

## HIT photovoltaic module

**HIP-215NKHE1**  
**HIP-210NKHE1**  
**HIP-205NKHE1**

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.



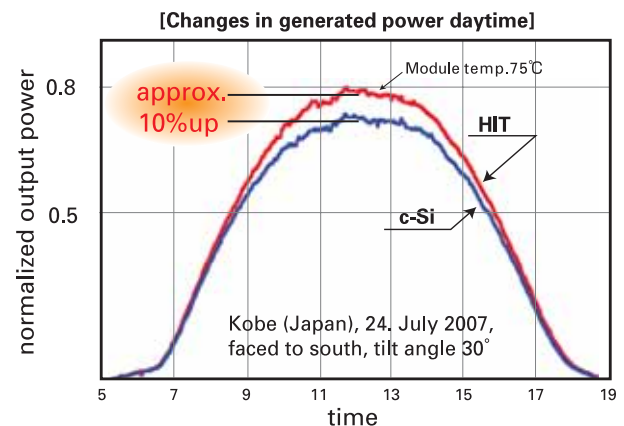
### Benefit in Terms of Performance

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

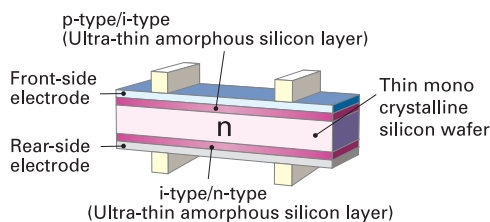
Model	Cell Efficiency	Module Efficiency
HIP-215NKHE1	19.3%	17.1%
HIP-210NKHE1	18.9%	16.7%
HIP-205NKHE1	18.4%	16.3%

### 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.

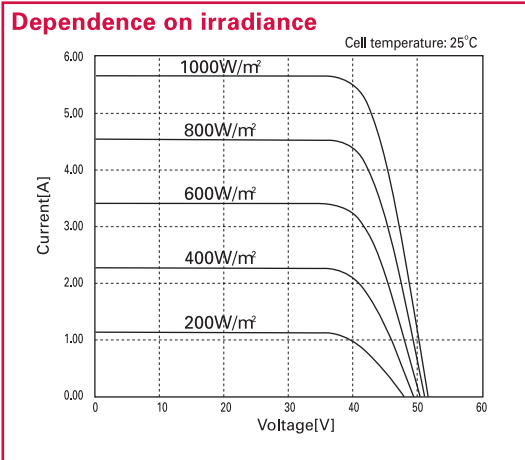
### Special Features

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.

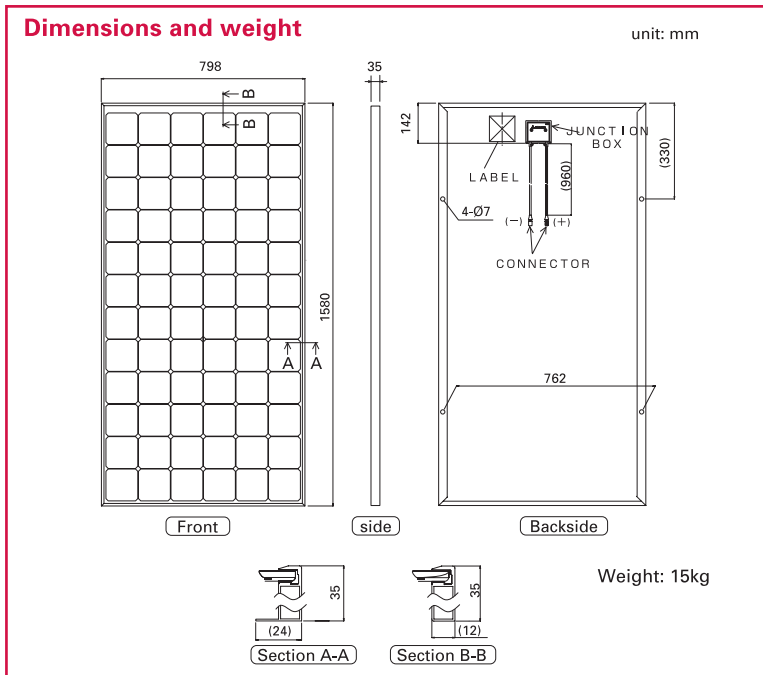
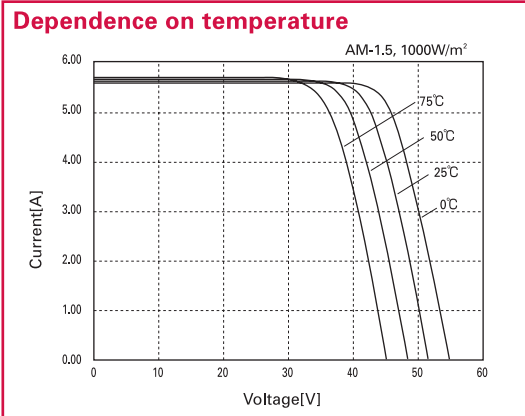
Models HIP-xxxNKHE1				
Electrical data		215	210	205
Maximum power (Pmax)	[W]	215	210	205
Max. power voltage (Vmp)	[V]	42.0	41.3	40.7
Max. power current (Imp)	[A]	5.13	5.09	5.05
Open circuit voltage (Voc)	[V]	51.6	50.9	50.3
Short circuit current (Isc)	[A]	5.61	5.57	5.54
Warranted minimum power (Pmin)	[W]	204.3	199.5	194.8
Maximum over current rating	[A]	15		
Output power tolerance	[%]	+10/-5		
Maximum system voltage	[V]	1000		
Temperature coefficient of Pmax	[%/°C]	-0.30		
	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

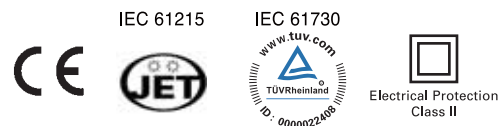
Reference data for model HIP-215NKHE1



Reference data for model HIP-215NKHE1



### Certificates



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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