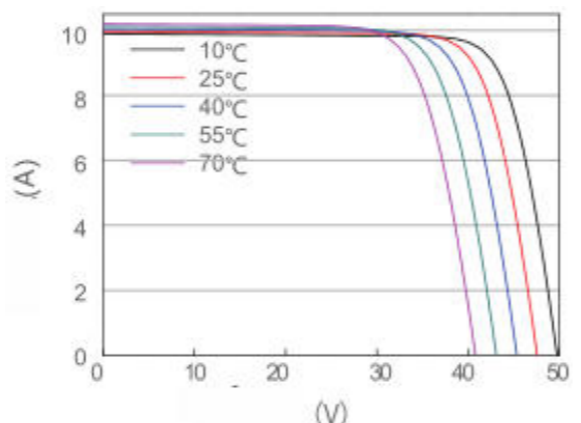
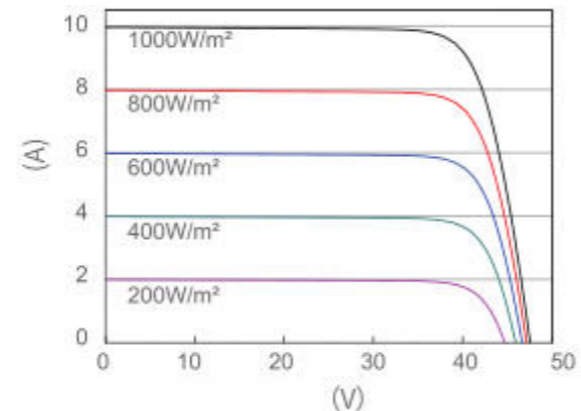




# PERC Half-Cell Module-144



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	SA400-144M	SA405-144M	SA410-144M	SA415-144M
Max Power - P <sub>mpp</sub> (W)	400	405	410	415
Positive power tolerance (%)	0-5W	0-5W	0-5W	0-5W
Open Circuit Voltage - V <sub>oc</sub> (V)	49.50	49.81	50.12	50.43
Short Circuit Current - I <sub>sc</sub> (A)	10.26	10.32	10.37	10.41
Max Power Voltage-V <sub>mpp</sub> (V)	41.17	41.46	41.76	42.05
Max Power Current - I <sub>mp</sub> (A)	9.72	9.77	9.82	9.87
Module Efficiency(%)	19.93	20.18	20.43	20.68

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	SA400-144M	SA405-144M	SA410-144M	SA415-144M
Max Power - P <sub>mpp</sub> (W)	296	300	303	307
Open Circuit Voltage - V <sub>oc</sub> (V)	45.56	45.81	46.06	46.31
Short Circuit Current - I <sub>sc</sub> (A)	8.28	8.33	8.38	8.43
Max Power Voltage-V <sub>mpp</sub> (V)	37.76	38.03	38.28	38.54
Max Power Current - I <sub>mp</sub> (A)	7.84	7.88	7.93	7.97

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

Temperature Characteristics		Maximum Ratings	
Voltage Temperature Coefficient	-0.29%/K	Maximum system voltage (V)	1500 V DC
Current Temperature Coefficient	+0.05%/K	Series fuse rating (A)	20A
Power Temperature Coefficient	-0.35%/K		

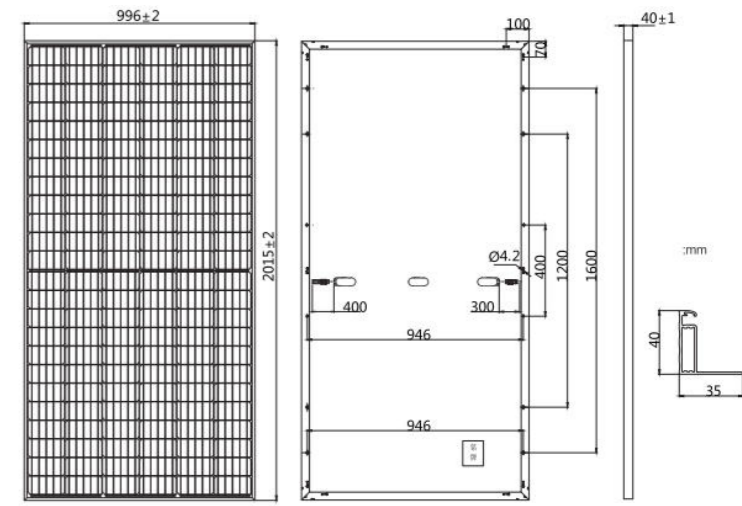
Mechanical Characteristics	
Dimensions	2015*996*40mm( Length*Width*Depth )
Weight	22.7kg
Frame	Anodized aluminum profile ( Silvery/Black )
Front glass	White toughened safety glass,anti-reflective coating 3.2mm
Cell Encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back sheet ( Black / White )	Fluorine containing composite film
Cells	6*24 pieces Mono solar cells series strings(6INCH/5BB)
Junction Box	IP ≥ 68,3diodes
Cable	4mm <sup>2</sup>
Connector	QC4

