








# ECO DELTA High Efficiency 5BB Polycrystalline PV Module

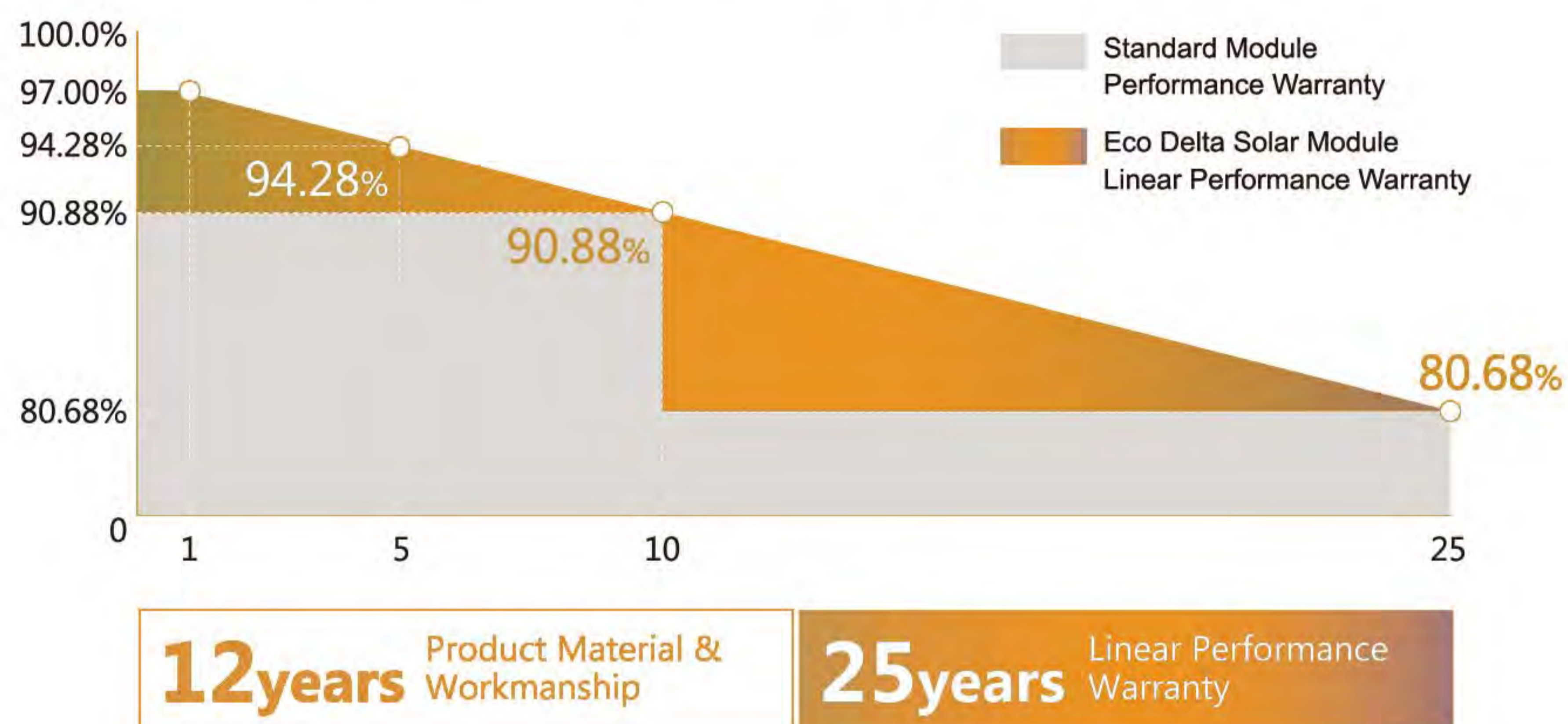
**ECO-270-290P-60**



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**Higher Module Efficiency**  
 Brings 0-+3W positive tolerance on label rating power provides higher Kwh
- 
**INNOVATIONAL 5-BUSBAR CELLS**  
 Reduces the cell series resistance and internal stress, decreases the risk of micro-crack and improves the module output.
- 
**INNOVATIVE PERC CELL TECHNOLOGY**  
 Excellent cell efficiency and output.
- 
**REDUCE SHADOW LOSS**  
 Effectively reduces the effect of shadow on the module surface.
- 
**REDUCE INTERNAL MISMATCH LOSS**  
 Reduces mismatch loss and improves output.
- 
**PASSED HAIL TEST**  
 Certified to hail resistance: ice ball size (d=45mm) and ice ball velocity (v=30.7m/s).
- 
**PID RESISTANCE**  
 Excellent PID resistance at 96 hours (@85°C/85%) test, and also can be improved to meet higher standards for the particularly harsh environment



## LINEAR PERFORMANCE WARRANTY



## QUALITY WARRANTY

Eco Delta guarantees that defects will not appear in materials and workmanship defined by IEC61215 or IEC61730 under normal installation, use and maintenance as specified in Eco Delta's installation manual for 12 years from the warranty starting date.

