

RUNERGY

HY-DH96N11-XXX **Bifacial**

440-465W

23.3%

Max. Efficiency

N-Type

Bifacial & 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

Bifacial higher power output, lower temperature coefficient and better low light performance



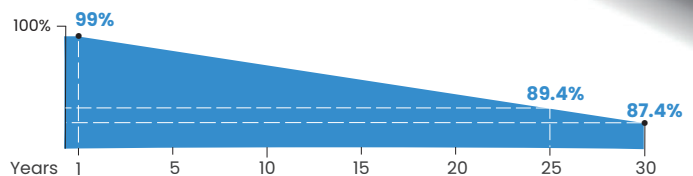
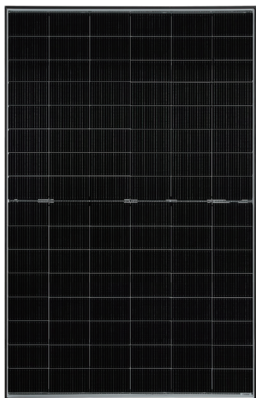
Long-term Reliability

5400Pa snow load, 2400Pa wind load, and 35mm hail-resistant with 27.2m/s strike



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 (STC) Warranty

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



25*-year product warranty



30-year linear power (STC) warranty

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



Jiangsu Runergy New Energy Technology Co., Ltd.

Assembled In China/Thailand/USA

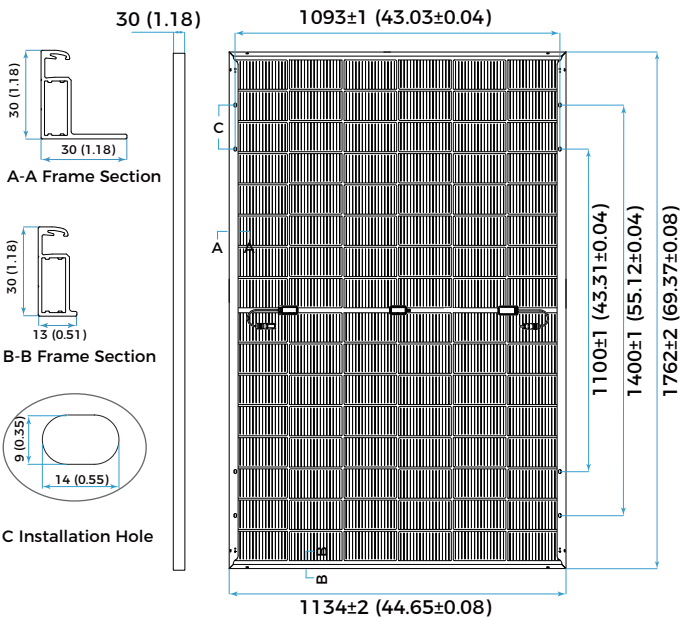
www.runergy.com sales-inform@runergy.com

Mechanical Parameters

Solar Cell	Mono N-Type 182*210mm
No. of Cells	96 (6 × 16)
Dimensions	1762 × 1134 × 30mm (69.37 × 44.65 × 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	PV-KST4-EVO2A/xy,PV KBT4-EVO2A/xy (Staubli) or PV-KST4-EVO 2/xy_UR,PV KBT4-EVO 2/xy_UR (Staubli)
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)

Operating Parameters

Max. System Voltage	DC 1500V (IEC/UL)
Operating Temperature	-40°C ~ +70°C (-40°F ~ +158°F)
Max. Fuse Rating	35A
Front/Back Max. Loading	+5400Pa (+112lb/ft ²)/-2400Pa (-50lb/ft ²)
Bifaciality	Pm:80±5%, Voc:98±2%, Isc:80±5%.
Temperature rating	T98 th 70°C
Fire Resistance	IEC Class A/ UL type 29



Electrical Characteristics - STC

Irradiance 1000 W/m², cell temperature 25 °C, AM-1.5, Tolerances: Pmax:±3%,Voc:±3%,Isc:±4%

Maximum Power at STC (Pmax/W)	465	460	455	450	445	440
Power Tolerance (W)	0 ~ +5					
Optimum Operating Voltage (Vmp/V)	29.83	29.70	29.57	29.44	29.30	29.16
Optimum Operating Current (Imp/A)	15.59	15.49	15.39	15.29	15.19	15.09
Open Circuit Voltage (Voc/V)	35.65	35.52	35.39	35.26	35.12	34.98
Short Circuit Current (Isc/A)	16.31	16.23	16.15	16.07	15.99	15.91
Module Efficiency	23.3%	23.0%	22.8%	22.5%	22.3%	22.0%

Electrical Characteristics - BNPI

Irradiance: front 1000W/m², rear 135W/m², Cell temperature 20 °C, AM-1.5, Tolerances: Pmax:±3%,Voc:±3%,Isc:±4%

Maximum Power at BNPI (Pmax/W)	510	505	500	495	490	485
Optimum Operating Voltage (Vmp/V)	29.83	29.70	29.57	29.44	29.30	29.16
Optimum Operating Current (Imp/A)	17.16	17.05	16.94	16.83	16.72	16.61
Open Circuit Voltage (Voc/V)	35.74	35.61	35.48	35.35	35.21	35.07
Short Circuit Current (Isc/A)	17.98	17.89	17.80	17.72	17.63	17.54

Short Circuit Current - BSI

Irradiance: front 1000W/m², rear 300W/m².

Short Circuit Current -BSI(Isc-BSI/A)	20.02	19.92	19.82	19.74	19.63	19.53
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Rearside Power Gain (Reference to 445W Front)

Rearside Power Gain	5%	15%	25%
Maximum Power (Pmax/W)	467	512	556
Optimum Operating Voltage (Vmp/V)	29.30	29.40	29.40
Optimum Operating Current (Imp/A)	15.95	17.41	18.92
Open Circuit Voltage (Voc/V)	35.12	35.22	35.22
Short Circuit Current (Isc/A)	16.79	18.33	19.93
Module Efficiency	23.4%	25.6%	27.8%

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

