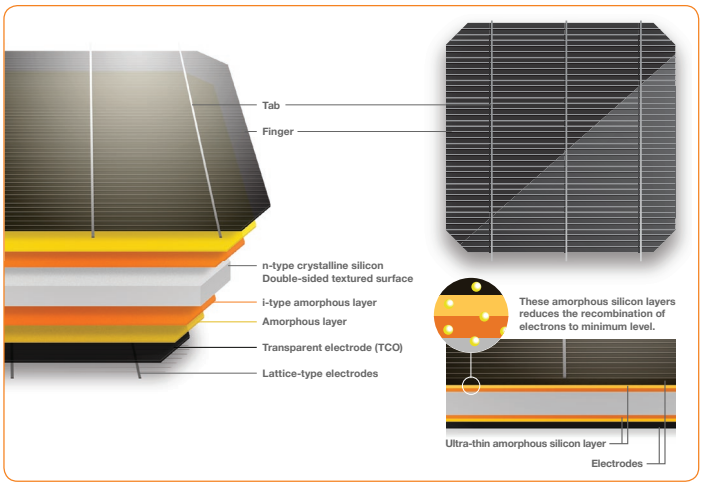
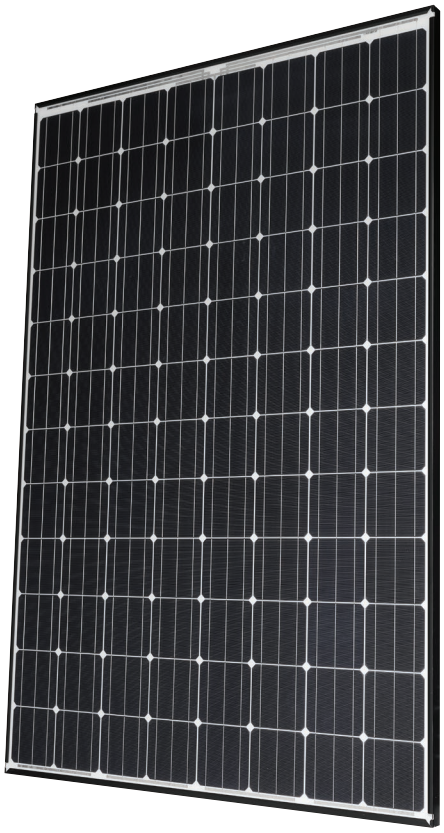
HIT®
Photovoltaic Module

Panasonic

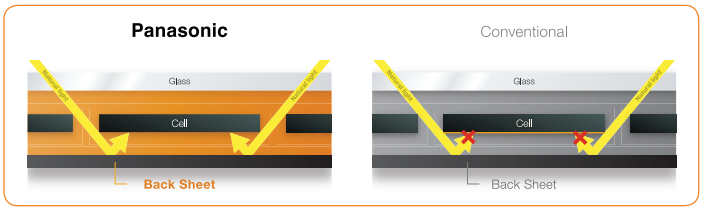
N330/N325

Panasonic's unique heterojunction technology uses ultra-thin amorphous silicon layers. These thin dual layers reduce losses, resulting in higher energy output than conventional panels.





Advanced bifacial cell designed for increased energy output. The cell utilizes sunlight reflected back from the rear side material which captures more light and converted into energy.



TOP PERFORMER 2018
DNV·GL
PV MODULE RELIABILITY SCORECARD

Our competitive advantages

High Efficiency at High Temperatures
As temperature increases, HIT® continues to perform at high levels due to the industry leading temperature coefficient of -0.258% /ºC. No other module even comes close to our temperature characteristics. That means more energy throughout the day.

25 Year Product and Performance Warranty**
Industry leading 25 year product workmanship and performance warranty is backed by a century old company- Panasonic. Power output is guaranteed to 90.76% after 25 years, far greater than other companies.

Quality and Reliability
Panasonic's vertical integration, 20 years of experience manufacturing HIT® and 20 internal tests beyond those mandated by current standards provides extreme quality assurance.

Higher Efficiency 19.7%
Enables higher power output and greater energy yields. HIT® provides maximum production for your limited roof space.

Low Degradation
HIT "N-type" cells result in extremely Low Light Induced Degradation (LID) and zero Potential Induced Degradation (PID) which supports reliability and longevity. This technology reduces annual degradation to 0.26% compare to 0.70% in conventional panels, guaranteeing more power for the long haul.

Enhanced Frame Design
A new 40mm frame increases durability and strength, being able to handle loads of up to 5400Pa. Also, the water drainage system gives rain water and snow melt a place to go, reducing water stains and soiling. Less dirt on the module means more sunlight getting through to generate power.

