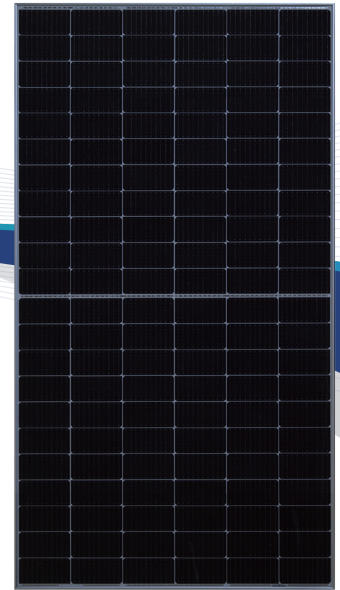


## HY-WH132P10

# 650-670W

132 Pieces | HALF-CELL | P-Type



**21.6%**  
Max.Efficiency  
**P-Type**  
Single Glass



### High Conversion Efficiency

Module efficiency up to 21.6% achieved through advanced cell technology and manufacturing process



### Excellent weak light performance

More power output in weak light condition, such as cloudy days, morning and sunset



### Extended mechanical performance

Module certified to withstand extreme wind(2400 Pa) and snow loads(5400 Pa)

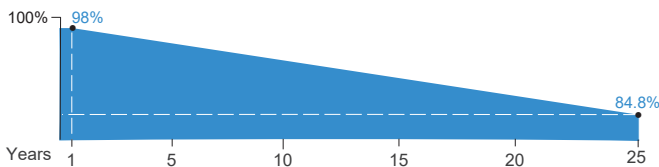


### Quality Guarantee

High module quality ensures long-term reliability



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



Runergy P-Type Single Glass Product Performance Warranty

warranty for materials  
and workmanship



warranty for extra  
linear power output



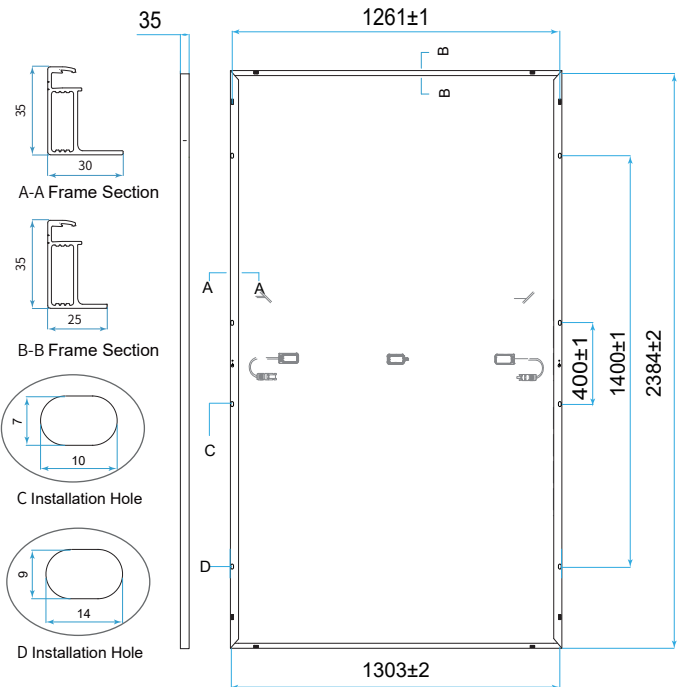
Unit: mm

## Mechanical Parameters

Solar Cell	Mono PERC 210mm
No. of Cells	132(6 × 22)
Dimensions	2384 × 1303 × 35mm
Weight	33.6kg
Junction Box	IP68 rated (3 bypass diodes)
Output Cable	4mm <sup>2</sup> (IEC), 12 AWG(UL) +400/-200mm or customized
Connector	RY01 or similar
Front Cover	3.2mm AR Tempered glass
Container	31 pcs/Pallet, 558 pcs/40' HC

## Operating Parameters

Max. System Voltage	DC 1500V(IEC)
Operating Temperature	-40°C ~ +85°C
Max. Fuse Rating	30A
Frontside Max. Loading	5400Pa
Backside Max. Loading	2400Pa
Fire Resistance	IEC Class C



## Electrical Characteristics - STC

Irradiance 1000 W/m<sup>2</sup>, ambient temperature 25 °C, AM1.5.

	670	665	660	655	650
Maximum Power at STC (Pmax/W)	670	665	660	655	650
Power Tolerance (W)	0 ~ +5				
Optimum Operating Voltage (Vmp/V)	38.46	38.23	38.07	37.81	37.61
Optimum Operating Current (Imp/A)	17.42	17.40	17.35	17.33	17.29
Open Circuit Voltage (Voc/V)	46.81	46.59	45.40	46.15	45.92
Short Circuit Current (Isc/A)	18.30	18.25	18.20	18.15	18.11
Module Efficiency	21.6%	21.4%	21.3%	21.1%	20.9%

## 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)	506.8	503.1	499.5	495.6	491.8
Optimum Operating Voltage (Vmp/V)	36.48	36.26	36.10	35.86	35.67
Optimum Operating Current (Imp/A)	13.89	13.88	13.84	13.82	13.79
Open Circuit Voltage (Voc/V)	44.20	43.99	43.81	43.57	43.35
Short Circuit Current (Isc/A)	14.97	14.80	14.72	14.68	14.64

## Temperature Characteristics

Nominal Module Operating Temperature	42 ± 2 °C
Nominal Cell Operating Temperature	45 ± 2 °C
Temperature Coefficient of Pmax	-0.35%/°C
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	0.050%/°C

## Warranty

Product Workmanship Warranty	12 Years
Linear Power Output Warranty	25 Years
First Year Degradation	2%
Annual Power Degradation	0.55%

## Current-Voltage & Power-Voltage Curve (665W)

