N 285

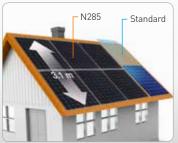


Photovoltaic module HIT® VBHN285SJ40

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!





Continue

Closest to

4 kW

[14x285 = 3.99 kW]

Unique water drainage

285W

High Efficiency High Performance at High Temperatures



QUALITY PROVEN 4 WAYS

Guaranteed by Panasonic

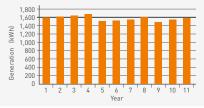
- IEC and over 20 Panasonic internal tests
- Vertically integrated own manufacturing (wafer, cell and module)



Less degradation on the field

11 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



Record low claim rate

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

3rd Party verified

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

HIT® is a registered trademark of Panasonic Group.



Photovoltaic module HIT® N285



Electrical data (at STC)	VBHN285SJ40	
Max. power (Pmax) [W]	285	
Voltage at Max. Power (Vmp)(V)	52.0	
Current at Max. Power (Imp)(A)	5.49	
Open circuit voltage (Voc) [V]	63.5	
Short circuit current (Isc) [A]	5.91	
Max. over current rating [A]	15	
Power tolerance [%] *	+10/-0	
Max. system voltage [V]	1000	
Max. amount of module in series.	13pcs	
Note: Standard Test Conditions: Air mass 1 F. Irradiance = 1000W/m², cell town 25°C		

Note: Standard Test Conditions: Air mass 1.5; Irradiance = $1000W/m^2$; cell temp. $25^{\circ}C$ * Maximum power at delivery. For guarantee conditions, please check our guarantee document

Temperature characteristics

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

At NOCT (Normal Operating Conditions)

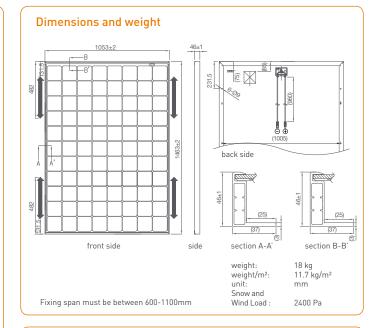
Max. power (Pmax) [W]	221
Max. power voltage (Vmp) [V]	49.2
Max. power current (Imp) [A]	4.50
Open circuit voltage (Voc) [V]	59.5
Short circuit current (Isc) [A]	4.85

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%)

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

Note: Low irradiance: Air mass 1.5; Irradiance = $200W/m^2$; cell temp. = $25^{\circ}C$



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

ectrical Protectio n Class II ((

Please consult your local dealer for more information

 \triangle 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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