ISO9001  
ISO14001  
OHSAS18001



## About Eco Delta

Eco Delta Power Co.,Ltd specializes in research, development, production, and sales of solar PV products as well as provision of related services and provides customers around the world with high-quality PV products.

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# ECO DELTA High Efficiency 5BB Polycrystalline PV Module

## ECO-270-290P-60



| ELECTRICAL DATA @ STC       |     | ECO-270P-60   | ECO-275P-60 | ECO-280P-60 | ECO-285P-60 | ECO-290P-60 |
|-----------------------------|-----|---|-------------|-------------|-------------|-------------|
| Peak Power(Pmax)            | (W) | 270   | 275         | 280         | 285         | 290         |
| Maximum Power Voltage (Vmp) | (V) | 30.90   | 31.10       | 31.40       | 31.60       | 31.85       |
| Maximum Power Current(Imp)  | (A) | 8.73  | 8.84        | 8.92        | 9.02        | 9.11        |
| Open-circuit Voltage (Voc)  | (V) | 37.90   | 38.10       | 38.20       | 38.30       | 38.40       |
| Short-circuit Current(Isc)  | (A) | 9.22  | 9.32        | 9.40        | 9.49        | 9.60        |
| Module Efficiency (%)       |     | 16.50   | 16.80       | 17.10       | 17.40       | 17.70       |
| Operating Temperature       |     | -40°C~+85°C   |             |             |             |             |
| Maximum System Voltage      |     | <input type="checkbox"/> 1000V <input type="checkbox"/> 1500V |             |             |             |             |
| Maximum Series Fuse Rating  |     | 15A   |             |             |             |             |
| Power Tolerance             |     | 0~+3%   |             |             |             |             |

\*STC (Standard Test Condition): Irradiance 1000W/ m<sup>2</sup> , Module Temperature 25°C, AM 1.5

| ELECTRICAL DATA @ NMOT     |     | ECO-270P-60 | ECO-275P-60 | ECO-280P-60 | ECO-285P-60 | ECO-290P-60 |
|----------------------------|-----|-------------|-------------|-------------|-------------|-------------|
| Peak Power(Pmax)           | (W) | 200         | 204         | 207         | 211         | 215         |
| MPP Voltage (Vmp)          | (V) | 28.70       | 29.00       | 29.20       | 29.40       | 29.63       |
| MPP Current(Imp)           | (A) | 6.97        | 7.03        | 7.10        | 7.17        | 7.25        |
| Open Circuit Voltage (Voc) | (V) | 35.50       | 35.60       | 35.80       | 36.00       | 36.20       |
| Short Circuit Current(Isc) | (A) | 7.41        | 7.47        | 7.55        | 7.63        | 7.71        |

\*Under Nominal Module Operating Temperature (NMOT), Irradiance of 800W/ m<sup>2</sup> , Spectrum AM 1.5, Ambient Temperature 20°C, Wind Speed 1m/s

### TEMPERATURE CHARACTERISTICS

|                                 |        |
|---------------------------------|--------|
| Temperature coefficient of Pmax | -0.41% |
| Temperature coefficient of Voc  | -0.32% |
| Temperature coefficient of Isc  | 0.05%  |
| NMOT                            | 44±2°C |

### MECHANICAL DATA

|                   |                                   |
|-------------------|-----------------------------------|
| Cell Type         | Poly-Crystalline, 156.75*156.75mm |
| Cell Arrangement  | 60pcs (6*10)                      |
| Dimension (L*W*H) | 1650*992*35mm                     |
| Weight            | 18.0kg                            |
| Front Cover       | 3.2mm Tempered Glass              |
| Frame             | Anodized Aluminium Alloy          |
| Junction Box      | IP67, 3 Bypass Diodes             |
| Cable Type        | 4mm <sup>2</sup>                  |
| Length of Cable   | 1000mm                            |
| Connector         | PV Connector                      |

