Panasonic

N 295
N 285

HIT® Photovoltaic Module

Photovoltaic module HIT®
VBHN295SJ46 / VBHN285SJ46

EN

Only 1.46 m tall

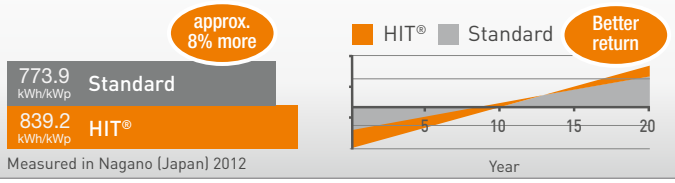
More power on your roof thanks to best fit in portrait due to shorter module length and less space between module rows on flat roofs.

100% Panasonic, 100% HIT®

Proudly featuring Panasonic's original invention, the heterojunction solar cell. With over 1 billion cells produced commercially over 18 years, 25 years after the breakthrough in the development and looking back to over 40 years of experience in solar, Panasonic really offers you a 25-year guarantee you can trust.

More energy, higher profit!

Helping you reach a higher final profit with your PV system!



Measured in Nagano (Japan) 2012

295W / 285W

High Efficiency + High Performance at High Temperatures = High Power Generation

QUALITY PROVEN 4 WAYS

1 Guaranteed by Panasonic

- IEC and over 20 Panasonic internal tests
- Vertically integrated own manufacturing (wafer, cell and module)

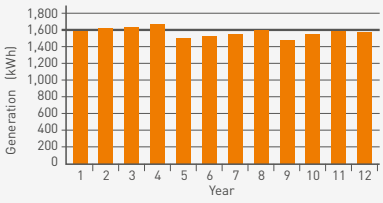
2 Record low claim rate

Less than 0.005% failure rate after more than 10 years experience in Europe (as of September 2015)

3 Less degradation on the field

12 years actual data prove a reliable and stable performance.

Installation:	March 2004
Location:	Glocestershire, UK
Model:	HIP-180BE
System size:	1.80 kWp
Tilt:	40 deg.
Direction:	South-West



4 3rd Party verified

- Lifecycle testing (Long-Term-Sequential-Test) by TÜV Rheinland (tested on VBHN240SE10)
- PID-free (tested by Fraunhofer Institute)

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N295, N285

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Electrical data (at STC)

	VBHN295SJ46	VBHN285SJ46
Max. power (Pmax) [W]	295	285
Voltage at Max. Power (Vmp)(V)	52.7	52.0
Current at Max. Power (Imp)(A)	5.60	5.49
Open circuit voltage (Voc) [V]	63.7	63.5
Short circuit current (Isc) [A]	6.00	5.91
Max. over current rating [A]	15	
Power tolerance [%] *	+10/-0	
Max. system voltage [V]	1000	
Solar Panel efficiency (%)	19.1	18.5

Note: Standard Test Conditions: Air mass 1.5; Irradiance = 1000W/m²; cell temp. 25°C
* Maximum power at delivery. For guarantee conditions, please check our guarantee document

Temperature characteristics

Temperature (NOCT) [°C]	44.0	44.0
Temp. coefficient of Pmax [%/°C]	-0.29	-0.29
Temp. coefficient of Voc [V/°C]	-0.159	-0.164
Temp. coefficient of Isc [mA/°C]	1.80	1.77

At NOCT (Normal Operating Conditions) (Tentative: N295)

Max. power (Pmax) [W]	226	221
Max. power voltage (Vmp) [V]	50.9	49.2
Max. power current (Imp) [A]	4.59	4.50
Open circuit voltage (Voc) [V]	59.7	59.5
Short circuit current (Isc) [A]	4.92	4.85

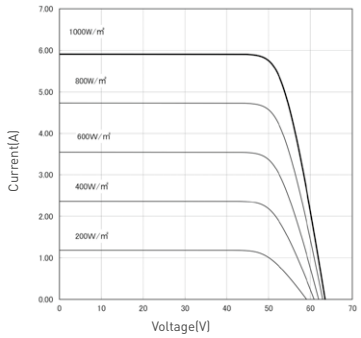
Note: Normal Operating Cell Temp.: Air mass 1.5; Irradiance = 800W/m²;
Air temperature 20°C; wind speed 1 m/s

At low irradiance (20%) (Tentative: N295)

Max. power (Pmax) [W]	58.8	56.8
Max. power voltage (Vmp) [V]	51.8	51.1
Max. power current (Imp) [A]	1.13	1.11
Open circuit voltage (Voc) [V]	60.5	60.3
Short circuit current (Isc) [A]	1.22	1.20

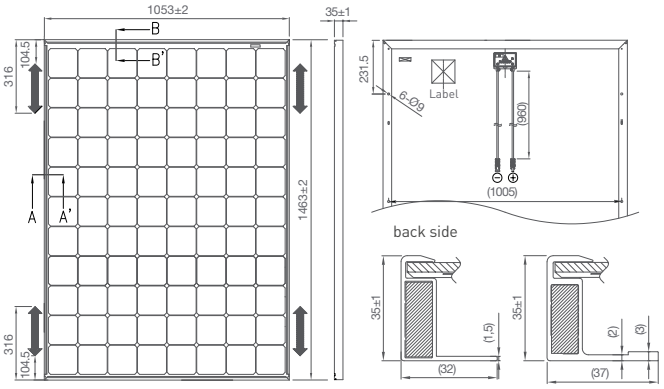
Note: Low irradiance: Air mass 1.5; Irradiance = 200W/m²; cell temp. = 25°C

Dependence on irradiance



Reference data for model
VBHN295SJ46
(Cell temperature: 25°C)

Dimensions and weight



weight:	18 kg
weight/m²:	11.7 kg/m²
unit:	mm
Snow and Wind Load :	2400 Pa

Fixing span must be between 836-1200 mm

Guarantee

Power output:	10 years (90% of Pmin)
	25 years (80% of Pmin)
Product workmanship:	15 years (based on guarantee document)

Materials

Cell material:	5 inch photovoltaic cells
Glass material:	AR coated tempered glass
Frame materials:	Black anodized aluminium
Connectors type:	SMK

Certificates

IEC61215
IEC61730-1
IEC61730-2

Electrical Protection Class II

Please consult your local dealer for more information

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

Used electrical and electronic products must not be mixed with general household waste. For proper treatment, recovery and recycling of old products, please take them to applicable collection points in accordance with your national legislation.

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