ERA®
SOLAR

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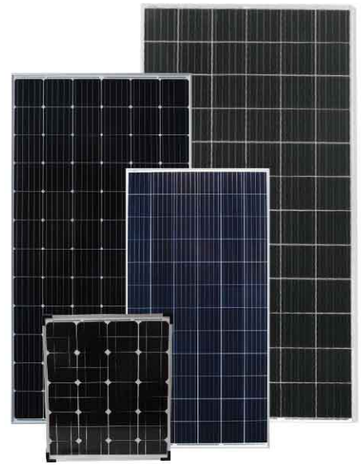


- STOCK CODE: 002641

• SOLAR MODULE

CONTENTS

Welcome to ERA Solar

ABOUT ERA SOLAR

Founded in January 2006, Zhejiang ERA Solar Technology Co., Ltd. is one of the council members of China Association of Building Energy Efficiency and the wholly-owned subsidiary of Yonggao Co., Ltd (stock code: 002641). The company is devoted to the field of solar photovoltaic power generation system, dedicating to researching, manufacturing, and selling environmental-friendly products. After decades of accumulation, four series of products are available in ERA Solar,(hereafter, Zhejiang ERA Solar Technology Co., Ltd. will be referred as ERA Solar), including solar modules, solar lights, solar applications, and solar engineering projects. Among them, solar applications cover the widest scope, encompassing solar power banks, solar backpacks, foldable solar panels, solar air-heaters, and many other solar commodities.

ERA Solar is a National High-tech Enterprise, a PV Applications' Pilot Base in Zhejiang province, and a national-recommended firm in the field of renewable energy and that of architectural application. Backed by its parent company which possesses national class postdoctoral programme and laboratory, ERA Solar employs leading PV authorities as its technical consultants, developing its product lines and innovating its technology. Hitherto, the company holds more than 50 patents, all of which own proprietary intellectual property rights and it was awarded Provincial Patent-Demonstrating Enterprise in 2011. Over 2,000 PV applications have been developed to cater to road construction, yard decoration, farmland operation, and other routine applications—it is technically an enterprise with an annual output of 500 megawatts. Today, ERA Solar has paced the whole nation in the field of PV industry, not only on its product lines, but also upon its innovation.

QUALITY ADVANTAGE

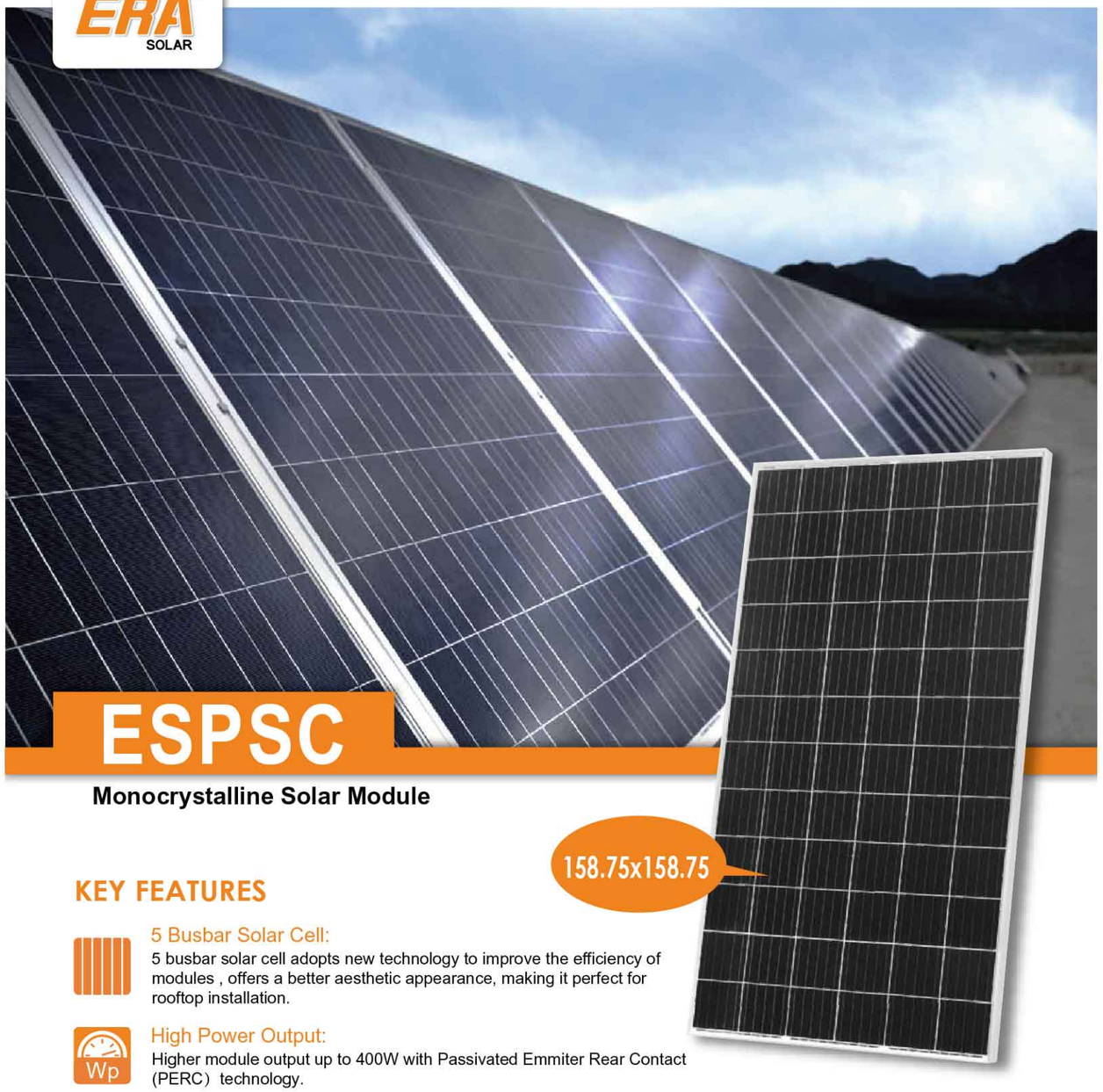
Quality is the top priority of ERA Solar; all products are manufactured under international standards, with CSA, CQC, INMETRO, MCS, BABT, UL, CE, RoHS, TÜV, IEC61215 and IEC61730 certified. With predominant performance of its products and public praise, the company has established smooth long-term business relations with50 countries and regions, including U.S.A., Germany, Spain, Italy, Australia, France, Saudi Arabia, Mexico, Russia, Brazil, etc.

