19.7% module efficiency
Enables reaching a higher output and lower specific installation and balance-of-system costs than with the same number of standard 60-cell modules.

N330 / N325 / N320

27% More Power

HIT™, 15pcs x 330W=4.95kW

VS

Standard*, 15pcs x 240W = 3.60kW

100% Panasonic design
Proudly featuring Panasonic’s original invention, the heterojunction solar cell. With over 1 billion cells produced commercially over 20 years, 27 years after the breakthrough in the development and looking back to over 42 years of experience in solar, Panasonic really offers you a 25-year guarantee you can trust.

More energy, higher profit!
Helping you reach a higher final profit with your PV system!

330W / 325W / 320W
High Efficiency + High Performance at High Temperatures = High Power Generation

QUALITY PROVEN 4 WAYS

1. Panasonic Quality
   - IEC and over 20 Panasonic internal tests
   - Vertically integrated own manufacturing (wafer, cell and module)

2. Record low claim rate
   Less than 0.005% failure rate after more than 10 years experience in Europe (as of May 2017)

3. Less degradation on the field
   14 years actual data prove a reliable and stable performance.

   Installation: July 2002
   System size: 1,360W
   Location: Tottori Prefecture, Japan
   Module: HIT™ (T50056/101_1670W)
   Direction: South

4. 3rd Party verified
   - Lifecycle testing (Long-Term-Sequential-Test) by TÜV Rheinland (tested on VBHN240SE10)
   - PID-free (tested by Fraunhofer Institute)

HIT™ is a trademark of Panasonic Group.
## Electrical and Mechanical Characteristics

### Electrical data (at STC)

<table>
<thead>
<tr>
<th></th>
<th>VBHN330SJ47</th>
<th>VBHN325SJ47</th>
<th>VBHN320SJ47</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. power (Pmax) [W]</td>
<td>330</td>
<td>325</td>
<td>320</td>
</tr>
<tr>
<td>Max. power voltage (Vmp) [V]</td>
<td>56.0</td>
<td>57.4</td>
<td>57.3</td>
</tr>
<tr>
<td>Max. power current (Imp) [A]</td>
<td>5.70</td>
<td>5.45</td>
<td>5.59</td>
</tr>
<tr>
<td>Open circuit voltage ( Voc ) [V]</td>
<td>49.7</td>
<td>49.4</td>
<td>49.6</td>
</tr>
<tr>
<td>Short circuit current ( Isc ) [A]</td>
<td>6.07</td>
<td>6.03</td>
<td>5.98</td>
</tr>
<tr>
<td>Max. over current rating [A]</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power tolerance [%]</td>
<td>+10/-0 *</td>
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<td></td>
</tr>
<tr>
<td>Max. system voltage [V]</td>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solar Panel efficiency [%]</td>
<td>19.7</td>
<td>19.4</td>
<td>19.1</td>
</tr>
</tbody>
</table>

*Note: Standard Test Conditions: Air mass 1.5; Irradiance = 1000W/m²; cell temp. 25°C

### Temperature characteristics

| Temperature (NOC) [°C] | 44.0 | 46.0 | 44.0 |
| Temp. coefficient of Pmax [%/°C] | -0.258 | -0.258 | -0.258 |
| Temp. coefficient of Voc [V/°C] | -0.164 | -0.164 | -0.163 |
| Temp. coefficient of Isc [mA/°C] | 3.34 | 3.32 | 3.29 |

### At NOCT (Normal Operating Conditions)

| Max. power (Pmax) [W] | 253.5 | 248.3 | 245.2 |
| Max. power voltage (Vmp) [V] | 56.5 | 56.1 | 55.7 |
| Max. power current (Imp) [A] | 4.56 | 4.52 | 4.47 |
| Open circuit voltage ( Voc ) [V] | 66.0 | 65.9 | 65.7 |
| Short circuit current ( Isc ) [A] | 4.91 | 4.88 | 4.84 |

*Note: Normal Operating Cell Temp. Air mass 1.5; Irradiance = 800W/m²; Air temperature 20°C, wind speed 1 m/s

### At low irradiance [20%]

| Max. power (Pmax) [W] | 43.5 | 62.3 | 41.0 |
| Max. power voltage (Vmp) [V] | 57.0 | 54.4 | 55.9 |
| Max. power current (Imp) [A] | 1.12 | 1.11 | 1.10 |
| Open circuit voltage ( Voc ) [V] | 65.4 | 65.3 | 64.9 |
| Short circuit current ( Isc ) [A] | 1.22 | 1.21 | 1.20 |

*Note: Low irradiance: Air mass 1.5; Irradiance = 200W/m²; cell temp. = 25°C

### Warranty

- Power output: 10 years (90% of Pmin)
- Product workmanship: 10 years (based on warranty document)

### Materials

- Cell material: 5 inch photovoltaic cells
- Glass material: AR coated tempered glass
- Frame material: Black anodized aluminium
- Connectors type: SMK

### Certificates

- IEC61215
- IEC61730-1
- IEC61730-2
- CE
- RoHS
- Royale Protection Class II
- Salt mist corrosion Severity 6

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Panasonic Corporation Eco Solutions Company

Marketed in India by:

**Anchor Electricals Pvt. Ltd.**

A member of the Panasonic Group

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Specifications are subject to change without notice.

05/2017

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⚠️ 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.