

HISTORIC AND DESIGN REVIEW COMMISSION

September 05, 2018

HDRC CASE NO: 2018-413
ADDRESS: 104 ADAMS ST
LEGAL DESCRIPTION: NCB 932 BLK W PT 1 LOT 4 & 5
ZONING: IDZ, HE
CITY COUNCIL DIST.: 1
DISTRICT: King William Historic District
LANDMARK: Engelke / Netter House
APPLICANT: Gustavo Mendoza/Smartworld Energy
OWNER: James Nelson
TYPE OF WORK: Installation of solar panels
APPLICATION RECEIVED: August 1, 2018
60-DAY REVIEW: September 20, 2018
REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to install a solar photovoltaic system on the east, south and west facing roofs at 104 Adams.

APPLICABLE CITATIONS:

Historic Design Guidelines, Chapter 3, Guidelines for Additions

C. SOLAR COLLECTORS

- i. Location*—Locate solar collectors on side or rear roof pitch of the primary historic structure to the maximum extent feasible to minimize visibility from the public right-of-way while maximizing solar access. Alternatively, locate solar collectors on a garage or outbuilding or consider a ground-mount system where solar access to the primary structure is limited.
- ii. Mounting (sloped roof surfaces)*—Mount solar collectors flush with the surface of a sloped roof. Select collectors that are similar in color to the roof surface to reduce visibility.
- iii. Mounting (flat roof surfaces)*—Mount solar collectors flush with the surface of a flat roof to the maximum extent feasible. Where solar access limitations preclude a flush mount, locate panels towards the rear of the roof where visibility from the public right-of-way will be minimized.

FINDINGS:

- a. The historic structure located at 104 Adams was constructed circa 1895 and is first found on the 1896 Sanborn Map. The structure features two stories in height with a tower element, a double height front porch and low sloping roofs. At this time, the applicant has proposed to install a total of forty-one (41) solar panels on various roof planes.
- b. The applicant has proposed to locate thirty-four (34) of the proposed 41 panels in a manner that is consistent with the Guidelines. These panels are located on the east facing roof slope of the primary structure, the south roof slope of the primary structure, the east roof slope of the two story wing, the west roof slope of the two story wing, the west roof slope of the tower element and the east roof slope of the tower element. These panels have been outlined in green on a roof plan in the exhibits. Staff finds that the installation of these panels is appropriate provided that they are mounted flush with the roof surface, as noted in the Guidelines for Additions 6.C.
- c. The applicant has proposed to locate seven (7) of the proposed panels on the double height roof slope on the front of the historic structure with a reverse tilt toward the south. The location as well as reverse tilt are inconsistent with the Guidelines, which notes that panels should be mounted flush with the surface of both flat and sloped roofs and should be located on side or rear roof pitches. Flush mounted panels at this location may not be visible from the public right of way.

