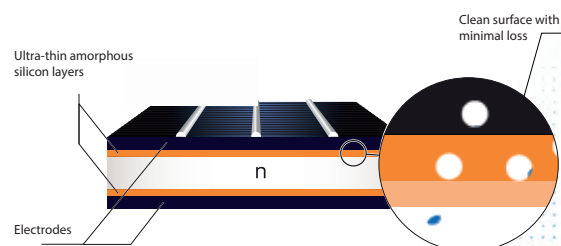


PANASONIC

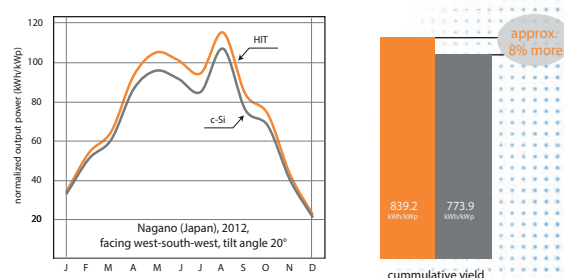
HIT-N240/N245



Cell structure of HIT®



Yield comparison



Technology of HIT®

Our HIT® is made of a thin monocrystalline silicon wafer surrounded by ultra-thin amorphous silicon layers. This product offers the industry's leading performance and value, using state-of-the-art manufacturing techniques. The development of the HIT® was supported in part by the New Energy and Industrial Technology Development Organization (NEDO).

High performance at high temperatures

With its very low temperature coefficient of only $-0.29\%/^{\circ}\text{C}$, our solar cell can maintain a higher efficiency than a conventional crystalline silicon solar cell, even at high temperatures.

Quality

Panasonic is truly committed to quality since it began developing and manufacturing solar PV technology in 1975. Our long track record is supported by our claim-rate of only 0.0038% among all modules sold in Europe (as of August 2014).

Special features

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

Model	Cell efficiency	Module efficiency	Output/m ²
N245	22.0%	19.4%	194 W/m ²
N240	21.6%	19.0%	190 W/m ²

ELECTRICAL DATA (AT STC)	HIT-N245	HIT-N240
Max. power (Pmax)	245 W	240 W
Max. power voltage (Vmp)	44.3 V	43.6 V
Max. power current (Imp)	5.54 A	5.51 A
Open circuit voltage (Voc)	53.0 V	52.4 V
Short circuit current (Isc)	5.86 A	5.85 A
Max. over current rating	15 A	15 A
Production tolerance power	+10/-5%*	+10/-5%*
Max. system voltage	1000 V	1000 V

STC: Standard Test Conditions: Air mass 1.5; Irradiance = 1000W/m²; cell temp. 25°C

*All modules measured by Panasonic facilities have an output with positive tolerance.

NOCT DATA		
Max. power (Pmax)	187.4 W	183.2 W
Max. power voltage (Vmp)	42.5 V	41.7 V
Max. power current (Imp)	4.41 A	4.39 A
Open circuit voltage (Voc)	50.3 V	49.7 V
Short circuit current (Isc)	4.71 A	4.71 A

NOCT: Nominal Operating Cell Temp.: Air mass 1.5; Irradiance = 800W/m²; Air temperature 20°C; wind speed 1 m/s

PERFORMANCE AT LOW IRRADIANCE (20%)		
Max. power (Pmax)	47.0 W	45.9 W
Max. power voltage (Vmp)	43.2 V	42.2 V
Max. power current (Imp)	1.09 A	1.09 A
Open circuit voltage (Voc)	49.6 V	49.0 V
Short circuit current (Isc)	1.17 A	1.17 A

Low irradiance: Air mass 1.5; Irradiance = 200W/m²; cell temp. = 25°C

TEMPERATURE CHARACTERISTICS		
Temperature (NOCT)		44°C
Temperature coefficient Isc		1.76 mA / °C
Temperature coefficient Voc		-0.133 V / °C
Temperature coefficient Pmax		-0.29% / °C

MECHANICAL CHARACTERISTICS	
Dimensions (L x B x H)	1580 x 798 x 35 mm
Weight	15 kg
Glass material	AR coated tempered glass
Frame material	Black anodized aluminium
Connectors type	SMK

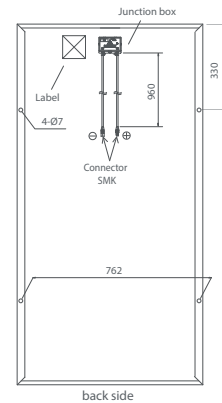
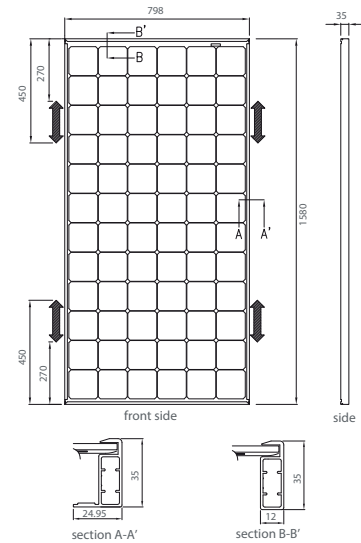
GUARANTEE (based on guarantee document) AND CERTIFICATES	
Power output	10 years (90% of Pmin), 25 years (80% of Pmin)
Product workmanship	10 years (based on guarantee document)



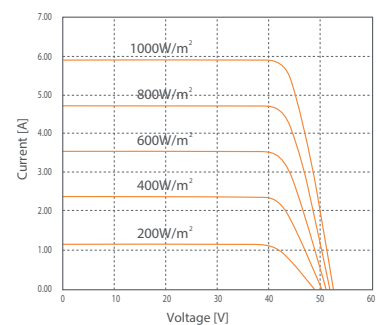
IEC61215
IEC61730-1
IEC61730-2



ENGINEERING DRAWINGS



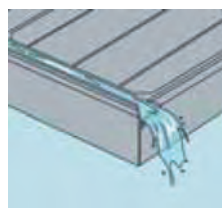
I-V CURVE



Reference data for model VBHN245J25 (Cell temperature: 25°C)

WATER DRAINAGE FRAME

Rain water is drained off the module surface. This avoids not only water accumulation, but also water stains after drying. Even in low-angle installations, water drainage corners keep the module clean.



POWER FROM BOTH SIDES

HIT® generates solar electricity simultaneously on the front and on the back side. This additional amount of light from the back side is combined with the light taken up by the front side of the module.