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ELECTRICAL SPECIFICATIONS

Model	VBHN330SA17	VBHN325SA17
Rated Power (Pmax)[1]	330W	325W
Maximum Power Voltage (Vpm)	58.0V	57.6V
Maximum Power Current (Ipm)	5.70A	5.65A
Open Circuit Voltage (Voc)	69.7V	69.6V
Short Circuit Current (Isc)	6.07A	6.03A
Temperature Coefficient (Pmax)	-0.258%/°C	-0.258%/°C
Temperature Coefficient (Voc)	-0.16V/°C	-0.16V/°C
Temperature Coefficient (Isc)	3.34mA/°C	3.34mA/°C
NOCT	44.0°C	44.0°C
CEC PTC Rating	311.7W	306.8W
Cell Efficiency	22.09%	21.76%
Module Efficiency	19.7%	19.4%
Watts per Ft.²	18.3W	18.0W
Maximum System Voltage	600V	600V
Series Fuse Rating	15A	15A
Warranted Tolerance (-/+)	+10%/-0%*	+10%/-0%*

MECHANICAL SPECIFICATIONS

Model	VBHN330SA17, VBHN325SA17
Internal Bypass Diodes	4 Bypass Diodes
Module Area	18.02 Ft.² (1.67m²)
Weight	41.89 Lbs (19kg)
Dimensions LxWxH	62.6x41.5x1.6 in. (1590x1053x40 mm)
Cable Length +Male/-Female	40.2/40.2 in. (1020/1020 mm)
Cable Size / Type	No. 12 AWG / PV Cable
Connector Type[2]	Multi-Contact® Type IV (MC4™)
Static Wind / Snow Load	112 PSF (5400Pa)****
Pallet Dimensions LxWxH	63.7x42.2x46.4 in.(Malaysia) 65.3 x 43.7 x 48.5 in.(USA)
Quantity per Pallet / Pallet Weight	24 pcs./1049 Lbs. (476 kg)
Quantity per 40' Container	672 pcs.
Quantity per 20' Container	288 pcs.

OPERATING CONDITIONS & SAFETY RATINGS

Model	VBHN330SA17, VBHN325SA17
Operating Temperature	-40°F to 185°F (-40°C to 85°C)
Hail Safety Impact Velocity	1" hailstone (25mm) at 52 mph (23m/s)
Safety & Rating Certifications	UL 1703, cUL, CEC
UL 1703 Fire Classification	Type 2
Limited Warranty	25** Yrs Workmanship and Power Output (Linear)***
Manufacturing Locations	Malaysia and USA

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.

** Installation need to be registered through our website **www.panasonicusahitwarranty.com** within 60 days in order to receive twenty-five (25) year Product workmanship. Otherwise, Product Workmanship will be only fifteen (15) years.

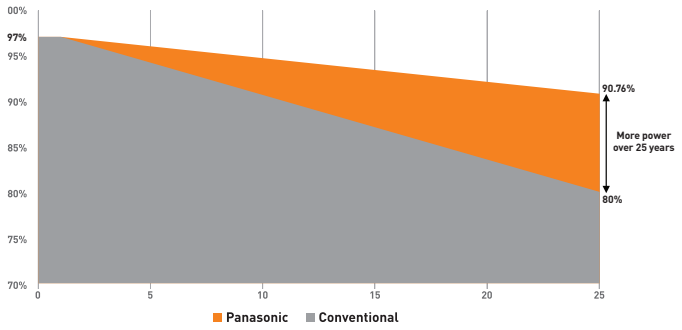
*** 1st year 97%, after 2nd year 0.26% annual degradation to year 25.

[1] STC: Cell temp. 25°C, AM1.5, 1000W/m²

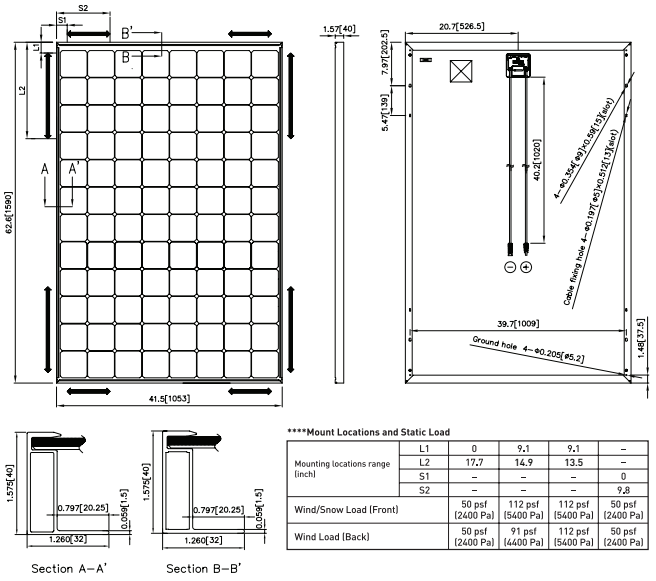
[2] Safety locking clip (PV-SSH4) is not supplied with the module.