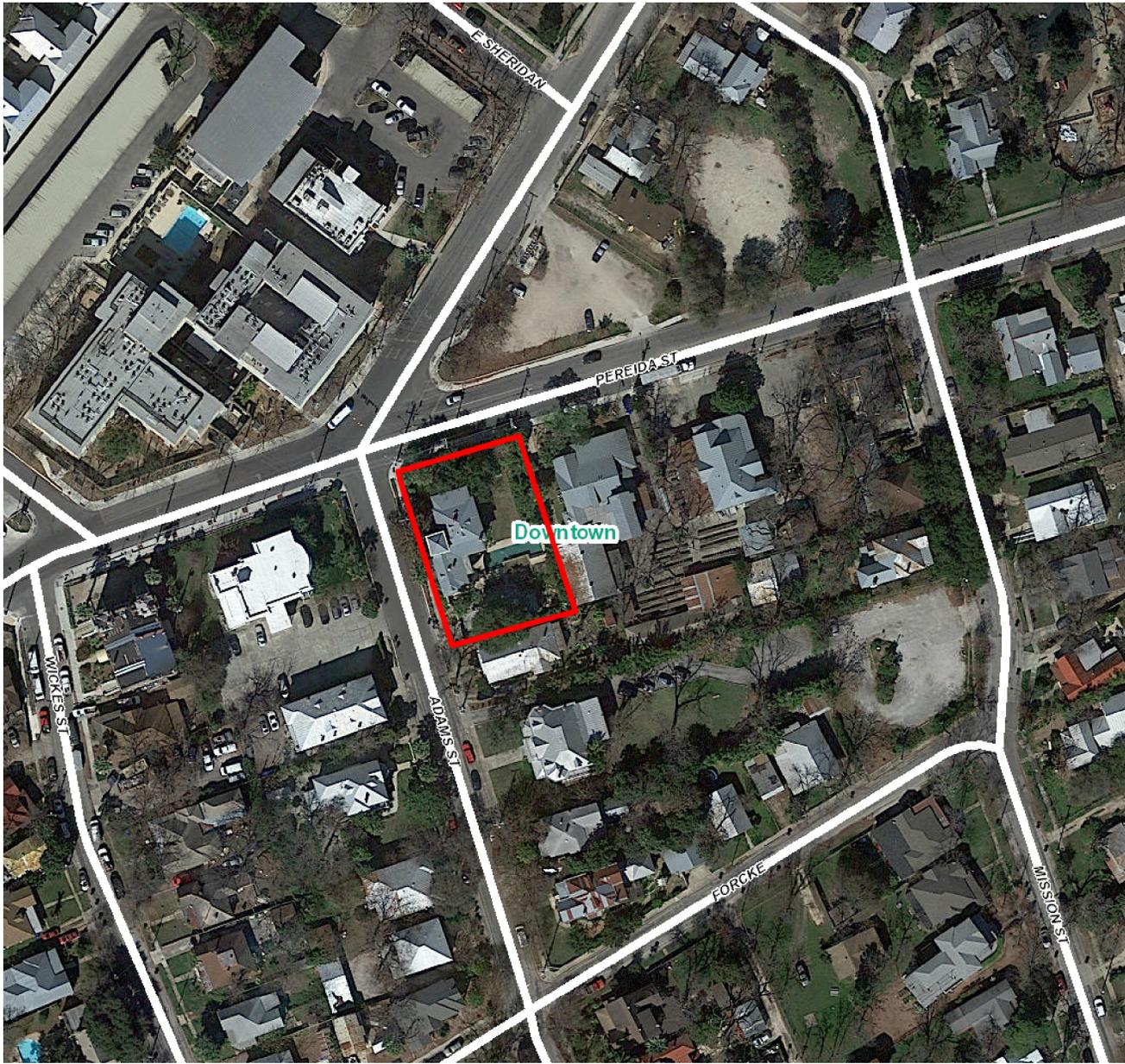
RECOMMENDATION:

Staff recommends approval of the thirty-four panels noted in finding b with the stipulation that they be mounted flush to the roof surfaces.

Staff does not recommend approval of the seven panels noted in funding c due to the proposed tilt of the panels. Staff recommends that flush mounted panels at this location be installed following verification that they cannot be seen from the public right of way.

CASE MANAGER:

Edward Hall



N



Flex Viewer

Powered by ArcGIS Server

Printed: Aug 29, 2018

The City of San Antonio does not guarantee the accuracy, adequacy, completeness or usefulness of any information. The City does not warrant the completeness, timeliness, or positional, thematic, and attribute accuracy of the GIS data. The GIS data, cartographic products, and associated applications are not legal representations of the depicted data. Information shown on these maps is derived from public records that are constantly undergoing revision. Under no circumstances should GIS-derived products be used for final design purposes. The City provides this information on an "as is" basis without warranty of any kind, express or implied, including but not limited to warranties of merchantability or fitness for a particular purpose, and assumes no responsibility for anyone's use of the information.





