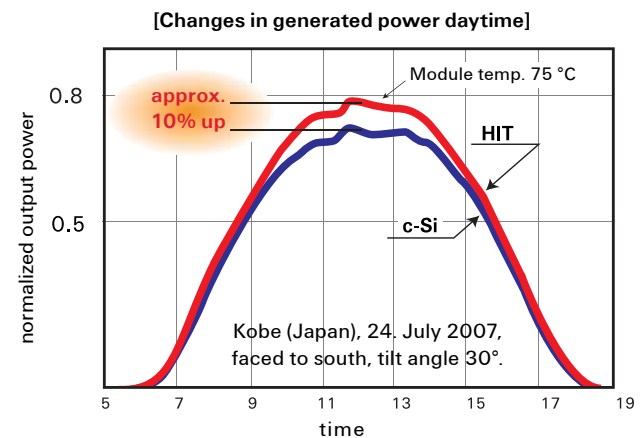
## Benefit in Terms of Performance

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

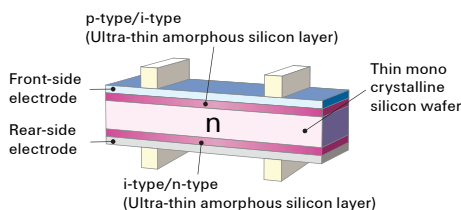
Model	Cell Efficiency	Module Efficiency
HIP-215NKHE5	19.3%	17.1%
HIP-210NKHE5	18.9%	16.7%
HIP-205NKHE5	18.4%	16.3%

## 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).

## Environmentally-Friendly Solar Cell More Clean Energy

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

## Special Features

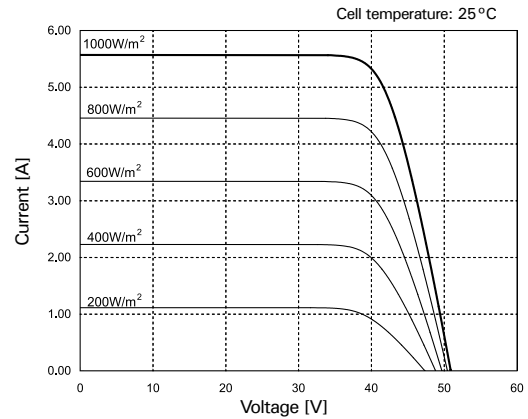
SANYO HIT solar modules are 100% emission free, have no moving parts and produce no noise. The dimensions of the HIT modules allow space-saving installation and achievement of maximum output power possible on given roof area.

Models HIP-xxxNKHE5			
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 min. power (Pmin) [W]	204.3	199.5	194.8
Maximum over current rating [A]	15		
Output power tolerance [%]	+ 10 / -5		
Max. system voltage [Vdc]	1000		
Temperature coeff. of Pmax [%/°C]	-0.30		
Temperature coeff. of Voc [V/°C]	-0.129	-0.127	-0.126
Temperature coeff. of Isc [mA/°C]	1.68	1.67	1.66

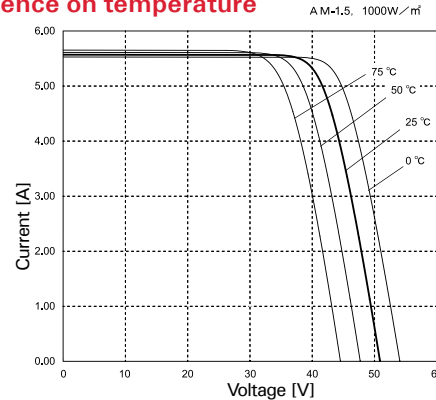
Note 1: Standard test conditions: Air mass 1.5, Irradiance = 1000 W/m<sup>2</sup>, Cell temperature = 25 °C.  
Note 2: The values in the above table are nominal.

## Reference data for model HIP-215NKHE5

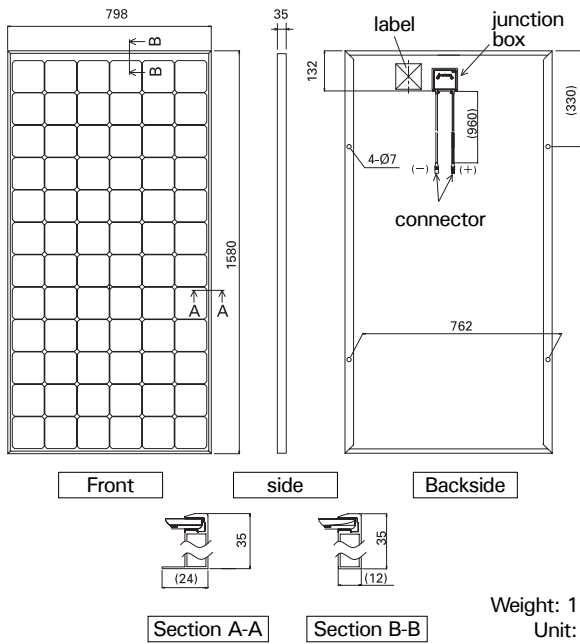
### Dependence on irradiance



### Dependence on temperature



### Dimensions and weight



### Certificates

IEC 61730 IEC 61215



• Safety tested, IEC 61730  
• Periodic Inspection



Electrical Protection Class II

Please consult your local dealer for more information.

**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.

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