

Bifacial cell structure

HIT Double® can generate electricity also from its rear side. The annual energy yield can increase up to 24% compared to standard HIT modules.*

Improvement of cell efficiency to reduce
- carrier recombination loss
- optical absorption loss
- resistance loss

R&D technology adaptation

Double glass module

Thanks to its double glass structure, the HIT Double® is ideal for terraces, car ports or wherever a see-through module is preferred.



* see more information on the back side „HIT Double vs. HIT Standard“

HIT cell technology

The HIT (Heterojunction with Intrinsic Thin layer) solar cell is made of a thin monocrystalline 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. The development of the HIT solar cell was supported in part by the New Energy and Industrial Technology Development Organization (NEDO).

Quality

Panasonic is truly committed to quality since it began developing and manufacturing solar PV modules in 1975. Our long track record is supported with our claim-rate of only 0.0034 % out of 3,200,497 solar modules produced in our European factory in Dörög, Hungary (as of July 2012).

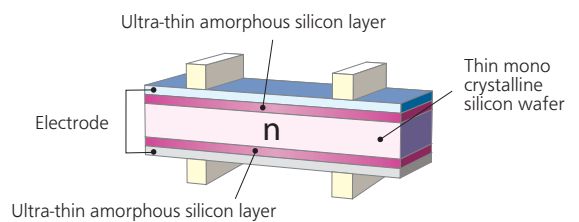
Special features

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

High performance at high temperatures

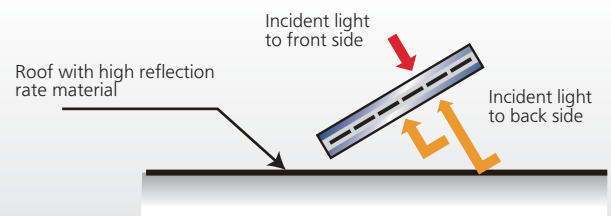
Even at high temperatures, the HIT solar cell can maintain higher efficiency than a conventional crystalline silicon solar cell.

HIT® solar cell structure



Ideal installation

No shadow cast on the rear side by mounting structure



Space between roof and the bottom of the array (50cm recommended)



HIT is a registered trademark of Panasonic Group, Ltd. The name "HIT" comes from "Heterojunction with intrinsic Thin-layer" which is an original technology of Panasonic Group.

Electrical data (at STC: Air mass 1.5, Irradiance = 1000 W/m², temperature = 25 °C)

	STC	5%	10%	15%	20%	25%	
VBHN210DE10	Maximum power (Pmax) [W]	210	219.9	229.7	239.3	248.8	258.1
	Maximum power voltage (Vmp) [V]	42.0	41.6	41.5	41.5	41.4	41.3
	Maximum power current (Imp) [A]	5.00	5.29	5.53	5.77	6.01	6.24
	Open circuit voltage (Voc) [V]	51.6	51.7	51.8	51.9	52.0	52.1
	Short circuit current (Isc) [A]	5.47	5.74	6.01	6.29	6.56	6.83
	Temperature coefficient of Voc [V/°C]	-0,129	-	-	-	-	-
	Temperature coefficient of Isc [mA/°C]	1.64	-	-	-	-	-
	VBHN205DE10	Maximum power (Pmax) [W]	205	214.9	224.5	233.9	243.2
Maximum power voltage (Vmp) [V]		41.3	40.9	40.8	40.8	40.7	40.6
Maximum power current (Imp) [A]		4.97	5.25	5.50	5.74	5.98	6.21
Open circuit voltage (Voc) [V]		50.9	51.0	51.1	51.2	51.3	51.3
Short circuit current (Isc) [A]		5.43	5.70	5.97	6.24	6.51	6.78
Temperature coefficient of Voc [V/°C]		-0.127	-	-	-	-	-
Temperature coefficient of Isc [mA/°C]		1.63	-	-	-	-	-
General		Maximum over current rating [A]	15	-	-	-	-
	Output power tolerance [%]	+10/-5*	-	-	-	-	-
	Maximum system voltage [Vdc]	1000	-	-	-	-	-
	Temperature coefficient of Pmax [%/°C]	-0.29	-	-	-	-	-

* All modules measured by Panasonic facility have output with positive tolerance

Guarantee

Power output: 10 years (90% of Pmin), 20 years (80% of Pmin)
Product workmanship: 10 years
(Based on guarantee document)

Materials

Cell material: 5 inch HIT cells
Glass material: tempered glass
Frame materials: Black anodized aluminium
Connectors type: MC3

Certificates



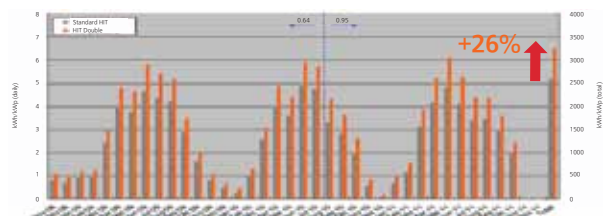
- Quality tested, IEC 61215
- Safety tested, IEC 61730
- Periodic inspection



Member of

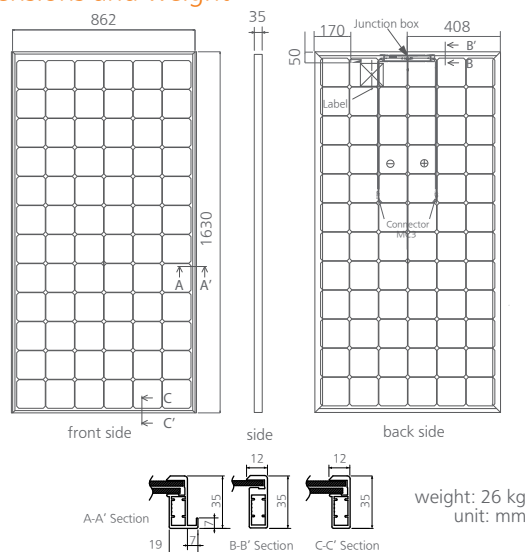


HIT Double vs. HIT Standard



1. Location: Geilenkirchen, Germany
2. Module angle: 15 deg, dir.: South
3. Height: 30 cm
4. Roof reflection rate: 64% until 08.10 and then 95%
5. Measured period: From 1st. Nov. 2008 to 31st Dec. 2011
6. Modules type: HIP-210NHE1 (HIT Standard), HIP-200DN2 (HIT Double)

Dimensions and weight



weight: 26 kg
unit: mm

Please consult your local dealer for more information.

CAUTION! Please read the installation manual carefully before using the products.

SANYO Component Europe GmbH
Panasonic Group

Solar Division
Stahlgruberring 4
81829 Munich, Germany
Tel. +49-(0)89-460095-0
Fax +49-(0)89-460095-170
<http://www.eu-solar.panasonic.net>

All Rights Reserved © 2012 COPYRIGHT SANYO Component Europe GmbH
Specifications are subject to change without notice.
10/2012