NO PARKING ANYTIME

NO PARKING ANYTIME TOW AWAY ZONE



P
796

**SE corner of Adams St and Pereida.
Only first two panels on reversed tilt will be partially visible**

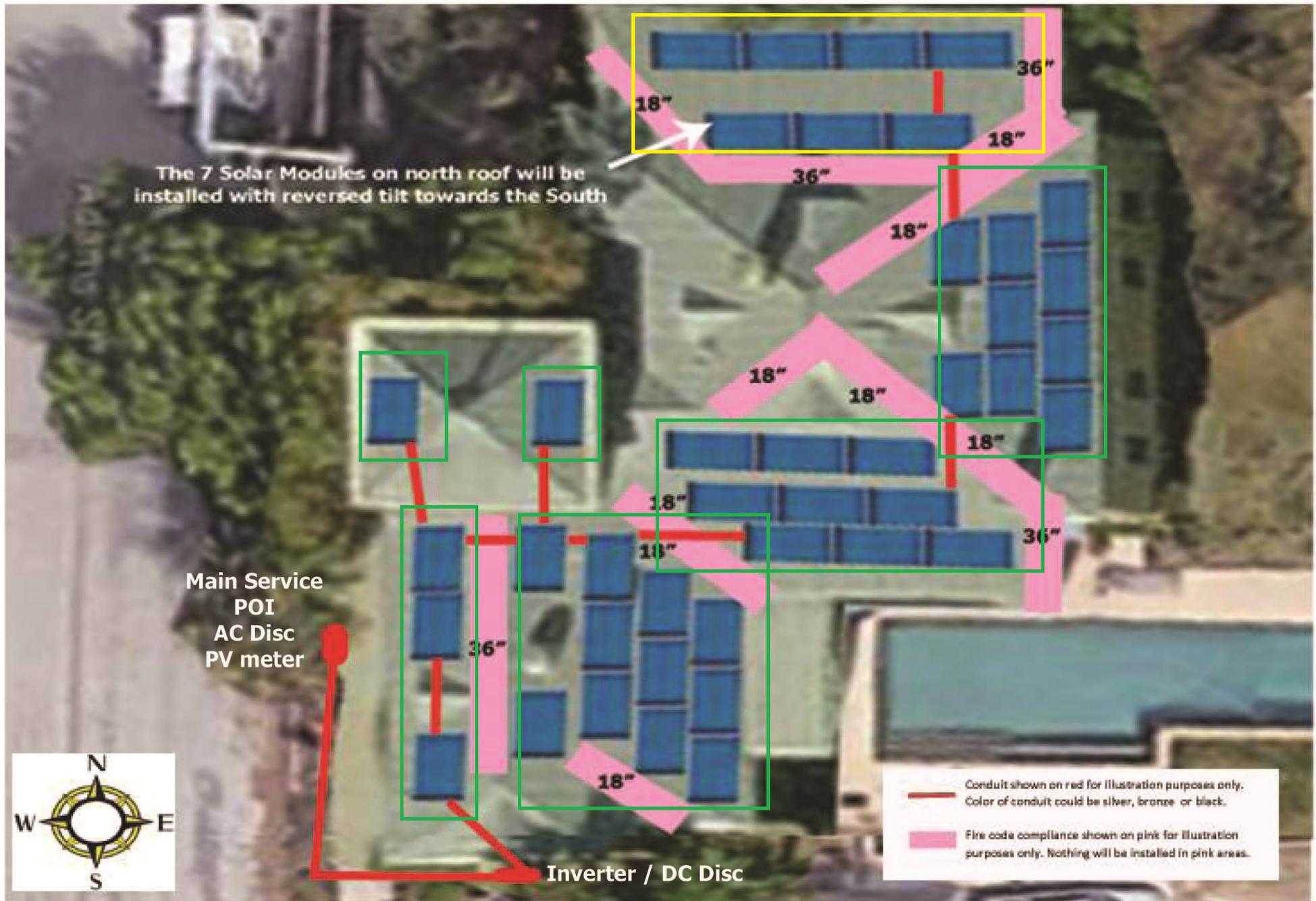


Panels in rear of the house partially visible from Pereida St



**View from South on Adams St
Solar Panels on west facing roof and west side of tower
are not visible from the street due to the height of the
dwelling and the low pitch of the roof**







