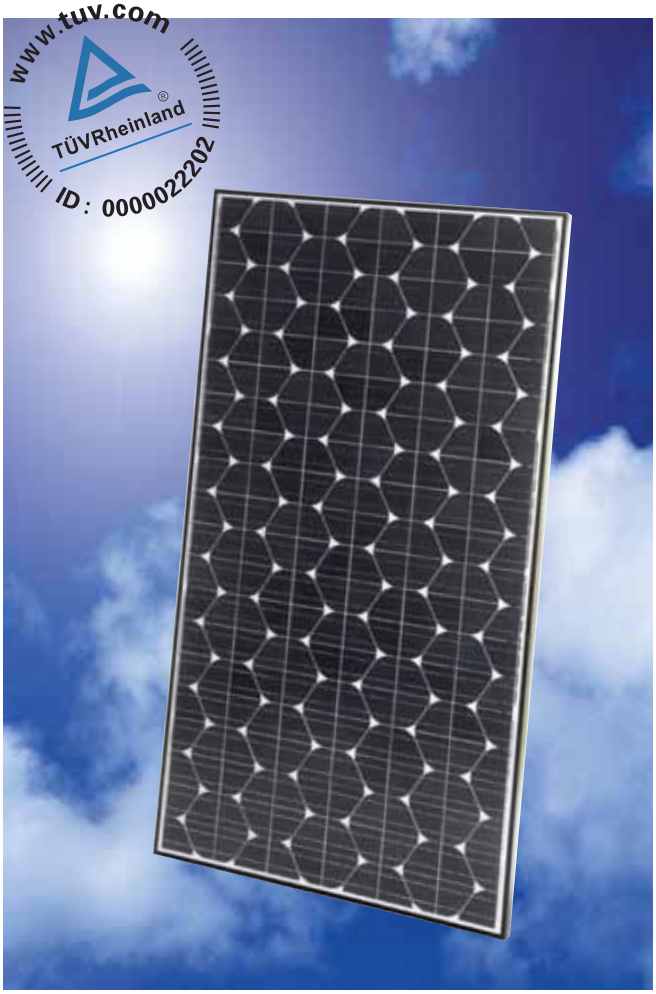
Think GAIA
For Life and the Earth

SANYO

HIT photovoltaic module

HIP-225HDE1
HIP-220HDE1
HIP-215HDE1

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.



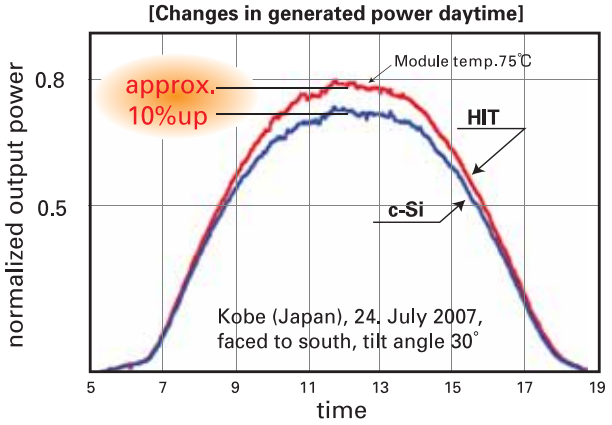
Benefit in Terms of Performance

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

Model	Cell Efficiency	Module Efficiency
HIP-225HDE1	18.8%	16.2%
HIP-220HDE1	18.3%	15.9%
HIP-215HDE1	17.9%	15.5%

High performance at high temperatures

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



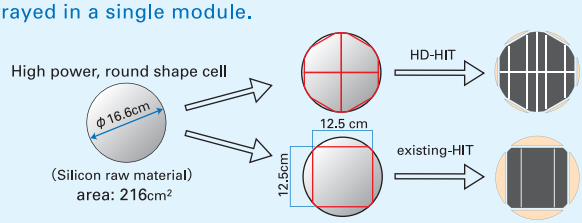
Environmentally-Friendly Solar Cell

More Clean Energy

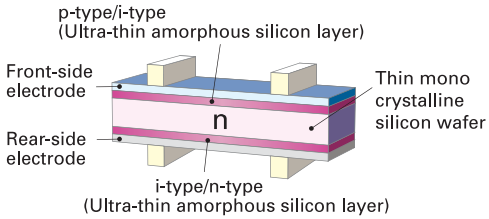
HIT can generate more clean Energy than other conventional crystalline solar cells.

