

RUNERGY

HY-DH96N11B **Turbo** **Monofacial**

445-465W

23.3%

Max. Efficiency

N-Type

Monofacial & Dual Glass

96 Pieces

Half-Cell



Leading Technology

Based on n-type cell and 210R technology platform; Advanced design and manufacturing process; Industry leading reliability and efficiency of mass production



High Power

Lower temperature coefficient, better low light performance; Unsusceptible to LID, LeTID and lower PID degradation; Significantly enhanced power output and lower LCOE



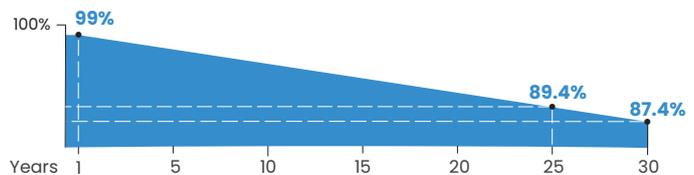
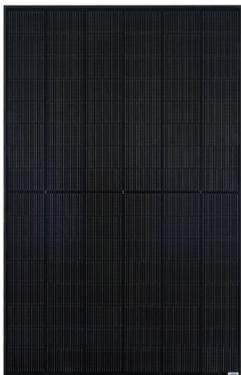
Aesthetic Appearance

All black front cover, aesthetic match with home rooftops; Dual glass and white back encapsulant film with porcelain enamel texture; 2m² golden size, easy for installation



Stringent Quality Control

Durable product structure; Stringent quality control system; Guaranteed after-sales service to ensure 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



www.runergy.com
sales-inform@runergy.com

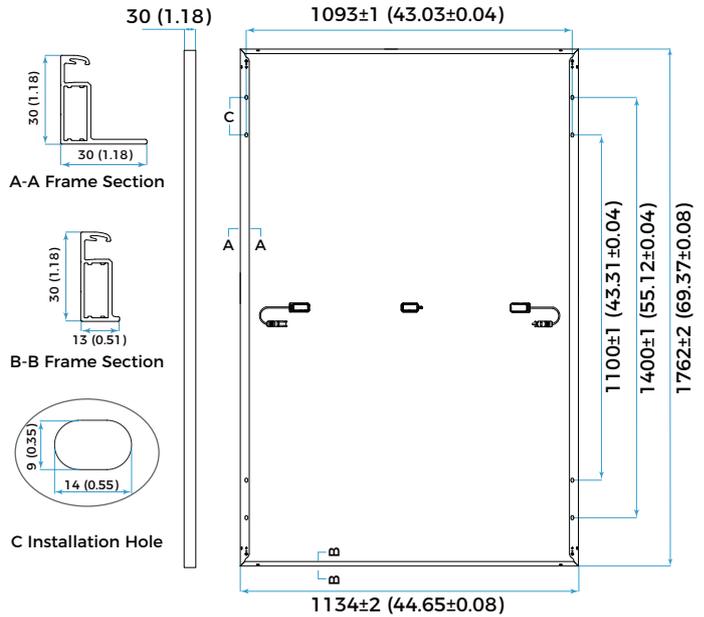
Unit: mm (inch)

Mechanical Parameters

Solar Cell	Mono N-Type 182*210 mm
No. of Cells	96 (6 × 16)
Dimensions	1762 × 1134 × 30mm (69.37 x 44.65 x 1.18in)
Weight	25kg (55.12lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm ² (IEC), 12 AWG (UL) ±1200mm (47.24in.) or customized
Connector	MC4-EVO2 or similar
Front Cover	2.0mm AR coated heat-strengthened glass
Back Cover	2.0mm heat-strengthened glass
Frame	Black-anodized aluminum
Container	36 pcs/pallet, 936 pcs/40' HQ (Global) ,756 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)
Hail Test	35mm, 27.2 m/s.
Fire Resistance	IEC Class A/ UL Type 29



Electrical Characteristics - STC

Irradiance 1000 W/m², cell temperature 25 °C, AM-1.5, Test uncertainty for Pmax: ±3%

	465	460	455	450	445
Maximum Power at STC (Pmax/W)	465	460	455	450	445
Power Tolerance (W)			0 ~ +5		
Optimum Operating Voltage (Vmp/V)	29.83	29.70	29.57	29.44	29.30
Optimum Operating Current (Imp/A)	15.59	15.49	15.39	15.29	15.19
Open Circuit Voltage (Voc/V)	35.65	35.52	35.39	35.26	35.12
Short Circuit Current (Isc/A)	16.31	16.23	16.15	16.07	15.99
Module Efficiency	23.3%	23.0%	22.8%	22.5%	22.3%

Electrical Characteristics - NMOT

Irradiance 800 W/m², ambient temperature 20 °C, AM1.5, wind speed 1 m/s.

	356.2	352.3	348.5	344.8	340.9
Maximum Power at NMOT (Pmax/W)	356.2	352.3	348.5	344.8	340.9
Optimum Operating Voltage (Vmp/V)	28.56	28.44	28.31	28.19	28.05
Optimum Operating Current (Imp/A)	12.47	12.39	12.31	12.23	12.15
Open Circuit Voltage (Voc/V)	34.13	34.01	33.89	33.76	33.63
Short Circuit Current (Isc/A)	13.15	13.08	13.02	12.95	12.89

Warranty

Product Workmanship Warranty	12 Years
Linear Power Output Warranty	30 Years
First Year Degradation	1%
Annual Power Degradation	0.4%

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

