

Mono Perc

ZH(430-460)-120M

Half-Cell High Efficiency PV Module

Max Module Efficiency: 21.24%

KEY FEATURES

- Excellent module efficiency up to:21.24%
- IP68 junction box for long-term weather endurance
- Heavy snow load up to 5400 Pa, wind load up to 3600 Pa
- PID: Selected material and stringent quality system ensure PID free
- Applicable to harsh environment of deserts, farmlands and seashores
- Much lower risk of hot spot

CERTIFICATE



COMPREHENSIVE

Products and System Certificates

IEC 61215 / IEC 61730 / CE / INMETRO

ISO 9001: 2015/Quality management system

ISO 14001: 2015/Standards for environmental management system

OHSAS 18001: 2007/International standards for occupational health & safety

WARRANTY

30
years

Linear power output warranty

*12 years minimum 92% power output

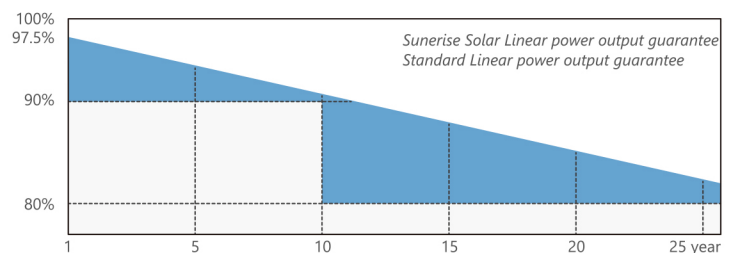
*30 years minimum 83% power output

12
years

Product warranty on materials and workmanship

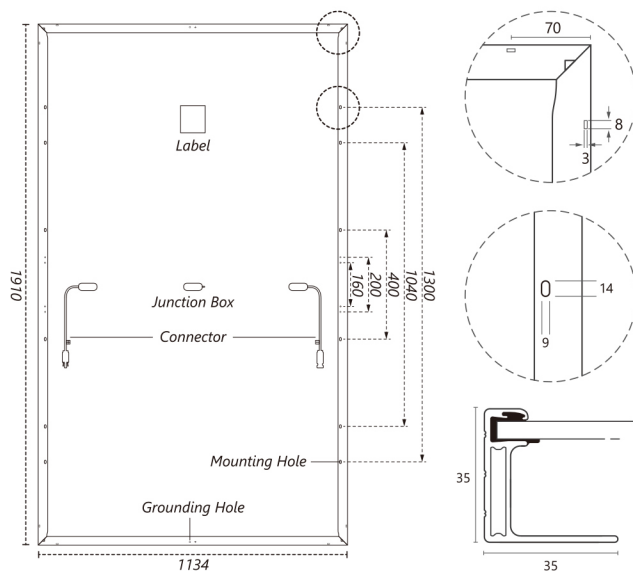
According to the applicable Einnova Solarline

Limited Warranty Statement



ZH(430-460)-120M

DESIGN



MECHANICAL SPECIFICATION

Cell Type	Dimension (L×W×T)	Weight
Mono 182×91mm	1910×1134×35mm	24kg
Packing	31pcs/pallet, 744pcs/40HQ	
Cable (Including connector)	4.0mm ² , Portrait: 350mm(+)/350mm(-) Landscape: 1400mm(+)/1400mm(-)	
No. of Cells	120 (6×20)	
Glass	3.2mm High Transmission, Antireflection Coating	
Junction box	IP68, 3 Bypass Diodes	
Connector	MC4 Compatible	

OPERATING PARAMETERS

Maximum system voltage	1000V/1500V DC
Operating Temperature	-40 ~ +85°C
Maximum series fuse rating	20A
Snow load, frontside	5400Pa
Wind load, backside	3600Pa
Nominal operating cell temperature	45°C±2°C
Application level	Class A

ELECTRICAL CHARACTERISTICS(STC)

MODULE TYPE	ZH(430-460)-120M						
Maximum Power (Pmax)	430W	435W	440W	445W	450W	455W	460W
Open-circuit Voltage (Voc)	40.8V	41.0V	41.2V	41.4V	41.6V	41.8V	42.0V
Maximum Power Voltage (Vmp)	34.1V	34.3V	34.5V	34.8V	35.0V	35.2V	35.5V
Short-circuit Current (Isc)	13.42A	13.48A	13.54A	13.60A	13.66A	13.72A	13.78A
Maximum Power Current (Imp)	12.62A	12.68A	12.74A	12.80A	12.86A	12.91A	12.97A
Module Efficiency (%)	19.85%	20.08%	20.31%	20.55%	20.78%	21.01%	21.24%
Power Tolerance	0~+5W						
Temperature Coefficient of Isc	0.05%/°C						
Temperature Coefficient of Voc	-0.31%/°C						
Temperature Coefficient of Pmax	-0.35%/°C						

Standard Test Environment : Irradiance 1000W/m², Cell temperature 25°C, Spectrum AM1.5

ELECTRICAL CHARACTERISTICS(NOCT)

MODULE TYPE	ZH(430-460)-120M						
Maximum Power (Pmax)	320W	324W	327W	331W	335W	339W	342W
Open-circuit Voltage (Voc)	38.3V	38.5V	38.6V	38.8V	39.0V	39.2V	39.4V
Maximum Power Voltage (Vmp)	32.0V	32.2V	32.4V	32.6V	32.8V	33.0V	33.3V
Short-circuit Current (Isc)	10.84A	10.89A	10.94A	10.99A	11.04A	11.09A	11.13A
Maximum Power Current (Imp)	10.01A	10.06A	10.11A	10.15A	10.20A	10.24A	10.29A

Standard Test Environment : Irradiance 800W/m², Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s