Panasonic
ideas for life

HIT Photovoltaic Module

HIT Power 235S

VBHN235SA06

R&D technology adaptation

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

New tab design

Application of three tabs
- Reducing electrical loss between the cell fingers and tabs
- Making the tab width thinner to expand the light receiving surface

Anti-reflection glass

Light capturing technology
- Reducing reflection and scattering of incoming light
- Improving generated electricity levels in morning and evening times

21.1%*

* 21.1% Cell Conversion Efficiency

HIT® Power
Photovoltaic Module

Ultra High Efficiency & Superior Real World Performance
HIT Power Solar panels are leaders in sunlight conversion efficiency. Our hybrid cells produce the highest output on cloudy days.
21.1% Cell Conversion Efficiency
Most PTC Power 218.7W
Highest PTC/STC Ratio 93% +

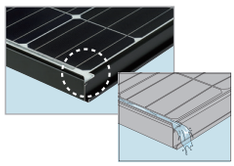
Superior Temperature Performance
As temperatures rise, HIT Power solar panels produce 10% or more electricity (kWh) than conventional crystalline silicon solar panels at the same temperature.

Quality and Reliability
Panasonic is truly committed to quality since it began developing and manufacturing solar PV in 1975. Since pioneering, developing and launching HIT Solar cells in the 1990s, we have been the technology leader, and for decades many satisfied customers have placed their trust in the competence in our unique HIT Technology.

Power Guarantee
The power ratings for HIT Power panels guarantee customers receive 100% of the nameplate rated power (or more) at the time of purchase, enabling owners to generate more kWh per rated Watt, quicken investments returns, and help realize complete customer satisfaction.

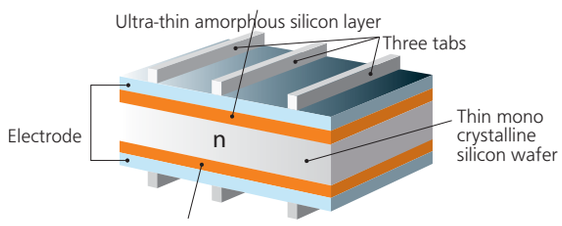
American Made Quality
Our silicon wafers located inside HIT solar panels are made in Oregon, and the panels are assembled in an IS0 9001 (quality), 14001 (environment), and 18001 (safety) certified factory. Unique eco-packing minimizes cardboard waste at the job site. The panels have a Limited 20-Year Power Output and 10-Year Product Workmanship Warranty.

"Drainage corner frame"
to prevent the accumulation of dirt on the panel



Rainwater flush the dirt of the panel

HIT® solar cell structure



HIT solar cells are hybrids of mono crystalline silicon surrounded by ultra thin amorphous silicon layers, and are available solely from Panasonic.

HIT Power 235S

Electrical Specifications

Model	HIT Power 235S or VBHN235SA06
Rated Power (Pmax)[1]	235 W
Maximum Power Voltage (Vpm)	43.0 V
Maximum Power Current (Ipm)	5.48 A
Open Circuit Voltage (Voc)	51.8 V
Short Circuit Current (Isc)	5.84 A
Temperature Coefficient (Pmax)	-0.30%/ °C
Temperature Coefficient (Voc)	-0.124 V/ °C
Temperature Coefficient (Isc)	1.75 mA/ °C
NOCT	118.9°F (48.3°C)
CEC PTC Rating	218.7 W
Cell Efficiency	21.1%
Module Efficiency	18.6%
Watts per Ft.[2]	17.33 W
Maximum System Voltage	600 V
Series Fuse Rating	15 A
Warranted Tolerance (-/+)	-0% / +10%

Mechanical Specifications

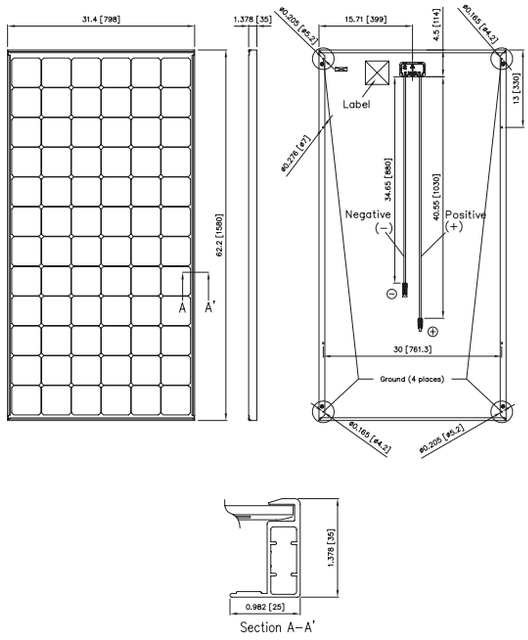
Internal Bypass Diodes	3 Bypass Diodes
Module Area	13.56 Ft² (1.26m²)
Weight	33.1 Lbs. (15kg)
Dimensions LxWxH	62.2x31.4x1.4 in. (1580x798x35 mm)
Cable Length +Male/-Female	40.55/34.64 in. (1030/880 mm)
Cable Size / Type	No. 12 AWG / PV Cable
Connector Type[3]	Multi-Contact® Type IV (MC4™)
Static Wind / Snow Load	50 PSF (2.400 Pa)
Pallet Dimensions LxWxH	63.2x32x.65 in. (1607x815x1650 mm)
Quantity per Pallet / Pallet Weight	40 pcs./1388.9 Lbs (630 kg)
Quantity per 40' Container	560 pcs.
Quantity per 20' Container	280 pcs.

Operating Conditions & Safety Ratings

Ambient Operating Temperature[2]	-4°F to 115°F (-20°C to 46°C)
Hail Safety Impact Velocity	1" hailstone (25mm) at 52 mph (23m/s)
Fire Safety Classification	Class C
Safety & Rating Certifications	UL 1703, cUL, CEC
Limited Warranty	10 Years Workmanship, 20 Years Power Output

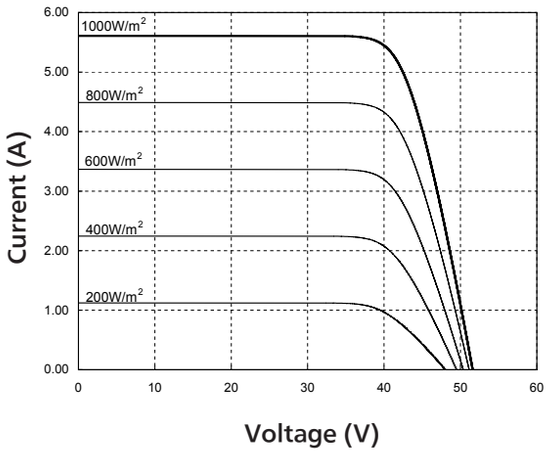
[1] STC: Cell temp. 25°C, AM1.5, 1000W/m²
[2] Monthly average low and high of the installation site.
Note: Specifications and information above may change without notice.
[3] Safety locking clip (PV-SSH4) is not supplied with the module.

Dimensions and Weight



Section A–A'

Dependence on Irradiance



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

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

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