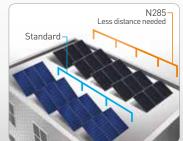
N 285



## 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.



# Product warranty Unique water drainage

### More energy, higher profit!

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







#### **QUALITY PROVEN 4 WAYS**

#### Guaranteed by Panasonic

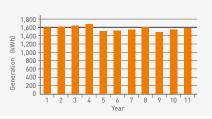
• IEC and over 20 Panasonic internal tests

 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



285W

#### 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 N 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

#### 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

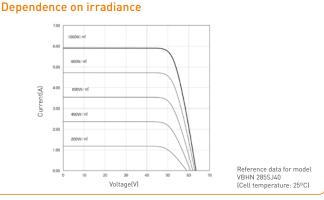
#### At NOCT (Normal Operating Conditions)

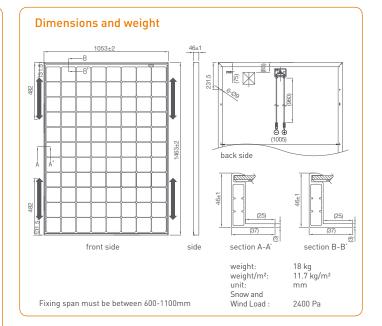
Max. power (Pmax) [W]	221
Max. power voltage (Vmp) [V]	49.2
Max. power current (Imp) [A]	4.50
Open circuit voltage (Voc) [V]	59.5
Short circuit current (Isc) [A]	4.85

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%)

710 1017 111 111111100 (2070)			
	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/m²; cell temp. = 25°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  $\epsilon$ 

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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