The economization of low-carbon lifestyles has been the goal of ERA Solar. Following the world-wide trend, the company endeavors to foster China's new energy industry, to ameliorate greenhouse effect, and to universalize solar applications.

PROCEDURE

ERA SOLAR

International standard certifications



ESPSC

Monocrystalline Solar Module

158.75x158.75

KEY FEATURES

5 Busbar Solar Cell:
5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:
Higher module output up to 400W with Passivated Emmiter Rear Contact (PERC） technology.

Low-light Performance:
Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:
10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+ WATTS POSITIVE TOLERANCE	10 YEARS PRODUCT WARRANTY	10 YEARS PERFORMANCE GUARANTEE 90%	25 YEARS PERFORMANCE GUARANTEE 80%

Zhejiang ERA Solar Technology Co., Ltd.
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ERA SOLAR Worldwide

MONOCRYSTALLINE, 72-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPSC	380M	/ 385M	/ 390M	/ 395M	/ 400M
Maximum Power(Wp)	380W	385W	390W	395W	400W
Open circuit Voltage(Voc)	48.9V	49.1V	49.3V	49.5V	49.8V
Short circuit Current(Isc)	9.75A	9.92A	10.12A	10.23A	10.36A
Maximum Power Voltage(Vm)	40.5V	40.8V	41.1V	41.4V	41.7V
Maximum Power Current(Im)	9.39A	9.44A	9.49A	9.55A	9.60A
Module efficiency	19.16%	19.42%	19.67%	19.92%	20.17%
Maximum Series Fuse	15A				
Watts positive tolerance	0~+3%				
Number of Diode	3				
Standard Test Conditions	1000W/M²,25°C,AM1.5				
Maximum System Voltage	1000V/DC				
Temperature-Coefficient Isc	+0.08558%/°C				
Temperature-Coefficient Uoc	-0.29506%/°C				
Temperature-Coefficient Pmpp	-0.38001%/°C				
Normal Operating Cell Temperature	-40°C...+85°C				
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)				
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)				
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO				
Company Certificate	ISO9001,ISO14001,ISO18001				

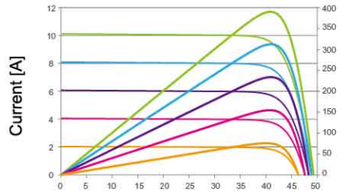
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	72 / monocrystalline silicon / 158.75x158.75mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1979x1002x40mm
Module Weight	22.5kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

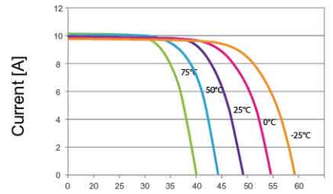
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	26	615	2030x1130x1140	260
40HQ	26	615	2030x1130x1140	627
	31	730	2030x1130x1350	

CURRENT-VOLTAGE CURVES:

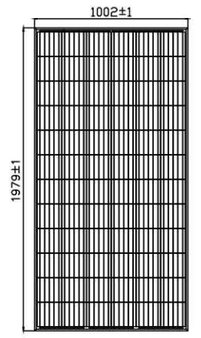


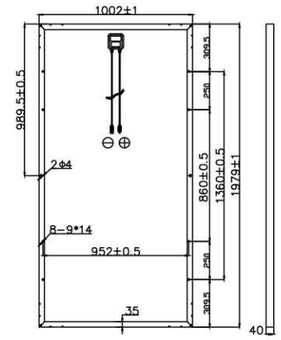
Module characteristics at constant module temperatures of 25°C and variable levels of irradiance

