



**PERLIGHT SOLAR**  
Powering Possibilities

# PERLIGHT DELTA PLUS 465W

## PLM-465H8NG-108

HPBC Cell Delta Plus Module

**22.78%**  
Efficiency

**25-YEAR**  
Warranty

**HPBC**  
**CELL**

### MODULE FEATURES



#### Maximum Efficiency of 22.78%

Powered by advanced Back Contact cell technology that maximizes light absorption.



#### Seamless Look

The Back Contact design eliminates front-side busbars, offering a sleek, modern look that enhances the visual appeal of any installation.



#### Pure Black design & Better Low-Light Performance

Enjoy reliable energy production even on cloudy or foggy days. The pure black design further maximises light capture, boosting power generation.



#### Superior Temperature Management

Benefit from a low temperature coefficient and better thermal management, ensuring consistent performance even in hot climates.



#### High Power Density and Versatile Installation

Maximize your energy output with high power density panels, ideal for installations with limited space.



#### Enhanced Durability and Reliability

30-year warranty and reinforced structural integrity, these panels are built to last, offering long-term reliability and sustained performance.

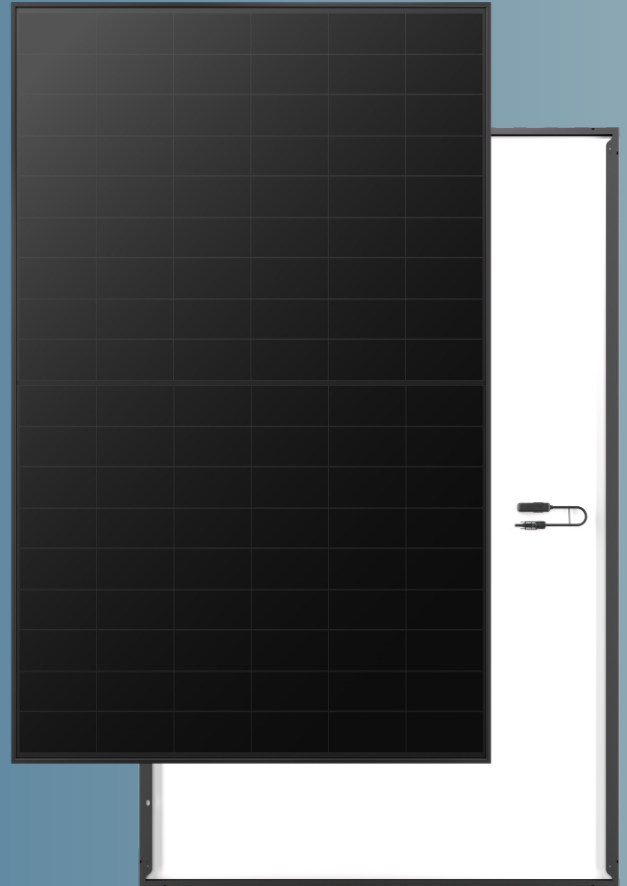
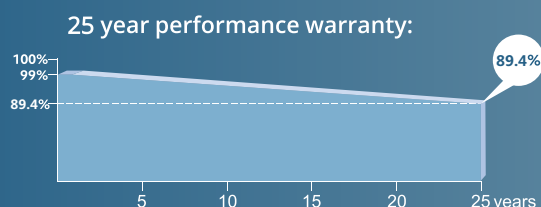
### EXTENDED POWER OUTPUT WARRANTY

**12**

years limited  
product  
warranty

**25**

years  
performance  
warranty



### QUALITY MANAGEMENT SYSTEM AND PRODUCT CERTIFICATION

IEC61215/61730, IEC62804(PID), IEC61701 (Salt),

IEC62716 (Ammonia), IEC60068-2-68 (Sand)

ISO 9001:2015 / quality management system

ISO 14001:2015 / environmental management system

ISO 45001:2018 / occupation health safety management system

ISO 50001:2011 / energy management system

IEC TS 62941 - 2016 / PV industry quality management system

### ETHICAL MANUFACTURING STANDARDS



The SA8000® Standard helps secure ethical working conditions for millions of workers globally. Established by Social Accountability International, the Standard leverages the power of businesses and consumers to purchase products or services from workplaces that enrich the livelihoods of people.

As a Sedex member we are committed to being a responsible business, sourcing responsibly, and improving ethical standards and working conditions within the supply chain.

**Sedex** | Member



EcoVadis is a globally recognized corporate sustainability performance assessment standard.





**PERLIGHT SOLAR**  
Powering Possibilities



More Than 40 Years Manufacturing  
Experience Of Baolite Group Since 1982

## ELECTRICAL CHARACTERISTICS (STC)

|                                             |                 |       |       |
|---------------------------------------------|-----------------|-------|-------|
| Module Type:                                | PLM-465H8NG-108 |       |       |
| Maximum Power - P <sub>m</sub> (W)          | 455             | 460   | 465   |
| Open Circuit Voltage - V <sub>oc</sub> (V)  | 39.31           | 39.51 | 39.71 |
| Short Circuit Current - I <sub>sc</sub> [A] | 14.70           | 14.77 | 14.83 |
| Maximum Power Voltage - V <sub>m</sub> [V]  | 33.14           | 33.34 | 33.54 |
| Maximum Power Current - I <sub>m</sub> [A]  | 13.73           | 13.80 | 13.87 |
| Module Efficiency - $\eta$ [%]              | 22.29           | 22.53 | 22.78 |