A module which uses silicon resources effectively

The newly developed "Honeycomb Design" HD cell allows the maximum number of round-type, high-power cells to be arrayed in a single module.



HIT Solar Cell Structure



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

HIT Photovoltaic Module HD 225/220/215

HIT Photovoltaic Module

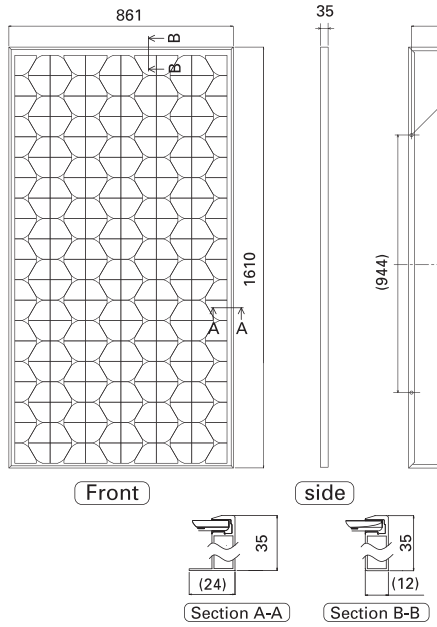
Electrical and Mechanical Characteristics
HIP-225HDE1,HIP-220HDE1,HIP-215HDE1

		Models HIP-xxxHDE1		
Electrical data		**225**	**220**	**215**
Maximum power (Pmax)	[W]	225	220	215
Max. power voltage (Vmp)	[V]	33.9	33.5	33.1
Max. power current (Imp)	[A]	6.64	6.57	6.50
Open circuit voltage (Voc)	[V]	41.8	41.4	40.9
Short circuit current (Isc)	[A]	7.14	7.07	6.99
Warranted minimum power (Pmin)	[W]	213.75	209	204.25
Maximum over current rating	[A]	15		
Output power tolerance	[%]	+10/-5		
Maximum system voltage	[Vdc]	1000		
Temperature coefficient of Pmax	[%/°C]	-0.3		
Voc	[V/°C]	-0.105	-0.104	-0.102
Isc	[mA/°C]	2.14	2.12	2.10

Note 1: Standard Test Conditions: Air mass 1.5, Irradiance = 1000W/m², Cell temperature = 25°C

Note 2: The values in the above table are nominal

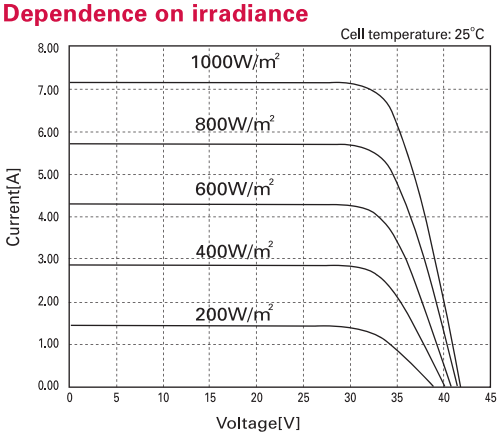
Dimensions and weight



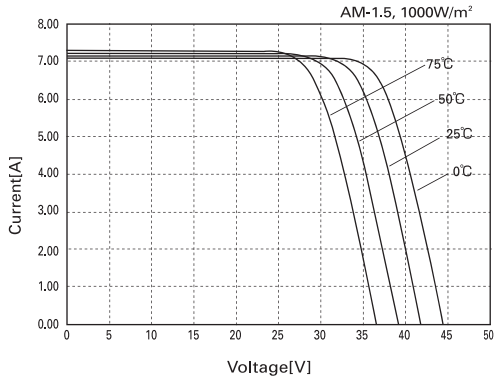
Weight: 16.5kg
unit: mm

Reference data for model HIP-225HDE1

Dependence on irradiance



Dependence on temperature



Certificates

IEC 61730

CE

www.tuv.com
TÜVRheinland
ID: 0000022202

- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic Inspection

Electrical Protection Class II

Please consult your local dealer for more information.

Warranty

Power output: 20 years (80% of minimum output power)
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.

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