

# RUNERGY

## TIER 1 HY-DH144N8 565-585W

**22.6%**

Max. Efficiency

**N-Type**

Bifacial & Dual Glass

**144 Pieces**

Half-Cell



### High Conversion Efficiency

Module efficiency up to 22.6% based on N-Type wafer and advanced N-Type cell technology



### Excellent Energy Yield

More power output in field operation due to better thermal behaviors, weak-light performance and bifaciality



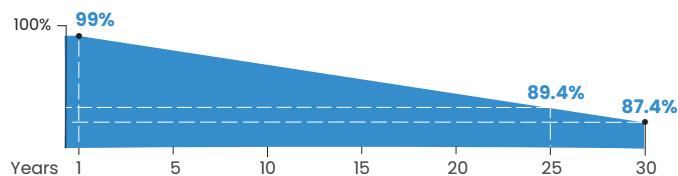
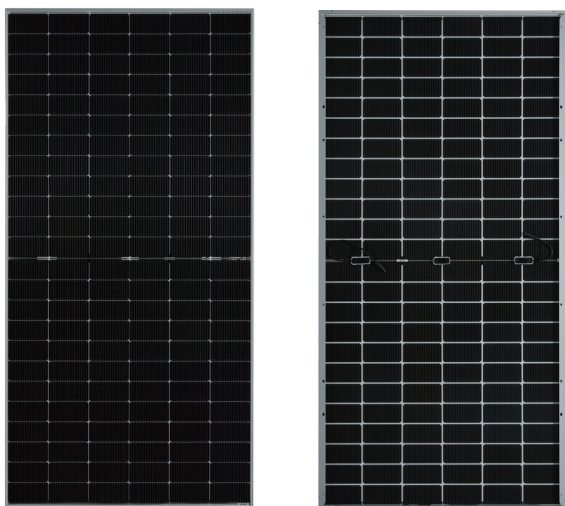
### Outstanding Anti-degradation

Unsusceptible to LID, LeTID and less annual degradation due to special characteristics of N-Type



### Quality Guarantee

High module quality ensures long-term reliability



Runergy N-Type Dual Glass Product Performance Warranty

- **12 Years** warranty for materials and workmanship
- **30 Years** warranty for extra linear power output
- 1st year < **1%**, annual degradation < **0.4%**

IEC61215 / IEC61730 / UL61730 / IEC61701 / IEC62716 / IEC60068 / ISO9001 / ISO14001 / ISO45001



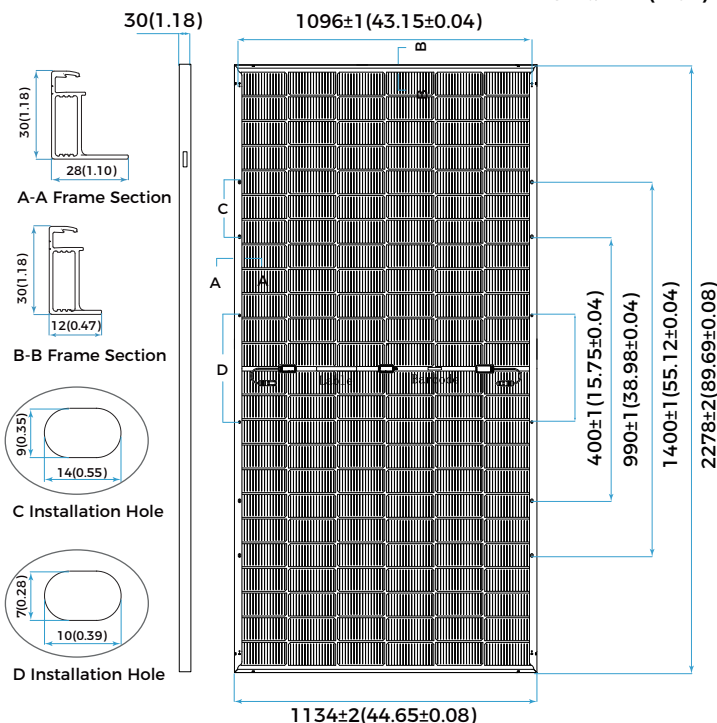
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## Mechanical Parameters