## ELECTRICAL CHARACTERISTICS (NMOT)

|                                             |       |       |       |
|---------------------------------------------|-------|-------|-------|
| Maximum Power - P <sub>m</sub> (W)          | 340   | 344   | 347   |
| Open Circuit Voltage - V <sub>oc</sub> (V)  | 36.91 | 37.10 | 37.29 |
| Short Circuit Current - I <sub>sc</sub> [A] | 11.87 | 11.93 | 11.98 |
| Maximum Power Voltage - V <sub>m</sub> [V]  | 30.24 | 30.42 | 30.60 |
| Maximum Power Current - I <sub>m</sub> [A]  | 11.25 | 11.31 | 11.36 |

Note: 1. Standard Test Conditions [STC]: irradiance 1000 W/m<sup>2</sup>; AM 1.5; cell temperature 25°C according to EN 60904-3;  
2. NOCT: Irradiance 800 W/m<sup>2</sup>; wind speed 1 m/s; ambient temperature 20°C;  
3. Tolerance of P<sub>m</sub>:  $\pm 3\%$ ; Measuring uncertainty of power:  $\pm 3\%$ ; Performance deviation of V<sub>oc</sub> [V], I<sub>sc</sub> [A], V<sub>m</sub> [V] and I<sub>m</sub> [A]:  $\pm 3\%$

## MECHANICAL PARAMETERS

|                 |                                                                        |
|-----------------|------------------------------------------------------------------------|
| Dimensions      | 1800 x 1134 x 30 mm                                                    |
| Weight          | 21.6 kg                                                                |
| Glass           | Single Glass, 3.2mm Coated Tempered Glass                              |
| Frame           | Anodized Aluminium Alloy                                               |
| Cells           | Half-Cell HPBC Mono Black                                              |
| Number of Cells | 108 (6 × 18)                                                           |
| Junction Box    | IP 68 (3 Diode)                                                        |
| Cable           | TUV 1×4.0 mm <sup>2</sup> , (+):1200mm/(-):1200mm or Customized Length |
| Connector       | Staubli MC4 EVO 2A                                                     |

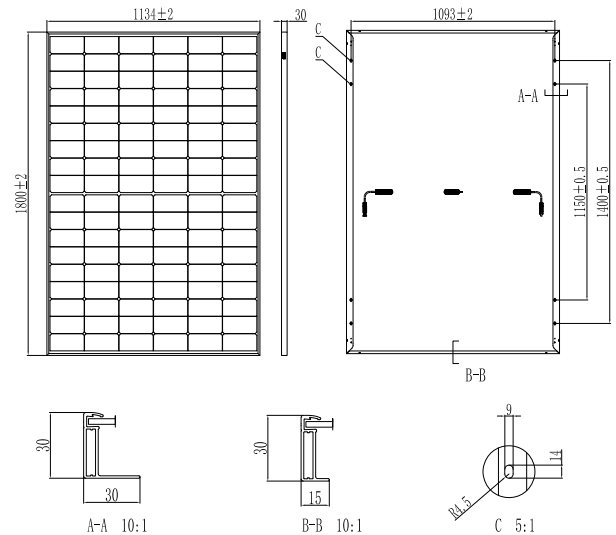
## TEMPERATURE PARAMETERS

|                                            |                                |
|--------------------------------------------|--------------------------------|
| NOCT                                       | 45°C ( $\pm 2^\circ\text{C}$ ) |
| Temperature Coefficient of V <sub>oc</sub> | -0.23%/°C                      |
| Temperature Coefficient of I <sub>sc</sub> | +0.05%/°C                      |
| Temperature Coefficient of P <sub>m</sub>  | -0.29%/°C                      |

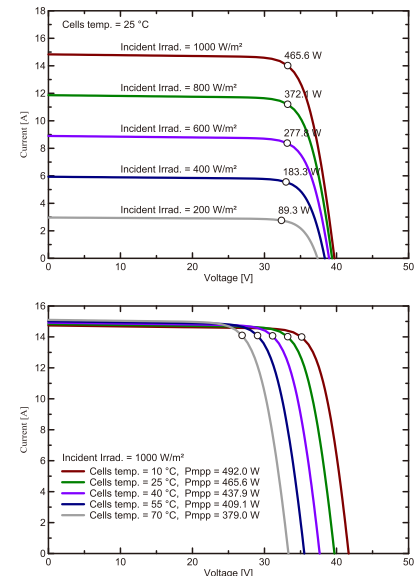
## MAXIMUM RATINGS

|                                    |                                                       |
|------------------------------------|-------------------------------------------------------|
| Maximum System Voltage [V]         | 1500V DC (IEC)                                        |
| Maximum Series Fuse Rating [A]     | 25                                                    |
| Maximum Surface Load Capacity [Pa] | Front 5400 / Back 2400                                |
| Temperature Range [°C]             | -40 ~ +85                                             |
| Withstanding Hail                  | Maximum diameter of 25 mm with impact speed of 23 m/s |
| Power Tolerance                    | $\pm 3\%$                                             |

## DRAWINGS



## I-V CURVE



## PACKAGING CONFIGURATION

|                   |       |
|-------------------|-------|
| Packing Type      | 40'HQ |
| Piece / Pallet    | 36    |
| Piece / Container | 864   |

## CLAMPING ZONES

|            |                          |
|------------|--------------------------|
| Long Side  | 250mm to 350mm from edge |
| Short Side | 150mm to 250mm from edge |