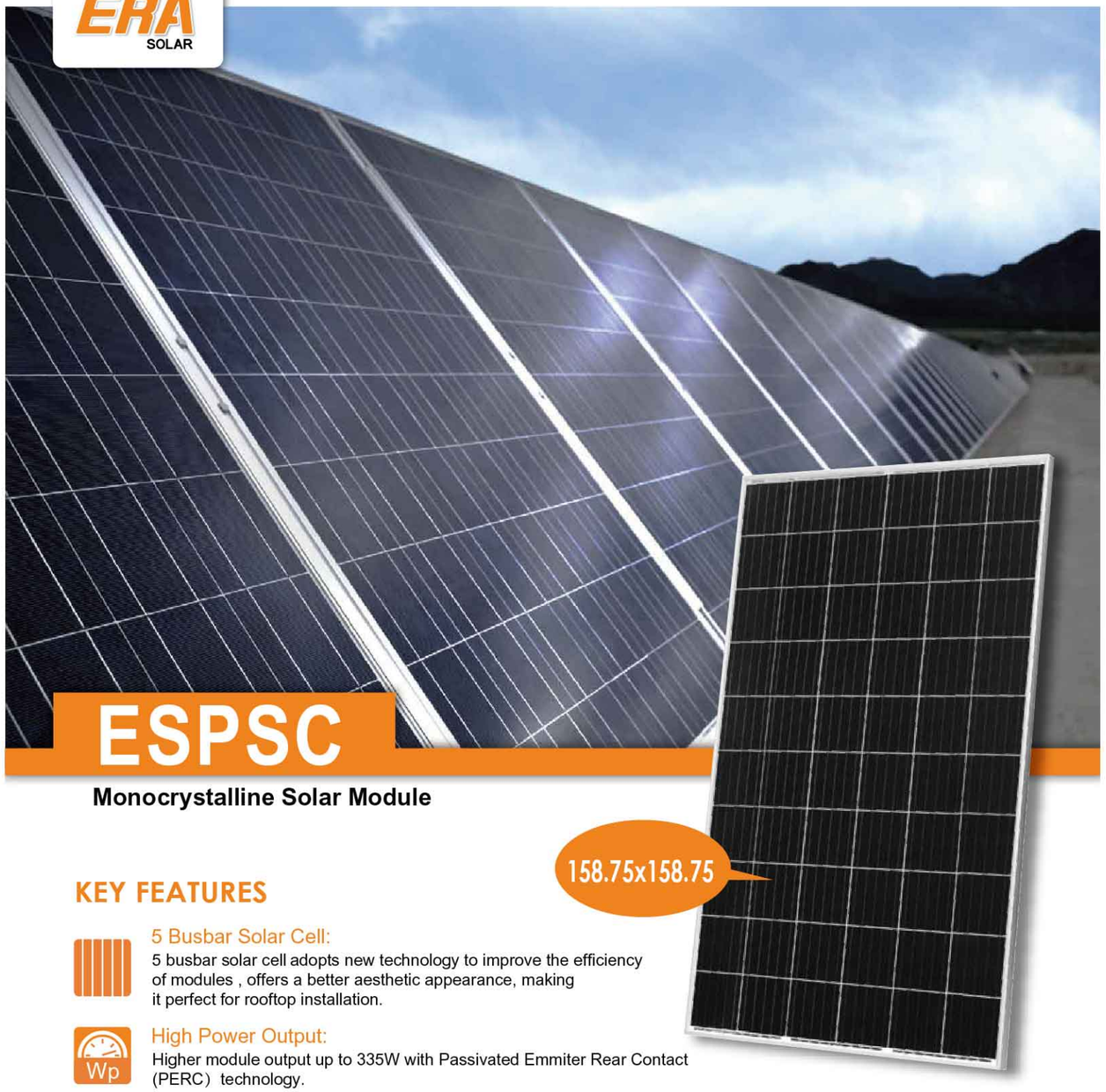


Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

MODULE DIAGRAM:







ESPSC

Monocrystalline Solar Module

158.75x158.75

KEY FEATURES

5 Busbar Solar Cell:
5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:
Higher module output up to 335W with Passivated Emmiter Rear Contact (PERC） technology.

Low-light Performance:
Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:
10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+	WATTS POSITIVE TOLERANCE	10	YEARS PRODUCT WARRANTY	10	YEARS PERFORMANCE GUARANTEE 90%	25	YEARS PERFORMANCE GUARANTEE 80%

Zhejiang ERA Solar Technology Co., Ltd.
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ERA SOLAR Worldwide

MONOCRYSTALLINE, 60-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPSC	315M	/ 320M	/ 325M	/ 330M	/ 335M
Maximum Power(Wp)	315W	320W	325W	330W	335W
Open circuit Voltage(Voc)	40.7V	40.9V	41.1V	41.3V	41.5V
Short circuit Current(Isc)	10.04A	10.15A	10.20A	10.31A	10.36A
Maximum Power Voltage(Vm)	33.2V	33.4V	33.6V	33.8V	34V
Maximum Power Current(Im)	9.49A	9.59A	9.68A	9.77A	9.87A
Module efficiency	18.88%	19.18%	19.48%	19.78%	20.08%
Maximum Series Fuse	15A				
Watts positive tolerance	0~+3%				
Number of Diode	3				
Standard Test Conditions	1000W/M²,25°C,AM1.5				
Maximum System Voltage	1000V/DC				
Temperature-Coefficient Isc	+0.08558%/°C				
Temperature-Coefficient Uoc	-0.29506%/°C				
Temperature-Coefficient Pmpp	-0.38001%/°C				
Normal Operating Cell Temperature	-40°C...+85°C				
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)				
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)				
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO				
Company Certificate	ISO9001,ISO14001,ISO18001				

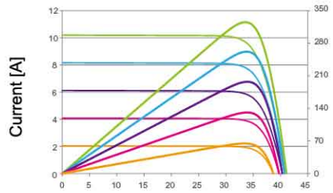
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	60 / monocrystalline silicon / 158.75x158.75mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1665x1002x35mm
Module Weight	19kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