### OPTIONAL

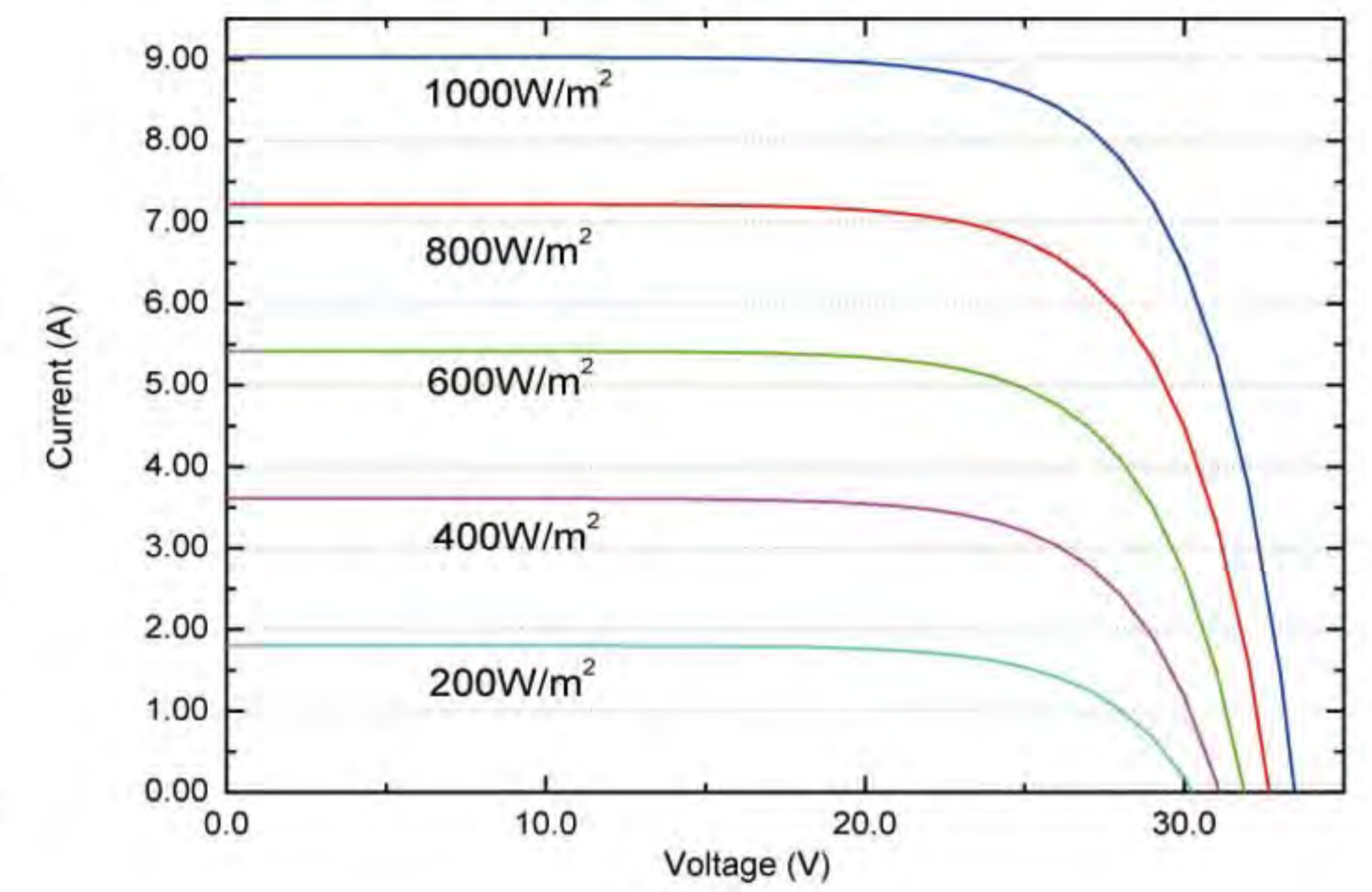
|             |                                       |
|-------------|---------------------------------------|
| Frame       | <input type="checkbox"/> Black        |
| Backsheet   | <input type="checkbox"/> Black        |
| Connector   | <input type="checkbox"/> Original MC4 |
| Cable       | <input type="checkbox"/> Customized   |
| Module Size | <input type="checkbox"/> Customized   |

### PACKING MANNER

|                  |       |
|------------------|-------|
| Packing Type     | 40'HQ |
| Piece/Pallet     | 30    |
| Pallet/Container | 28    |
| Piece/Container  | 840   |

\*The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, ECO DELTA POWER CO., LTD Reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Current-Voltage Curve under different irradiance



Current-Voltage Curve under different working temperatures

