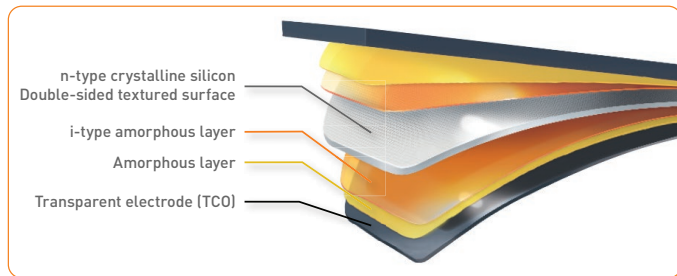
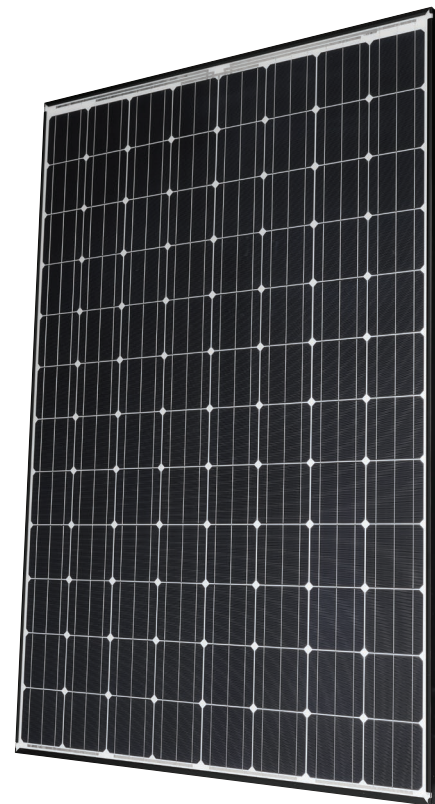
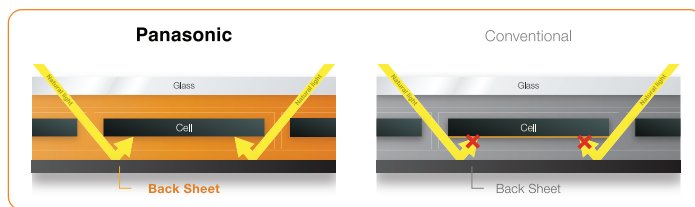


Panasonic's unique heterojunction technology uses ultra-thin amorphous silicon layers. These thin dual layers reduce losses, resulting in higher energy output than conventional panels.



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.



## 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  $-0.258\% / ^\circ\text{C}$ . 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, 22 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.

**ELECTRICAL SPECIFICATIONS**

Model	VBH330RA18N
Rated Maximum Power (Pmax) <sup>1</sup>	330W
Maximum Power Voltage (Vpm)	59.0V
Maximum Power Current (Ipm)	5.60A
Open Circuit Voltage (Voc)	70.6V
Short Circuit Current (Isc)	6.01A
Temperature Coefficient (Pmax)	-0.258%/°C
Temperature Coefficient (Voc)	-0.17V/°C
Temperature Coefficient (Isc)	3.31mA/°C
NOCT	44.0°C
CEC PTC Rating (TENTATIVE)	311.7W
Cell Efficiency	22.18%
Module Efficiency	19.7%
Maximum System Voltage	1000V
Maximum Series Fuse	15A
Warranted Tolerance (-/+)	+10%/-0%*

**MECHANICAL SPECIFICATIONS**

Model	VBH330RA18N
Internal Bypass Diodes	4 Bypass Diodes
Module Area	18.02 Ft. <sup>2</sup> (1.67m <sup>2</sup> )
Weight	41.89 Lbs (19kg)
Dimensions LxWxH	62.6 x 41.5 x 1.6 in [1590 x 1053 x 40mm]
Cable Length +Male/-Female	40.2/40.2 in. [1020/1020mm]
Cable Size / Type	No. 12 AWG / PV Cable
Connector Type <sup>2</sup>	Multi-Contact <sup>®</sup> Type IV (MC4™)
Static Wind / Snow Load	112 PSF [5400Pa****]
Pallet Dimensions LxWxH	63.7x42.2x46.4 (Malaysia) 65.3x43.7x48.5 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.