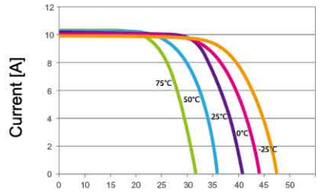
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	30	590	1710x1130x1140	360
40HQ	30	590	1710x1130x1140	910
	35	686	1710x1130x1330	

CURRENT-VOLTAGE CURVES:

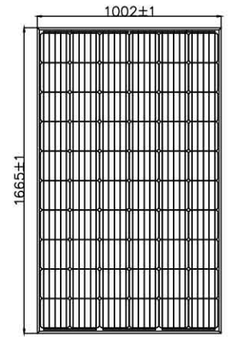


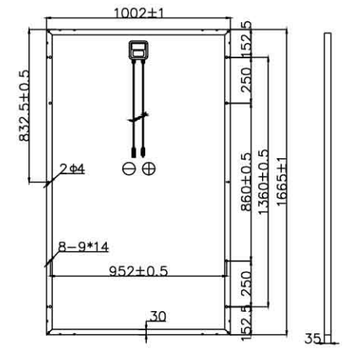
Voltage [V]
Module characteristics at constant module temperatures of 25°C and variable levels of irradiance

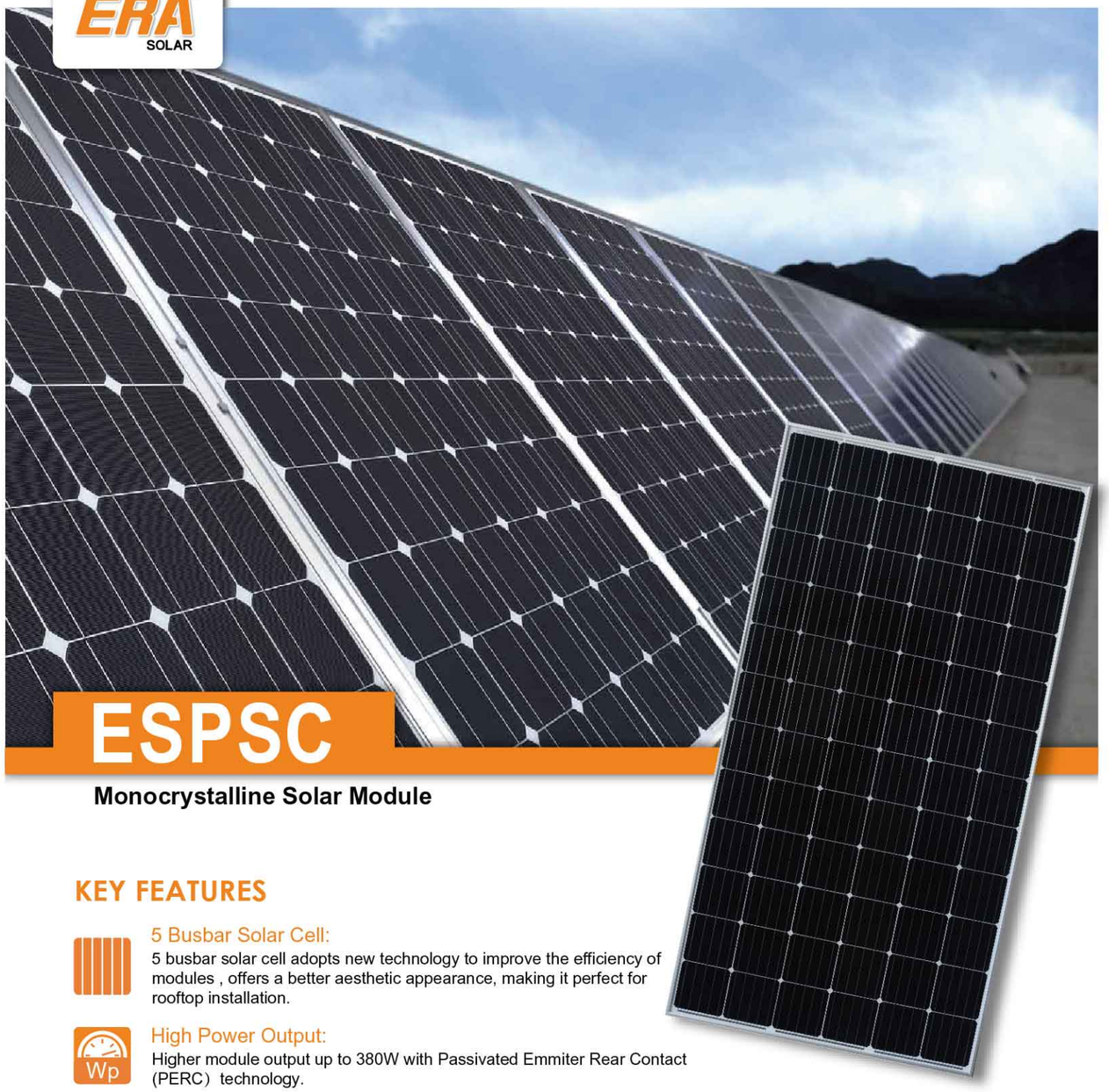


Voltage [V]
Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

MODULE DIAGRAM:







ESPSC

Monocrystalline Solar Module

KEY FEATURES

5 Busbar Solar Cell:
5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:
Higher module output up to 380W with Passivated Emmiter Rear Contact (PERC） technology.