|              |                                                                                   |
|--------------|-----------------------------------------------------------------------------------|
| Solar Cell   | Mono N-Type 182mm                                                                 |
| No. of Cells | 144 (6 × 24)                                                                      |
| Dimensions   | 2278 × 1134 × 30mm(89.69× 44.65 × 1.18in.)                                        |
| Weight       | 32kg(70.55lbs)                                                                    |
| Junction Box | IP68 rated (3 bypass diodes)                                                      |
| Output Cable | 4mm <sup>2</sup> (IEC), 12 AWG(UL)<br>+400/-200mm (+15.75/-7.87in.) or customized |
| Connector    | RY01 or similar                                                                   |
| Front Cover  | 2.0mm (0.079in.)semi-tempered AR glass                                            |
| Back Cover   | 2.0mm (0.079in.)semi-tempered glass                                               |
| Container    | 36 pcs/Pallet, 720 pcs/40' HQ                                                     |

## Operating Parameters

|                        |                                |
|------------------------|--------------------------------|
| Max. System Voltage    | DC 1500V (IEC/UL)              |
| Operating Temperature  | -40℃ ~ +85℃(-40°F ~ +185°F)    |
| Max. Fuse Rating       | 30A                            |
| Frontside Max. Loading | 5400Pa(112lb/ft <sup>2</sup> ) |
| Backside Max. Loading  | 2400Pa(50lb/ft <sup>2</sup> )  |
| Bifaciality            | 80%±10%                        |
| Fire Resistance        | IEC Class A                    |



## Electrical Characteristics - STC

Irradiance 1000 W/m<sup>2</sup>, cell temperature 25 °C, AM1.5, , Test uncertainty for Pmax: ±3%

|                                   |       |       |        |       |       |
|-----------------------------------|-------|-------|--------|-------|-------|
| Maximum Power at STC (Pmax/W)     | 585   | 580   | 575    | 570   | 565   |
| Power Tolerance (W)               |       |       | 0 ~ +5 |       |       |
| Optimum Operating Voltage (Vmp/V) | 44.22 | 44.04 | 43.83  | 43.62 | 43.43 |
| Optimum Operating Current (Imp/A) | 13.23 | 13.17 | 13.12  | 13.07 | 13.01 |
| Open Circuit Voltage (Voc/V)      | 52.16 | 51.97 | 51.74  | 51.52 | 51.31 |
| Short Circuit Current (Isc/A)     | 13.85 | 13.80 | 13.75  | 13.70 | 13.65 |
| Module Efficiency                 | 22.6% | 22.5% | 22.3%  | 22.1% | 21.9% |

## Electrical Characteristics - NMOT

Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM1.5, wind speed 1 m/s.

|                                   |       |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|-------|
| Maximum Power at NMOT (Pmax/W)    | 448.1 | 444.2 | 440.4 | 436.6 | 432.7 |
| Optimum Operating Voltage (Vmp/V) | 42.34 | 42.17 | 41.97 | 41.77 | 41.58 |
| Optimum Operating Current (Imp/A) | 10.58 | 10.53 | 10.49 | 10.45 | 10.41 |
| Open Circuit Voltage (Voc/V)      | 49.94 | 49.76 | 49.54 | 49.33 | 49.13 |
| Short Circuit Current (Isc/A)     | 11.16 | 11.12 | 11.08 | 11.04 | 11.00 |

## Rearside Power Gain (Reference to 585W Front)

|                                   |       |       |       |
|-----------------------------------|-------|-------|-------|
| Rearside Power Gain               | 5%    | 15%   | 25%   |
| Maximum Power (Pmax/W)            | 614   | 673   | 731   |
| Optimum Operating Voltage (Vmp/V) | 44.22 | 44.32 | 44.32 |
| Optimum Operating Current (Imp/A) | 13.89 | 15.18 | 16.50 |
| Open Circuit Voltage (Voc/V)      | 52.16 | 52.26 | 52.26 |
| Short Circuit Current (Isc/A)     | 14.54 | 15.90 | 17.28 |
| Module Efficiency                 | 23.8% | 26.1% | 28.3% |

## Temperature Characteristics

|                                      |           |
|--------------------------------------|-----------|
| Nominal Module Operating Temperature | 42 ± 2 °C |
| Nominal Cell Operating Temperature   | 45 ± 2 °C |
| Temperature Coefficient of Pmax      | -0.29%/°C |
| Temperature Coefficient of Voc       | -0.25%/°C |
| Temperature Coefficient of Isc       | 0.045%/°C |

