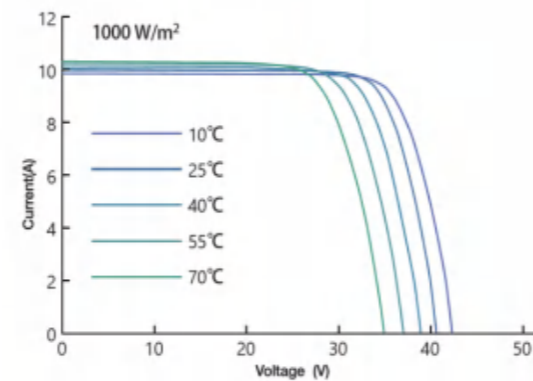
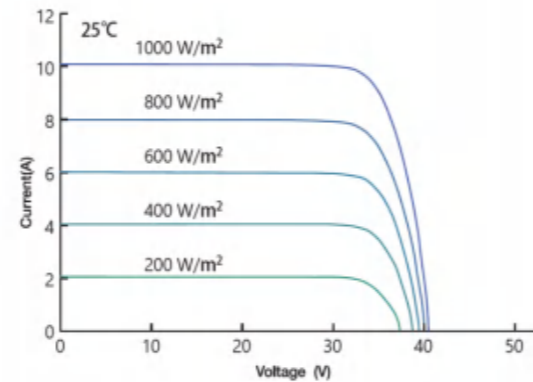
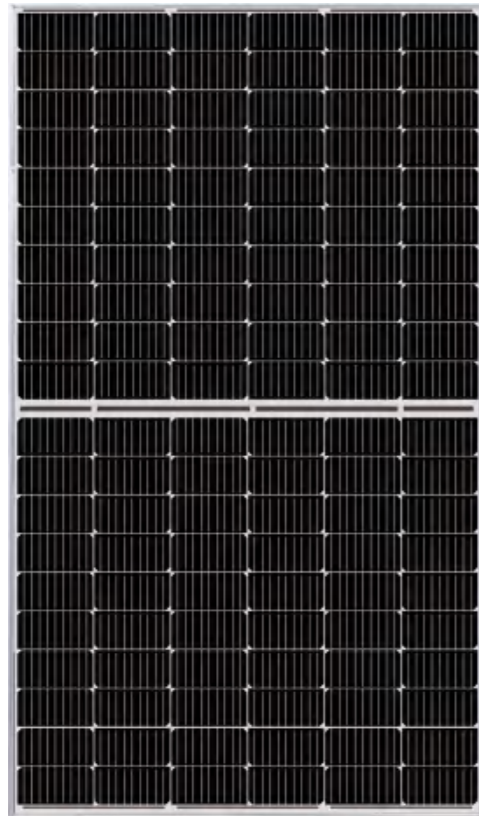


## PERC Half-Cell Module-M10-120



IEC61215-1:2016 IEC61215-1-1:2016 IEC61215-2:2016 IEC61730-1:2016 IEC61730-2:2016 EN61215-1:2016  
 EN61215-2:2017 EN61215-1-1:2016 EN IEC61730-1:2018 EN IEC61730-2:2018 IEC61853-1:2011 IEC61701:2011  
 EN61000-6-1:2007 EN61000-6-3:2007+A1:2011+AC:2012 IEC61000-6-1:2016 IEC61000-6-3:2011 EN50380:2003  
 IEC TS62804-1:2015 IEC62716:2013 KS C 8561:2016 IEC60068-2-68 LCS ISO9001:2015 ISO14001:2015 ISO45001:2018



### Electrical characteristics at Standard Test Conditions (STC)

Model	SA440-120M	SA445-120M	SA450-120M	SA455-120M
Max Power - P <sub>mpp</sub> (W)	440	445	450	455
Positive power tolerance (W)	0-5	0-5	0-5	0-5
Open Circuit Voltage - Voc (V)	41.05	41.17	41.28	41.35
Short Circuit Current - Isc (A)	13.69	13.77	13.85	13.99
Max Power Voltage-V <sub>mpp</sub> (V)	33.95	34.07	34.18	34.22
Max Power Current - I <sub>mpp</sub> (A)	13.01	13.09	13.17	13.30
Module Efficiency(%)	20.4	20.6	20.9	21.1

Electrical data relates to standard test conditions (STC): irradiance 1000 W/m<sup>2</sup>; AM 1.5; cell temperature 25°C measuring uncertainty of power is within 0-5W. Certified in accordance with IEC61215:2016, IEC61730-1/2:2016

### Electrical characteristics at Nominal Operating Cell Temperature (NOCT)

Model	SA440-120M	SA445-120M	SA450-120M	SA455-120M
Max Power - P <sub>mpp</sub> (W)	329	332	335	339
Open Circuit Voltage - Voc (V)	38.75	38.86	38.96	39.01
Short Circuit Current - Isc (A)	11.06	11.12	11.19	11.25
Max Power Voltage-V <sub>mpp</sub> (V)	31.60	31.71	31.83	31.91
Max Power Current - I <sub>mpp</sub> (A)	10.40	10.46	10.52	10.61

Nominal Operating Cell Temperature (NOCT): Irradiance 800W/m<sup>2</sup>, environment temperature 20, wind speed 1m/s

### Temperature Characteristics

Voltage Temperature Coefficient	-0.29%/K
Current Temperature Coefficient	+0.048%/K
Power Temperature Coefficient	-0.36%/K

### Maximum Ratings

Maximum system voltage (V)	1500 V DC
Maximum series fuse rating (A)	20A

### Mechanical Characteristics

Dimensions	1903*1133*35mm( Length*Width*Depth )
Weight	23kg ±3%
Frame	Anodized aluminum profile ( Silvery/Black )
Front glass	White toughened safety glass,anti-reflective coating 3.2mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back sheet ( Black / White )	Fluorine containing composite film
Cells	6*20 pieces Mono solar cells series strings(M10)
Junction Box	IP 68,3diodes
Cable	Length 350mm, Diameter 4mm <sup>2</sup>
Connector	MC4

**Note : We accept customized solar modules , such as frame , backsheet colors , length of cables**

### Packaging

Container 40HQ	744PCS
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### Parameters

temp. Range	-40°C to 85°C
Application Class	Class A
Pollution Degree	1
Protection Class	Class II
Fire Rating	Class C

### Dimensions

Note: Module layout below only valid for modules with 35mm thickness. All dimensions in mm and tolerance ±2mm

- Cell efficiency > 23.0%
- EL Double Inspection
- 12 years Material&workmanship warranty
- 25 years Linear power output warranty
- diameter 25mm with 23m/s (standard )  
diameter 55mm with 33.9m/s (optional)
- front side 5400Pa (standard)  
front side 8000Pa & 12000Pa (optional)