NOTE: Specifications and information above may change without notice.

PERFORMANCE WARRANTY



DIMENSIONS



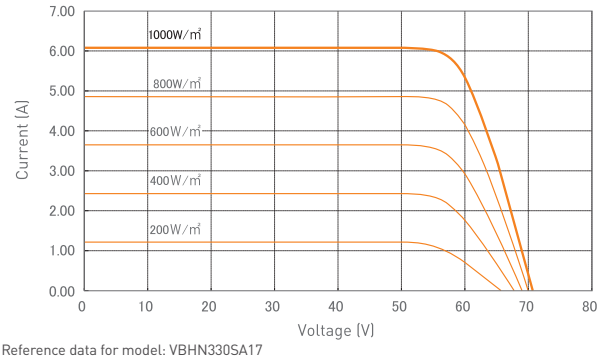
****Mount Locations and Static Load

Mounting locations range (inch)	L1	0	9.1	9.1	–
	L2	17.7	14.9	13.5	–
	S1	–	–	–	0
	S2	–	–	–	9.8
Wind/Snow Load (Front)		50 psf (2400 Pa)	112 psf (5400 Pa)	112 psf (5400 Pa)	50 psf (2400 Pa)
Wind Load (Back)		50 psf (2400 Pa)	91 psf (4400 Pa)	112 psf (5400 Pa)	50 psf (2400 Pa)

Unit: inches (mm)

*Please refer to the Installation Manual for different loads

DEPENDENCE ON IRRADIANCE



Reference data for model: VBHN330SA17
(Cell temperature: 25°C)

⚠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.

Panasonic

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business.panasonic.com/solarpanels

RS18783DS

CERTIFICATE OF COMPLIANCE

Certificate Number	20171024-E181540
Report Reference	E181540-20111226
Issue Date	2017-OCTOBER-24
Issued to:	SANYO ELECTRIC CO LTD OF PANASONIC GROUP 15-2 NISHIKI-MINAMI-MACHI KAIZUKA-SHI OSAKA 597-0094 JAPAN
This is to certify that representative samples of	PHOTOVOLTAIC MODULES AND PANELS See Addendum Page
	Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.
Standard(s) for Safety:	UL 1703 & ULC ORD/C1703-01, , Flat-Plate Photovoltaic Modules and Panels
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	20171024-E181540
Report Reference	E181540-20111226
Issue Date	2017-OCTOBER-24

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

HIT-N195A followed by 07, 08, 09 or 10

HIT-N200A, HIT-N205A, HIT-N210A, HIT-N215A, HIT-N220A, HIT-N225A followed by 07, 08, 09, 10, 16, 17, 18 or 19

HIT-N230A, HIT-N235A followed by 16, 17, 18 or 19

HIT-N220SA, HIT-N225SA, HIT-N230SA, HIT-N235SA, HIT-N240SA, HIT-N245SA followed by 03, 04, 05 or 06.

HIT-N215SA, HIT-N220SA, HIT-N225SA, HIT-N230SA, HIT-N235SA followed by 07, 08, 09 or 10.

VBHN220SA, VBHN225SA, VBHN230SA, VBHN235SA, VBHN240SA, VBHN245SA followed by 03, 03B, 04, 04B, 05, 05B, 06, 06B, 11, 11B, 12 or 12B.

VBHN215SA, VBHN220SA, VBHN225SA, VBHN230SA, VBHN235SA followed by 07, 07B, 08, 08B, 09, 09B, 10 or 10B.

VBHN320SA, VBHN325SA, VBHN330SA, VBHN332SA, VBHN333SA, VBHN335SA followed by 15, 15B, 16, 16B, 17 or 18.

VBHNxxxKA# (xxx = 305 – 325: Where xxx are positive integers; # = 01, 02, 03 or 04)

VBHN320ZA, VBHN325ZA, VBHN330ZA followed by 01.

VBHNxxxZAyy (xxx = 305 – 325: Where xxx are positive integers; yy = 02 or 03 or 04)

Bruce Mahrenholz, Director North American Certification Program

UL LLC