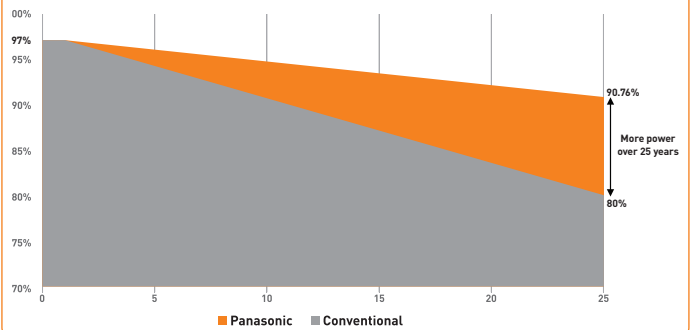
**OPERATING CONDITIONS & SAFETY RATINGS**

Model	VBH330RA18N
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 (Plan)	UL 61730, Certified by UL LLC. CEC, FSEC, ISO9001
UL 1703 Fire Classification (Plan)	Type 2
Limited Warranty	25** Yrs Workmanship and Power Output (Linear)***
Manufacturing Locations	USA and Malaysia

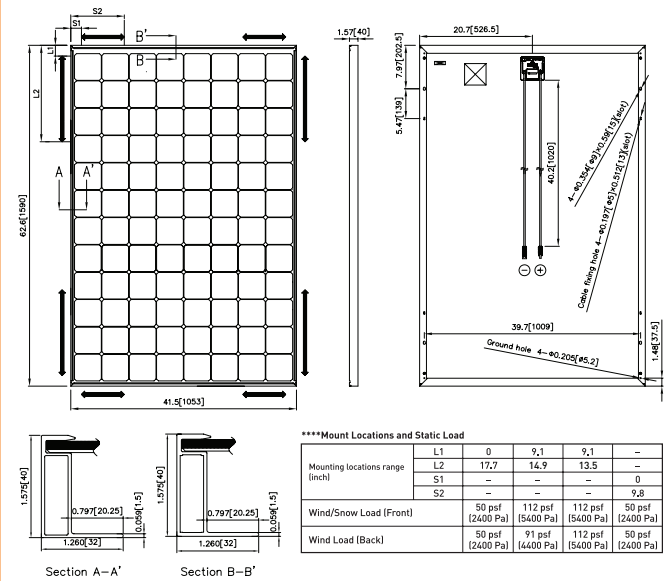
\* Maximum power at delivery. For guarantee conditions, please check our guarantee document.  
 \*\* Installation must be registered through our website [www.panasonicusahitwarranty.com](http://www.panasonicusahitwarranty.com) within 60 days in order to receive twenty-five (25) year Product workmanship. Otherwise, Product Workmanship will be only fifteen (15) years.  
 \*\*\* 1st year 97%, after 2nd year 0.26% annual degradation to year 25.  
<sup>1</sup> STC: Cell temp. 25°C, AM1.5, 1000W/m<sup>2</sup>  
<sup>2</sup> Safety locking clip (PV-SSH4) is not supplied with the module.



**PERFORMANCE WARRANTY**

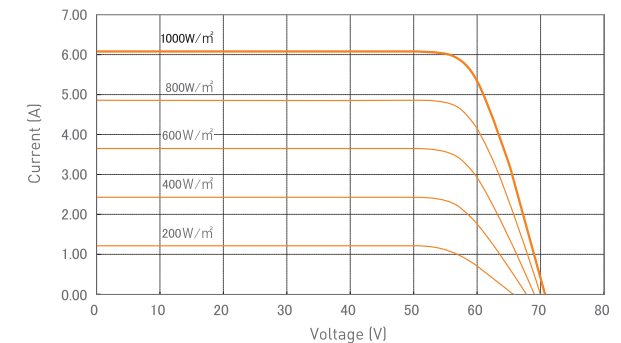


**DIMENSIONS**



Unit: inches (mm) \*Please refer to the Installation Manual for different loads

**DEPENDENCE ON IRRADIANCE**



Reference data for model: VBH330RA18N  
(Cell temperature: 25°C)

**NOTE:** Specifications and information above may change without notice.  
**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.