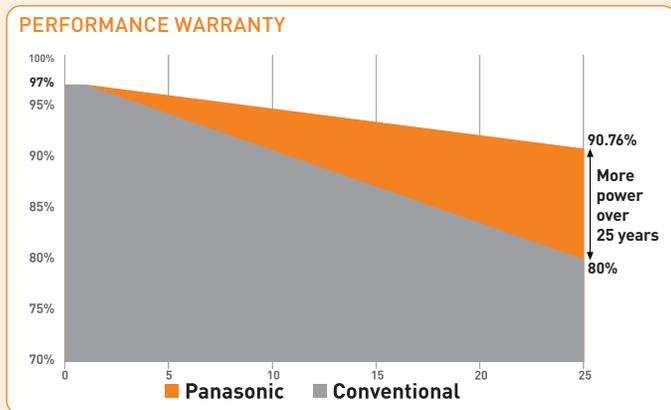
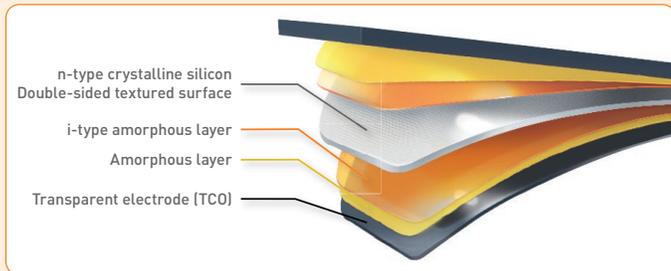


N330E

BLACK SERIES AC MODULE

Panasonic HIT[®] AC Modules combine the efficiency of HIT[®] solar panels with the intelligence of seventh-generation Enphase IQ 7X Microinverters. Delivers a smart grid-ready module with high efficiency and high power output for residential solar systems.

HIT[®] heterojunction technology uses dual ultra-thin amorphous silicon layers which reduce electron losses and produce greater power output than conventional panels.



The Panasonic HIT[®] Advantage

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 comes close to our temperature characteristics. That means more energy throughout the day.

TripleGuard 25-Year Warranty**
TripleGuard covers your solar panel system's performance, workmanship, parts, and labor for 25 years**. Whether in year three or year 25, rest assured your Panasonic warranty protection will be there when you need it.

Quality and Reliability
Panasonic's vertical integration, over 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 40mm frame increases durability and strength, handling loads of up to 5400Pa. A special water drainage system prevents rain water accumulation and eliminates water stains from the panel surface, allowing optimal sunlight penetration and panel efficiency.

N330E

BLACK SERIES AC MODULE

AC ELECTRICAL SPECIFICATIONS

Model #	VBHN330KA03E
Peak Power Output	320VA
Maximum Continuous Output Power	315VA
Nominal (L-L) voltage/range [†]	240V / 211 – 264V
Maximum Continuous Output Current	1.31A @ 240VAC / 1.51A @ 208VAC
Maximum Units per 20 A (L-L) branch circuit	12 @ 240VAC / 10 @ 208VAC
Nominal Frequency	60Hz
Extended Frequency Range	47 – 68Hz
AC Short Circuit Fault Current Over 3 Cycles	5.8Arms
Overvoltage Class AC Port	III
AC Port Backfeed Current	0A
Power Factor Setting	1.0
Power Factor (adjustable)	0.7 or 0.85 leading/ 0.7 or 0.85 lagging
CEC Weighted Efficiency	97.5% @ 240V / 97.0% @ 208V

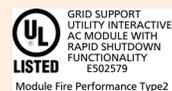
DC ELECTRICAL SPECIFICATIONS

Model #	VBHN330KA03E
Rated Power (Pmax) ¹	330W
Temperature Coefficient (Pmax)	-0.258%/°C
CEC PTC Rating (Tentative)	306.8W
CEC PTC to STC Ratio (Tentative)	92.9%
Cell Efficiency	22.18%
Module Efficiency	19.7%
Warranted Tolerance [-/+]	+10%/-0%*

FEATURES

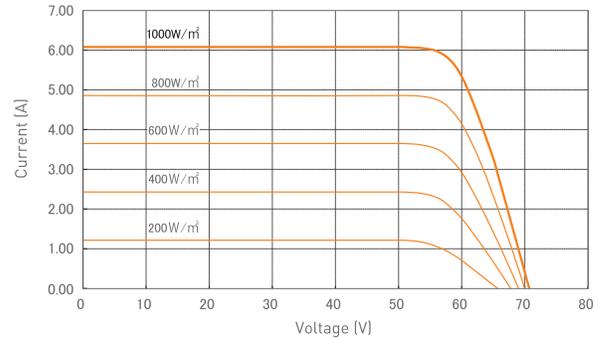
Model #	VBHN330KA03E
Communication	Power Line Communication (PLC)
Communication	Enlighten Manager and MyEnlighten monitoring options. Compatible with Enphase IQ Envoy
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690.
Compliance	CA Rule 21 UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01 Safety & Rating Certifications UL 1703, UL 1741, CEC This product is UL Listed as PV Rapid Shut Down Equipment and conforms with NEC-2014 and NEC-2017 section 690.12 and C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to manufacturer's instructions

* Maximum power at delivery. For guarantee conditions, please check our guarantee document.
 ** Equipment must be installed by Panasonic Authorized or Premium installer and registered through our website www.panasonicusahitwarranty.com within 60 days in order to receive twenty-five (25) year product and labor
 *** DC Warranty Performance: 1st year 97%, after 2nd year 0.26% annual degradation to year 25.
[†] Nominal voltage range can be extended beyond nominal if required by the utility.
¹ Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.
² Microinverter warranty provided by Panasonic.
³ STC: Cell temp. 25°C, AM1.5, 1000W/m²
⁴ Safety locking clip (PV-SSH4) is not supplied with the module.
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.

DEPENDENCE ON IRRADIANCE



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

MECHANICAL SPECIFICATIONS

Internal Bypass Diodes	4 Bypass Diodes
Module Area	18.02 Ft. ² (1.67m ²)
Weight	42.99 Lbs. (19.5kg)
Dimensions LxWxH	62.6x41.5x1.6 in. (1590x1053x40 mm)
Static Wind / Snow Load	112 PSF (5400Pa)
Pallet Dimensions LxWxH	65.3 x 43.7 x 48.5 in.
Quantity per Pallet / Pallet Weight	24 pcs./1098 Lbs. (498 kg)
Quantity per 40' Container	672 pcs.
Quantity per 20' Container	288 pcs.

OPERATING CONDITIONS & SAFETY RATINGS

Operating Temperature	-2°F to 185°F (-18°C to 85°C) [VBHN330KA03E]
Hail Safety Impact Velocity	1" hailstone (25mm) at 52 mph (23m/s)
UL 1703 Fire Classification	Type 2
Limited Warranty	Module and Microinverter: 25** Yrs Workmanship, Materials and Power Output (Linear)***
Manufacturing Locations	USA

DIMENSIONS

