

# RUNERGY

## TIER1 HY-DH144N8 570-595W

**23.0%**

Max. Efficiency

**N-Type**

Bifacial & Dual Glass

**144 Pieces**

Half-Cell



### High Conversion Efficiency

Module efficiency up to 23.0% 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



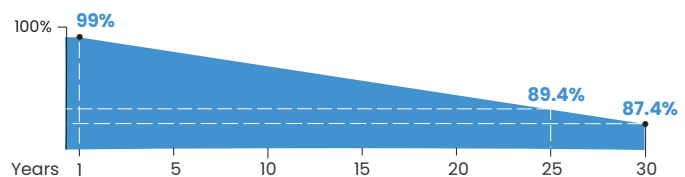
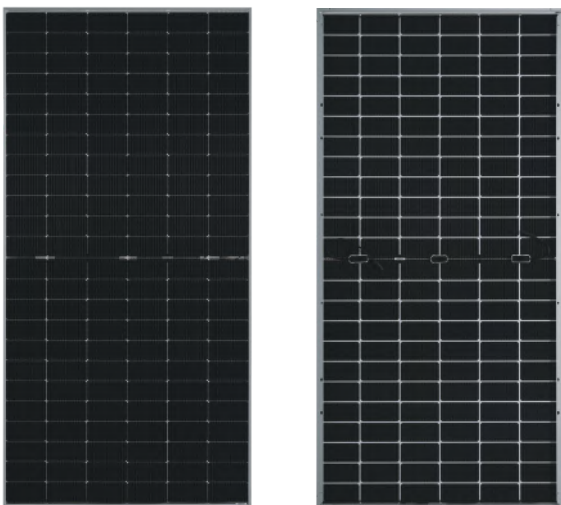
### Outstanding Anti-degradation

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

• 1st year degradation <1%, annual degradation <0.4%



12-year product warranty



30-year linear power warranty

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

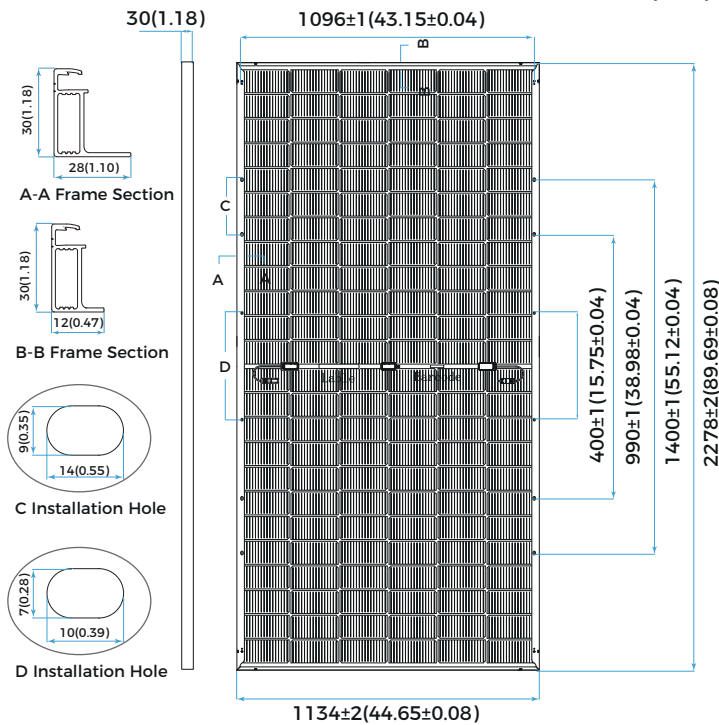


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Unit: mm(inch)

| 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 AR coated heat strengthened glass                                           |
| Back Cover            | 2.0mm heat strengthened glass                                                     |
| Frame                 | Aluminum, silver anodized                                                         |
| Container             | 36 pcs/Pallet, 720 pcs/40' HQ                                                     |

| Operating Parameters   |                                |
|------------------------|--------------------------------|
| Max. System Voltage    | DC 1500V (IEC/UL)              |
| Operating Temperature  | -40°C ~ +85°C(-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/ UL Type 29        |



| 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)     | 595                                                                                              | 590   | 585   | 580   | 575   | 570   |
| Power Tolerance (W)               | 0 ~ +5                                                                                           |       |       |       |       |       |
| Optimum Operating Voltage (Vmp/V) | 44.64                                                                                            | 44.43 | 44.22 | 44.04 | 43.83 | 43.62 |
| Optimum Operating Current (Imp/A) | 13.33                                                                                            | 13.28 | 13.23 | 13.17 | 13.12 | 13.07 |
| Open Circuit Voltage (Voc/V)      | 52.58                                                                                            | 52.37 | 52.16 | 51.97 | 51.74 | 51.52 |
| Short Circuit Current (Isc/A)     | 13.93                                                                                            | 13.89 | 13.85 | 13.80 | 13.75 | 13.70 |
| Module Efficiency                 | 23.0%                                                                                            | 22.8% | 22.6% | 22.5% | 22.3% | 22.1% |

| 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)    | 455.7                                                                                 | 451.9 | 448.1 | 444.2 | 440.4 | 436.6 |
| Optimum Operating Voltage (Vmp/V) | 42.74                                                                                 | 42.54 | 42.34 | 42.17 | 41.97 | 41.77 |
| Optimum Operating Current (Imp/A) | 10.66                                                                                 | 10.62 | 10.58 | 10.53 | 10.49 | 10.45 |
| Open Circuit Voltage (Voc/V)      | 50.35                                                                                 | 50.14 | 49.94 | 49.76 | 49.54 | 49.33 |
| Short Circuit Current (Isc/A)     | 11.23                                                                                 | 11.20 | 11.16 | 11.12 | 11.08 | 11.04 |

| 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 |