Photovoltaic Module HIT® N330, N325 | VBHN330SA16, VBHN325SA16

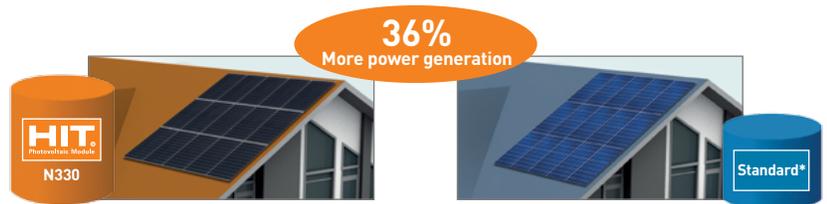
Panasonic solar technology

Panasonic photovoltaic modules HIT® feature an innovative hetero-junction cell structure made of mono-crystalline and amorphous silicon layers. Ultra-thin amorphous silicon layers prevent recombinations of electrons, keeping carrier loss to an absolute minimum. As a result, HIT® conversion efficiency ratings are among the highest available today.

19.7% module efficiency

Employing 96 cells in the same size footprint, N330 and N325 HIT® produce up to 36% more free electricity compared to conventional 60-cell panels.

- More solar power output per square foot
- Fewer panels to install, faster installations
- Ideal for small roof areas
- Greater cost savings for homeowners over a 25-year lifecycle



HIT®: 9,167kWh/year (15pcs x 330W = 4.95kW) VS Standard*: 6,716kWh/year (15pcs x 260W = 3.90kW)

NOTE: Panasonic's simulation in CA, USA

*Conventional crystalline module



Quality you can trust

100% Panasonic HIT®

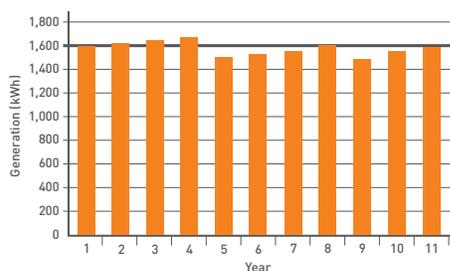
Starting over 40 years ago with the research and development of photovoltaic cells in 1975, Panasonic has been a solar pioneer since the beginning of the green revolution. In 1997, the HIT® set the industry standard for high conversion efficiency. Satisfied customers worldwide have come to trust and rely on Panasonic quality ever since.

Panasonic manufactured and guaranteed

- 25-year power output warranty and 15-year workmanship warranty
- Vertically integrated in-house manufacturing of wafer, cell, and module
- State-of-the-art production facilities and manufacturing processes
- Industry's most stringent independent testing and quality control standards
- IEC and 20+ internal tests

Minimal field degradation

Actual recorded data proves reliable, stable performance over 11 years.



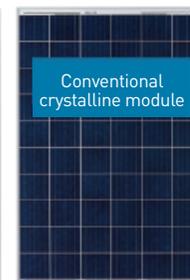
Simply powerful

330W

260W



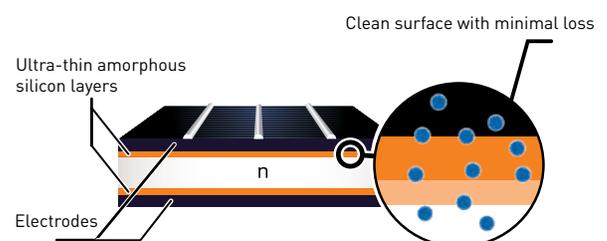
Panel size (1.6m²)



Panel size (1.6m²)

With the same dimension, HIT® N330 produces more power than conventional crystalline modules

Cell structure of HIT®



Electrical Specifications (TENTATIVE)

Model	VBHN330SA16	VBHN325SA16
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)	-0.30%/°C	-0.30%/°C
Temperature Coefficient (Voc)	-0.174V/°C	-0.174V/°C
Temperature Coefficient (Isc)	1.82mA/°C	1.82mA/°C
NOCT	44.0°C	44.0°C
CEC PTS Rating	305.9W	301.2W
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 (TENTATIVE)

