

# RUNERGY

## TIER 1 HY-DH156N8 625-645W

**23.1%** Max. Efficiency    **N-Type** Bifacial & Dual Glass    **156 Pieces** Half-Cell

### High Conversion Efficiency

Module efficiency up to 23.1% based on N-Type wafer and advanced N-Type cell technology

### Excellent Energy Yield

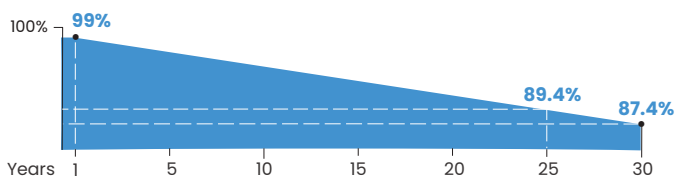
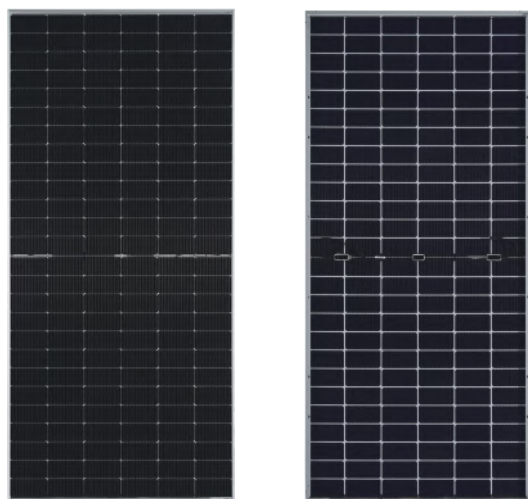
More power output in field operation due to better thermal behaviors, weak-light performance and bifaciality

### 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



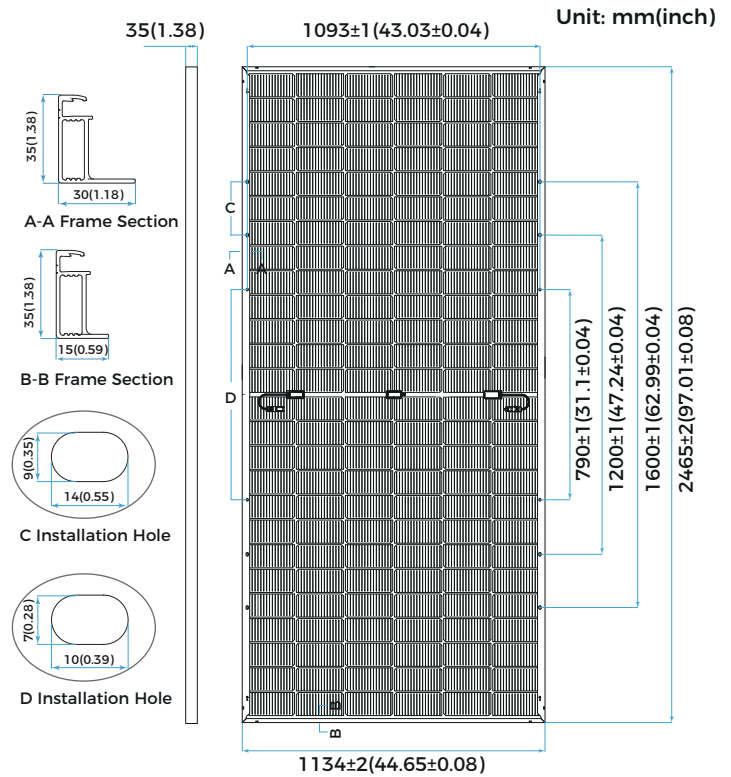
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## Mechanical Parameters

Solar Cell	Mono N-Type 182mm
No. of Cells	156 (6 × 26)
Dimensions	2465 × 1134 × 35mm(97.05 × 44.65 × 1.38in.)
Weight	34.4kg(75.84lbs)
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm <sup>2</sup> (IEC), 12 AWG(UL) +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	31 pcs/Pallet, 496 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	30A
Frontside Max. Loading	5400Pa(112lb/ft <sup>2</sup> )
Backside Max. Loading	2400Pa(50lb/ft <sup>2</sup> )
Bifaciality	80±5%
Fire Resistance	IEC Class A/ UL Type 29



## Electrical Characteristics - STC

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

	645	640	635	630	625
Maximum Power at STC (Pmax/W)					
Power Tolerance (W)			0 ~ +5		
Optimum Operating Voltage (Vmp/V)	48.32	48.13	47.97	47.80	47.61
Optimum Operating Current (Imp/A)	13.35	13.30	13.24	13.18	13.13
Open Circuit Voltage (Voc/V)	56.95	56.75	56.56	56.37	56.18
Short Circuit Current (Isc/A)	13.98	13.94	13.89	13.84	13.79
Module Efficiency	23.1%	22.9%	22.7%	22.5%	22.4%

## Electrical Characteristics - BNPI

Irradiance: front 1000W/m<sup>2</sup>, rear 135W/m<sup>2</sup>, Cell temperature 20 °C, AM1.5.

Maximum Power at BNPI (Pmax/W)	709.8	704.6	698.9	693.6	688.0
Optimum Operating Voltage (Vmp/V)	48.32	48.13	47.97	47.80	47.61
Optimum Operating Current (Imp/A)	14.69	14.64	14.57	14.51	14.45
Open Circuit Voltage (Voc/V)	57.09	56.89	56.70	56.51	56.32
Short Circuit Current (Isc/A)	15.41	15.37	15.31	15.26	15.20

## Rearside Power Gain (Reference to 645W Front)

Rearside Power Gain	5%	15%	25%
Maximum Power (Pmax/W)	677	742	806
Optimum Operating Voltage (Vmp/V)	48.32	48.42	48.42
Optimum Operating Current (Imp/A)	14.02	15.32	16.65
Open Circuit Voltage (Voc/V)	56.95	57.05	57.05
Short Circuit Current (Isc/A)	14.68	16.05	17.44
Module Efficiency	24.2%	26.5%	28.8%

## 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