Low-light Performance:
Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:
10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+	WATTS POSITIVE TOLERANCE	10	YEARS PRODUCT WARRANTY	10	YEARS PERFORMANCE GUARANTEE 90%	25	YEARS PERFORMANCE GUARANTEE 80%

Zhejiang ERA Solar Technology Co., Ltd.
www.erasolar.com.cn

ERA SOLAR Worldwide

MONOCRYSTALLINE, 72-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPSC	340 / 350 / 360 / 370 / 375 / 380
Maximum Power(Wp)	340W / 350W / 360W / 370W / 375W / 380W
Open circuit Voltage(Voc)	46.4V / 47.1V / 47.7V / 48.3V / 48.35V / 48.7V
Short circuit Current(Isc)	9.45A / 9.6A / 9.8A / 9.95A / 9.95A / 10A
Maximum Power Voltage(Vm)	38.5V / 39.1V / 39.6V / 40.1V / 40.5V / 40.8V
Maximum Power Current(Im)	8.84A / 8.96A / 9.1A / 9.23A / 9.26A / 9.32A
Module efficiency	17.5% / 18% / 18.5% / 19% / 19.3% / 19.5%
Maximum Series Fuse	15A
Watts positive tolerance	0~+3%
Number of Diode	3
Standard Test Conditions	1000W/M²,25°C,AM1.5
Maximum System Voltage	1000V/DC
Temperature-Coefficient Isc	+0.08558%/°C
Temperature-Coefficient Uoc	-0.29506%/°C
Temperature-Coefficient Pmpp	-0.38001%/°C
Normal Operating Cell Temperature	-40°C...+85°C
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO
Company Certificate	ISO9001,ISO14001,ISO18001

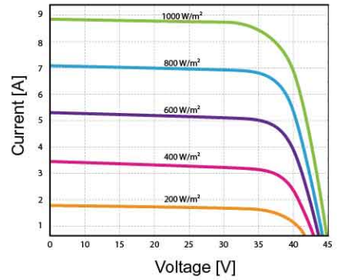
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	72 / monocrystalline silicon / 156.75x156.76mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1956x992x40mm
Module Weight	21.5kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

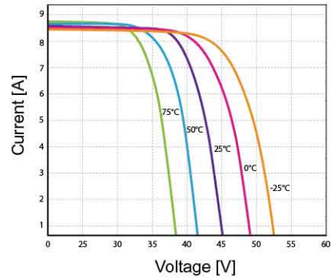
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	26	570	2000x1130x1120	260
40HQ	26	570	2000x1130x1120	627
	31	676	2000x1130x1340	

CURRENT-VOLTAGE CURVES:

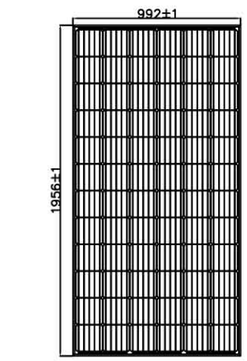


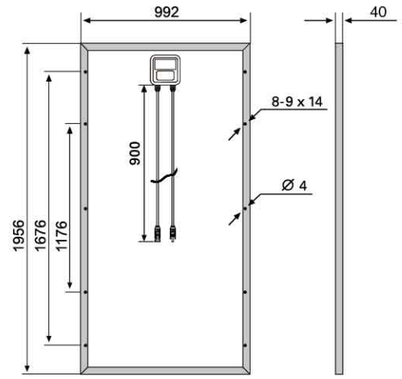
Module characteristics at constant module temperatures (25°C) and different levels of irradiance.