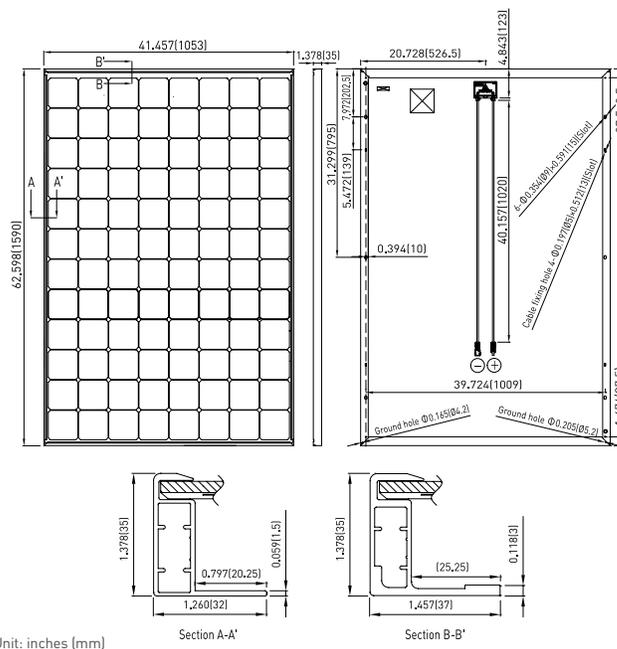
Model	VBHN330SA16, VBHN325SA16
Internal Bypass Diodes	4 Bypass Diodes
Module Area	18.02 Ft. ² [1.67m ²]
Weight	40.81 Lbs. (18.5kg)
Dimensions LxWxH	62.6x41.5x1.4 in. (1590x1053x35 mm)
Cable Length +Male/-Female	40.2/40.2 in. (1020/1020 mm)
Cable Size / Type	No. 12 AWG / PV Cable
Connector Type ²	Multi-Contact [®] Type IV (MC4™)
Static Wind / Snow Load	50 PSF (2400 Pa)
Pallet Dimensions LxWxH	63.7x42.2x5.5 in. (1618x1071x140 mm)
Quantity per Pallet / Pallet Weight	40 pcs. /1719 Lbs. (780 kg)
Quantity per 40' Container	560 pcs.
Quantity per 20' Container	240 pcs.

Operating Conditions & Safety Ratings (TENTATIVE)

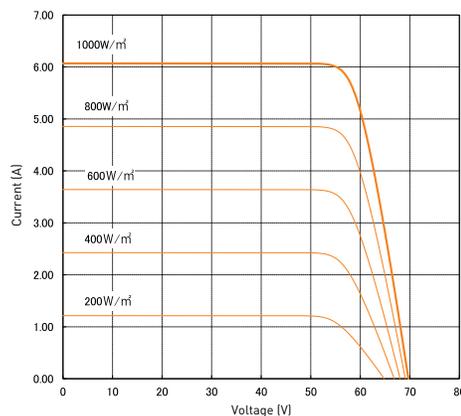
Model	VBHN330SA16, VBHN325SA16
Operating Temperature	-40°F to 185°F (-40°C to 85°C)
Hail Safety Impact Velocity	1" hailstone (25mm) at 52 mph (23m/s)
Safety & Rating Certifications	UL 1703, cUL, CEC
UL 1703 Fire Classification	Type 2
Limited Warranty	15 Years Workmanship, 25 Years Power Output

Note: Standard Test Conditions: Air mass 1.5; irradiance = 1000W/m²; cell temp. 25°C
¹Maximum power at delivery. For guarantee conditions, please check our guarantee document.
²STC: Cell temp. 25°C, AM1.5, 1000W/m²
³Safety locking clip (PV-SSH4) is not supplied with the module.
 Note: Specifications and information above may change without notice.

Dimensions



Dependence on Irradiance



Reference data for model: VBHN330SA16
 (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.