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

Packaging		Parameters	
Container 20	260PCS	temp. Range	-40°C to 85°C
Container 40	572PCS	Application Class	Class A
Container 40HQ	638PCS	Pollution Degree	1
		Protection Class	Class II
		Fire Rating	Class C

**Dimensions**  
 Note: Module layout below only valid for modules with 40mm thickness. All dimensions in mm

- Cell efficiency > 22.5%
- 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)





# PERC Half-Cell Module-120

Electrical characteristics at Standard Test Conditions (STC)			
Model	SA335-120M	SA340-120M	SA345-120M
Max Power - Pmpp (W)	335	340	345
Positive power tolerance (%)	0-5W	0-5W	0-5W
Open Circuit Voltage - Voc (V)	41.12	41.36	41.47
Short Circuit Current - Isc (A)	10.38	10.46	10.53
Max Power Voltage-Vmpp (V)	34.36	34.63	34.88
Max Power Current - Imp (A)	9.75	9.82	9.89
Module Efficiency(%)	20.16	20.46	20.76

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	SA335-120M	SA340-120M	SA345-120M
Max Power - Pmpp (W)	248	252	256
Open Circuit Voltage - Voc (V)	37.93	38.18	38.58
Short Circuit Current - Isc (A)	8.30	8.36	8.40
Max Power Voltage-Vmpp (V)	34.10	34.38	34.74
Max Power Current - Imp (A)	7.27	7.32	7.37

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

Temperature Characteristics		Maximum Ratings	
Voltage Temperature Coefficient	-0.29%/K	Maximum system voltage (V)	1500 V DC
Current Temperature Coefficient	+0.05%/K	Reverse current overload (A)	20A
Power Temperature Coefficient	-0.35%/K		

Mechanical Characteristics	
Dimensions	1675*992*35mm( Length*Width*Depth )
Weight	19.0kg
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(6INCH/5BB)
Junction Box	IP ≥ 68,3diodes
Cable	4mm <sup>2</sup>
Connector	MC4

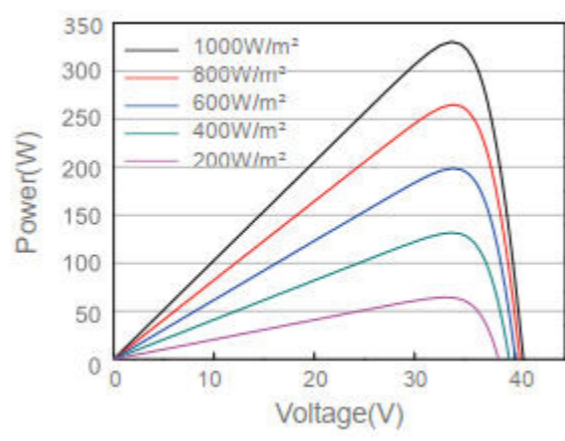
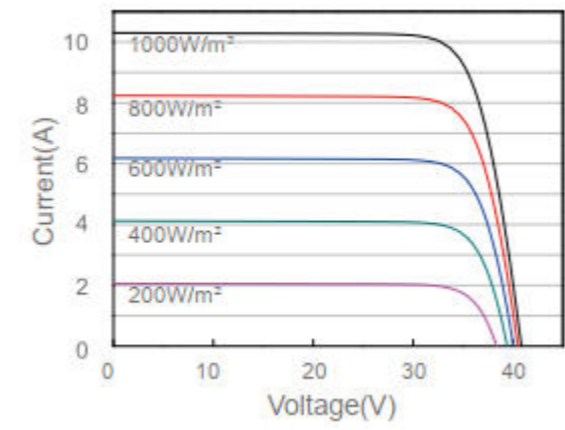
**Note : We accept customized solar modules , such as frame , backsheet colors , length of cables**

Packaging		Parameters	
Container 20	360PCS	temp. Range	-40°C to 85°C
Container 40	780PCS	Application Class	Class A
Container 40HQ	884PCS	Pollution Degree	1
		Protection Class	Class II
		Fire Rating	Class C

Rated cell operating temperature	
Rated cell operating temperature	45±2

### Dimensions

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



IEC61215-1:2016 IEC61215-1-1:2016 IEC61215-2:2016 IEC61730-1:2016 IEC61730-2:2016 EN61215-1:2016  
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 IEC TS62804-1:2015 IEC62716:2013 KS C 8561:2016 IEC60068-2-68 LCS ISO9001:2015 ISO14001:2015 ISO45001:2018



- Cell efficiency > 22.5%
- 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)

