

RUNERGY

TIER 1 HY-DH108N11 490-515W

23.2% Max. Efficiency **N-Type** Bifacial & Dual Glass **108 Pieces** Half-Cell



Advanced Technology

Embracing N - type Cells and a Novel product technology platform. The mass production efficiency and reliability are leading in the industry.



Exceptional Performance

Double - sided Design, When Paired with a Tracker System, Significantly increases Energy Yield.



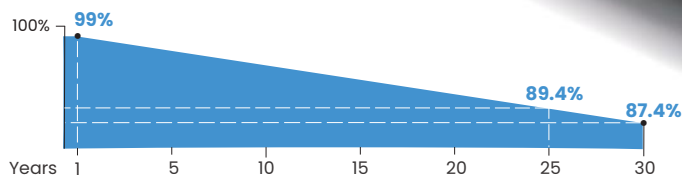
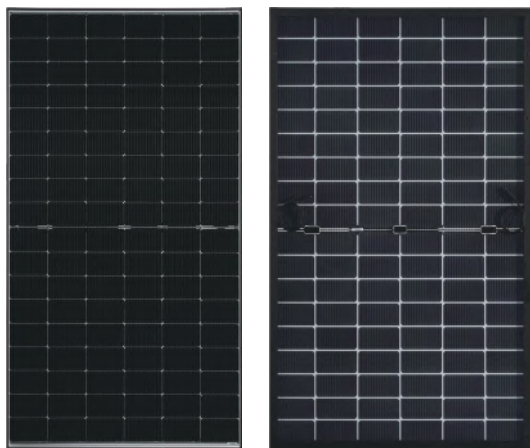
Easy to assemble

The center power gear is 500W, which makes it easier to build an integer-Kw system.



Solid Quality, Steady Reliability

Dual - glass Design, Exhibiting Strong Resistance to Water Vapor and Guaranteeing Long - term Reliability.



Runergy N-Type Dual Glass Product Performance Warranty

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



15-year product warranty



30-year linear power warranty

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



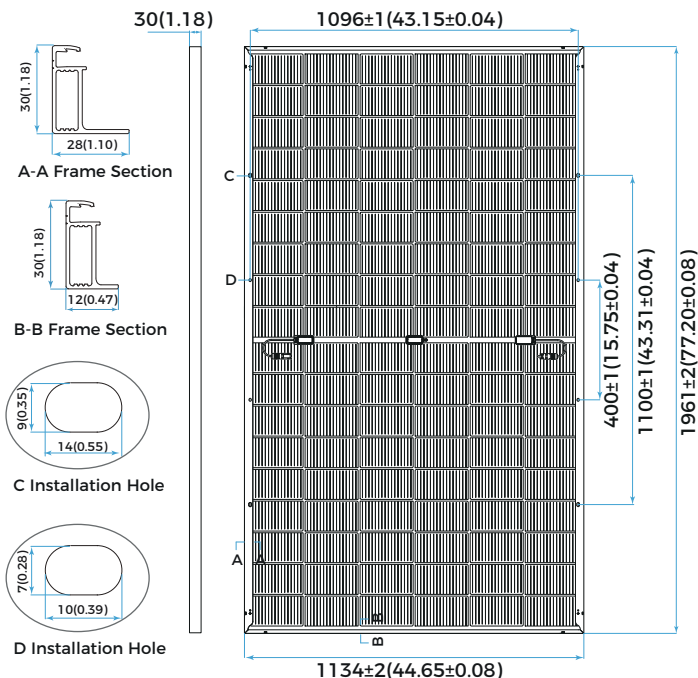
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Mechanical Parameters

Solar Cell	Mono N-Type 182*210mm
No. of Cells	108 (6 × 18)
Dimensions	1961 × 1134 × 30mm(77.20x 44.65 x 1.18in)
Weight	27.5kg(60.6lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm ² (IEC), 12 AWG(UL) ±1200mm(47.24in.) or customized
Connector	EVO2 or similar
Front Cover	2.0mm AR coated heat strengthened glass
Back Cover	2.0mm heat strengthened glass
Frame	Aluminum, black anodized
Container	36 pcs/Pallet, 864 pcs/40' HQ(Global), 684 pcs/40'HQ(US)

Operating Parameters

Max. System Voltage	DC 1500V (IEC/UL)
Operating Temperature	-40°C ~ +85°C(-40°F ~ +185°F)
Max. Fuse Rating	35A
Frontside Max. Loading	5400Pa(112lb/ft ²)
Backside Max. Loading	2400Pa(50lb/ft ²)
Bifaciality	80%±5%
Fire Resistance	IEC Class A/ UL type 29



Electrical Characteristics - STC

Irradiance 1000 W/m², cell temperature 25 °C, AM1.5, Test uncertainty for Pmax: ±3%

Maximum Power at STC (Pmax/W)	515	510	505	500	495	490
Power Tolerance (W)	0 ~ +5					
Optimum Operating Voltage (Vmp/V)	33.89	33.69	33.49	33.29	33.09	32.89
Optimum Operating Current (Imp/A)	15.20	15.14	15.08	15.02	14.96	14.90
Open Circuit Voltage (Voc/V)	40.89	40.59	40.29	40.09	39.79	39.59
Short Circuit Current (Isc/A)	15.98	15.93	15.88	15.85	15.82	15.79
Module Efficiency	23.2%	22.9%	22.7%	22.5%	22.2%	22.0%

Electrical Characteristics - BNPI

Irradiance : front 1000 W/m², rear 135W/m², Cell temperature 25 °C, AM1.5.

Maximum Power at BNPI (Pmax/W)	567	561	556	550	545	539
Optimum Operating Voltage (Vmp/V)	33.89	33.69	33.49	33.29	33.09	32.89
Optimum Operating Current (Imp/A)	16.73	16.66	16.60	16.53	16.46	16.40
Open Circuit Voltage (Voc/V)	40.99	40.69	40.39	40.19	39.89	39.69
Short Circuit Current (Isc/A)	17.62	17.56	17.51	17.47	17.44	17.41

Rearside Power Gain (Reference to 500W Front)

Rearside Power Gain	5%	15%	25%
Maximum Power (Pmax/W)	525	575	625
Optimum Operating Voltage (Vmp/V)	33.29	33.29	33.30
Optimum Operating Current (Imp/A)	15.77	17.27	18.77
Open Circuit Voltage (Voc/V)	40.09	40.09	40.10
Short Circuit Current (Isc/A)	16.64	18.23	19.81
Module Efficiency	23.6%	25.9%	28.1%

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