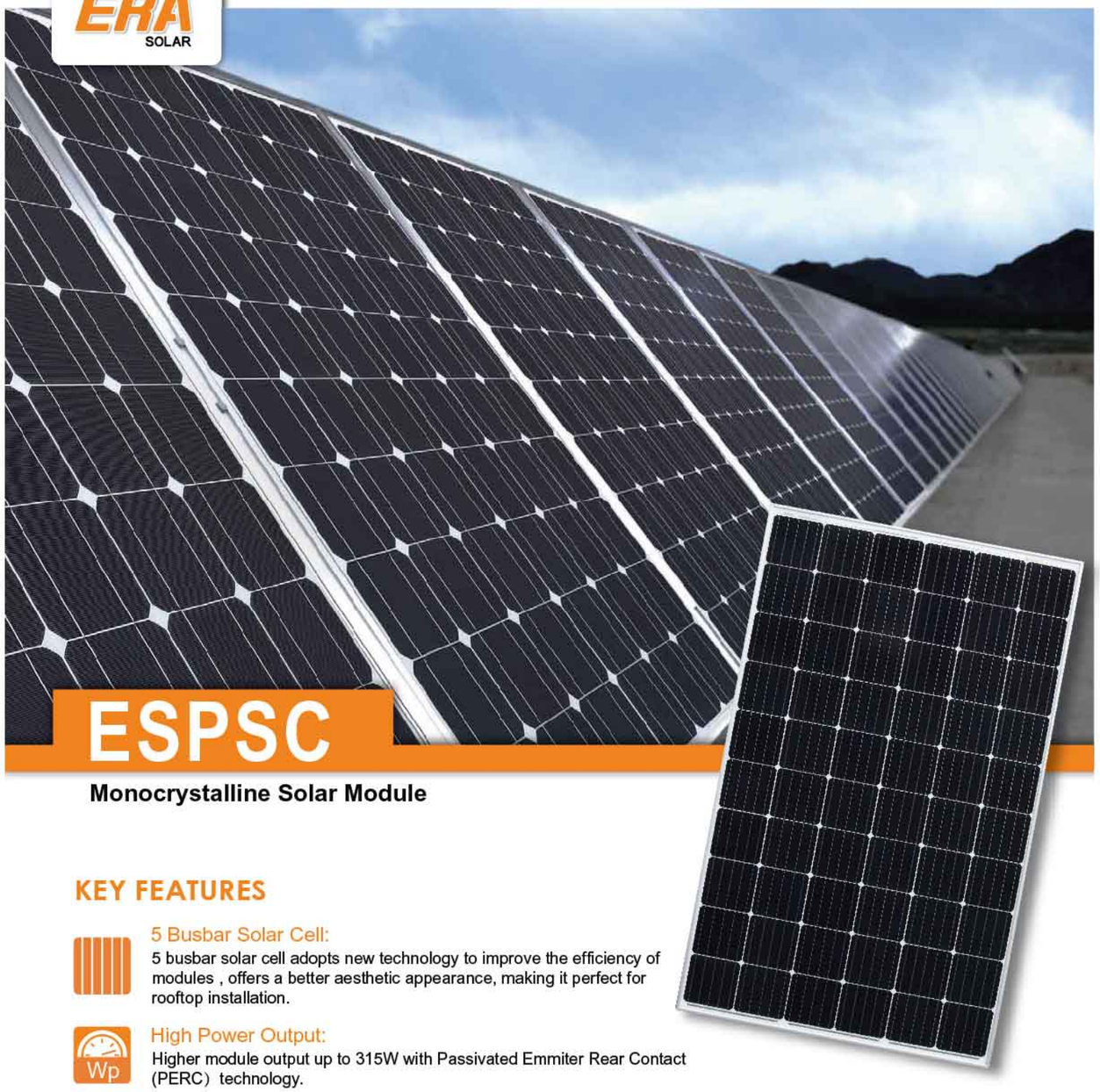


Module characteristics at different module temperatures and constant module irradiance (1.000 W/m²).

MODULE DIAGRAM:







ESPSC

Monocrystalline Solar Module

KEY FEATURES

5 Busbar Solar Cell:

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:

Higher module output up to 315W with Passivated Emmiter Rear Contact (PERC） technology.

Low-light Performance:

Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:

10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+	WATTS POSITIVE TOLERANCE	10	YEARS PRODUCT WARRANTY	10	YEARS PERFORMANCE GUARANTEE 90%	25	YEARS PERFORMANCE GUARANTEE 80%

Zhejiang ERA Solar Technology Co., Ltd.
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ERA SOLAR Worldwide

MONOCRYSTALLINE, 60-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPSC	280 /	290 /	300 /	310 /	315
Maximum Power(Wp)	280W	290W	300W	310W	315W
Open circuit Voltage(Voc)	37.8V	38.3V	38.7V	39.2V	39.5V
Short circuit Current(Isc)	9.36A	9.58A	9.8A	9.95A	10.05A
Maximum Power Voltage(Vm)	32.2V	32.6V	33V	33.5V	33.7V
Maximum Power Current(Im)	8.7A	8.9A	9.1A	9.25A	9.35A
Module efficiency	17.2%	17.8%	18.4%	19%	19.2%
Maximum Series Fuse	15A				
Watts positive tolerance	0~+3%				
Number of Diode	3				
Standard Test Conditions	1000W/M²,25°C,AM1.5				
Maximum System Voltage	1000V/DC				
Temperature-Coefficient Isc	+0.08558%/°C				
Temperature-Coefficient Uoc	-0.29506%/°C				
Temperature-Coefficient Pmpp	-0.38001%/°C				
Normal Operating Cell Temperature	-40°C...+85°C				
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)				
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)				
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO				
Company Certificate	ISO9001,ISO14001,ISO18001				

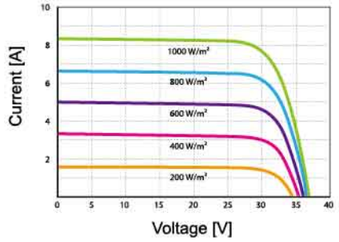
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	60 / monocrystalline silicon / 156.75x156.75mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1640x992x35mm (A) / 1650x990x35mm (B)
Module Weight	17.75kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

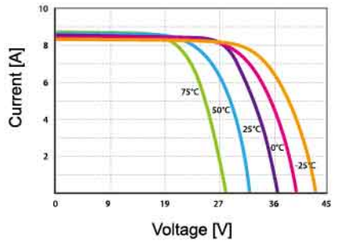
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	30	560	1690x1130x1120	360
40HQ	30	560	1690x1130x1120	910
	35	650	1690x1130x1300	

CURRENT-VOLTAGE CURVES:

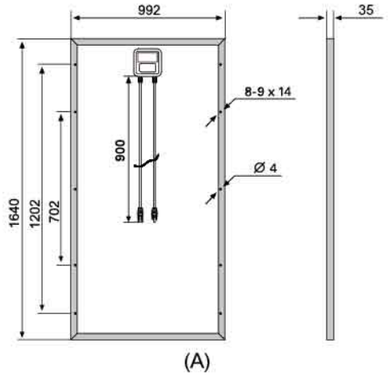


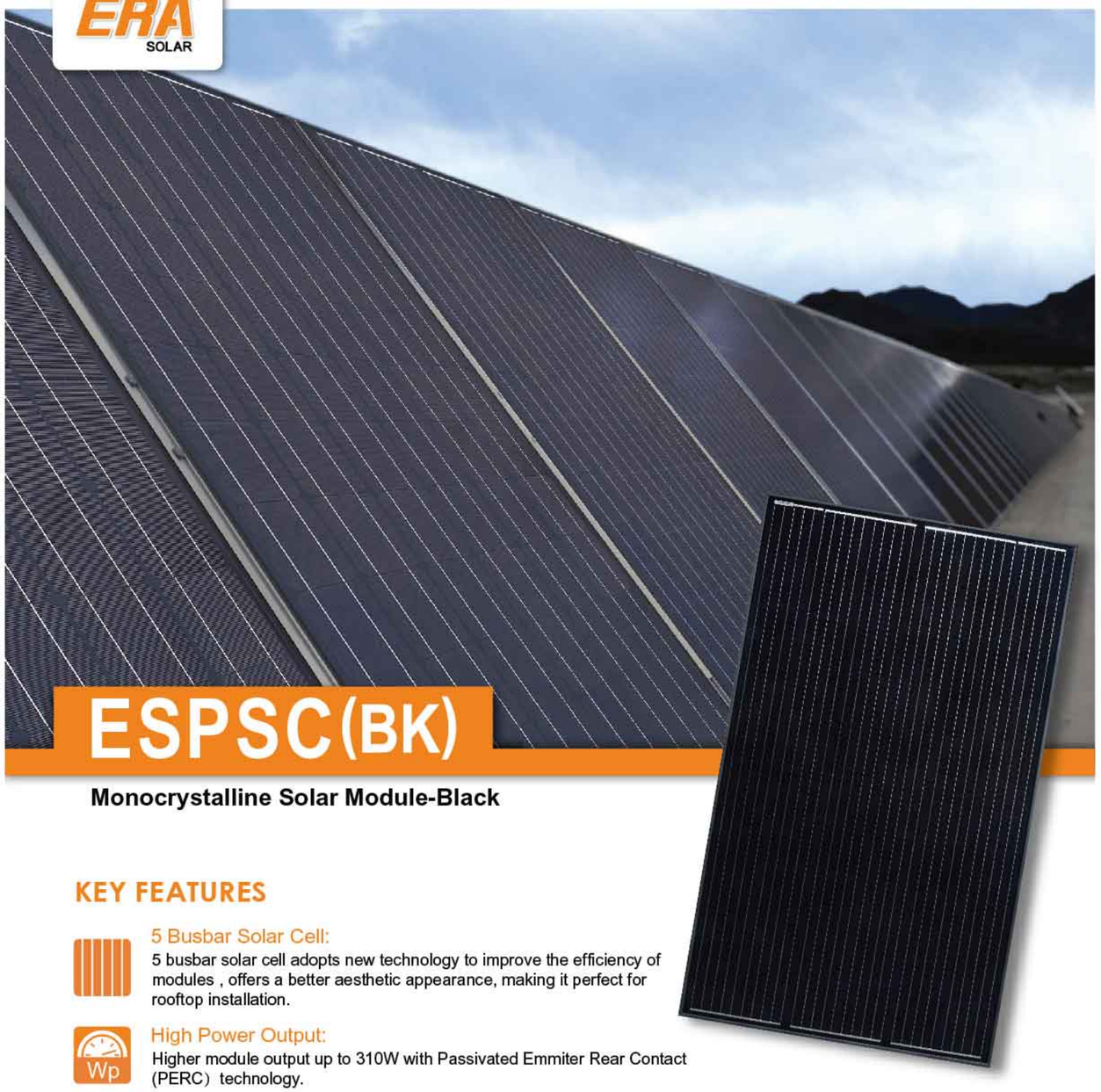
Module characteristics at constant module temperatures of 25°C and variable levels of irradiance



Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

MODULE DIAGRAM:





ESPSC(BK)

Monocrystalline Solar Module-Black

KEY FEATURES

5 Busbar Solar Cell:

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:

Higher module output up to 310W with Passivated Emmiter Rear Contact (PERC） technology.

Low-light Performance:

Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:

10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+	WATTS POSITIVE TOLERANCE	10	YEARS PRODUCT WARRANTY	10	YEARS PERFORMANCE GUARANTEE 90%	25	YEARS PERFORMANCE GUARANTEE 80%

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www.erasolar.com.cn

ERA SOLAR Worldwide

MONOCRYSTALLINE, 60-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPSC	290	/ 295	/ 300	/ 305	/ 310
Maximum Power(Wp)	290W	295W	300W	305W	310W
Open circuit Voltage(Voc)	38.3V	38.5V	38.7V	38.95V	39.2V
Short circuit Current(Isc)	9.58A	9.7A	9.8A	9.87A	9.95A
Maximum Power Voltage(Vm)	32.6V	32.8V	33V	33.25V	33.5V
Maximum Power Current(Im)	8.9A	9A	9.1A	9.18A	9.26A
Module efficiency	17.8%	18.1%	18.4%	18.6%	18.9%
Maximum Series Fuse	15A				
Watts positive tolerance	0~+3%				
Number of Diode	3				
Standard Test Conditions	1000W/M²,25°C,AM1.5				
Maximum System Voltage	1000V/DC				
Temperature-Coefficient Isc	+0.08558%/°C				
Temperature-Coefficient Uoc	-0.29506%/°C				
Temperature-Coefficient Pmpp	-0.38001%/°C				
Normal Operating Cell Temperature	-40°C...+85°C				
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)				
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)				
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO				
Company Certificate	ISO9001,ISO14001,ISO18001				

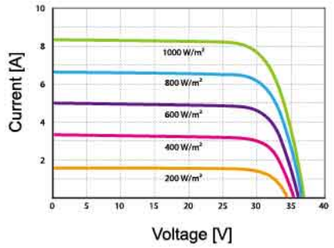
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in Black
Cell (quantity / material / dimensions)	60 / monocrystalline silicon / 156.75x156.75mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / Black
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1640x992x35mm (A) / 1650x990x35mm (B)
Module Weight	17.75kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

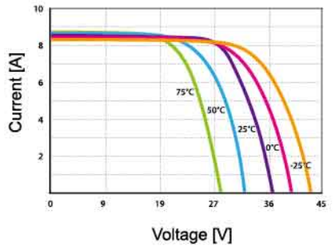
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	30	560	1690x1130x1120	360
40HQ	30	560	1690x1130x1120	910
	35	650	1690x1130x1300	

CURRENT-VOLTAGE CURVES:

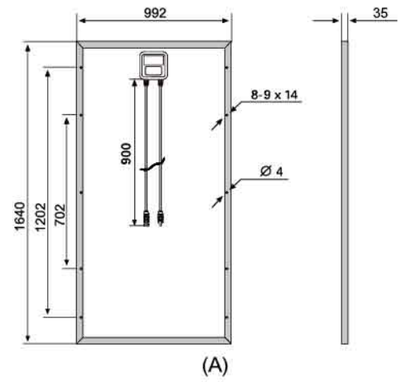


Module characteristics at constant module temperatures of 25°C and variable levels of irradiance



Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

MODULE DIAGRAM:



ESPSA

Monocrystalline Solar Module

KEY FEATURES

2 Busbar Solar Cell:
2 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:
Monocrystalline 72-cell module achieves a power output up to 210Wp.

Low-light Performance:
Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:
10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+	WATTS POSITIVE TOLERANCE	10	YEARS PRODUCT WARRANTY	10	YEARS PERFORMANCE GUARANTEE 90%	25	YEARS PERFORMANCE GUARANTEE 80%

Zhejiang ERA Solar Technology Co., Ltd.
www.erasolar.com.cn

ERA SOLAR Worldwide

MONOCRYSTALLINE, 72-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPSA	180 /	190 /	200 /	210
Maximum Power(Wp)	180W	190W	200W	210W
Open circuit Voltage(Voc)	44.1V	44.8V	45.4V	45.9V
Short circuit Current(Isc)	5.4A	5.6A	5.8A	6A
Maximum Power Voltage(Vm)	35.6V	36.2V	36.7V	37.2V
Maximum Power Current(Im)	5.05A	5.25A	5.45A	5.65A
Module efficiency	14.1%	14.9%	15.7%	16.4%
Maximum Series Fuse	15A			
Watts positive tolerance	0~+3%			
Number of Diode	3			
Standard Test Conditions	1000W/M²,25°C,AM1.5			
Maximum System Voltage	1000V/DC			
Temperature-Coefficient Isc	+0.08558%/°C			
Temperature-Coefficient Uoc	-0.29506%/°C			
Temperature-Coefficient Pmpp	-0.38001%/°C			
Normal Operating Cell Temperature	-40°C...+85°C			
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)			
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)			
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO			
Company Certificate	ISO9001,ISO14001,ISO18001			

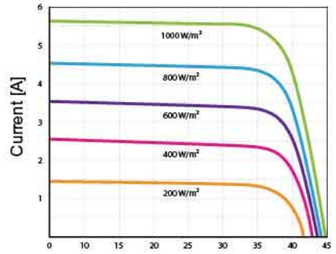
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	72 / monocrystalline silicon / 125x125mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1580x808x35mm
Module Weight	13.5kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

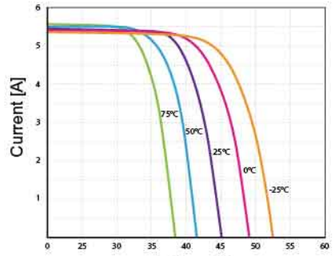
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	30	410	1630x1130x940	390
	35	475	1630x1130x1135	
40HQ	30	410	1630x1130x940	1050
	45	610	1630x1130x1500	

CURRENT-VOLTAGE CURVES:

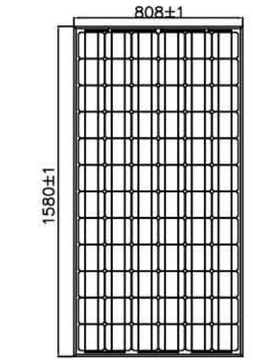


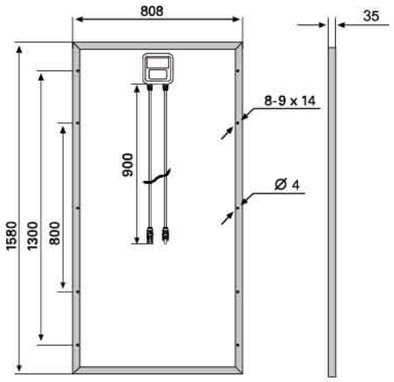
Module characteristics at constant module temperatures (25°C) and different levels of irradiance.

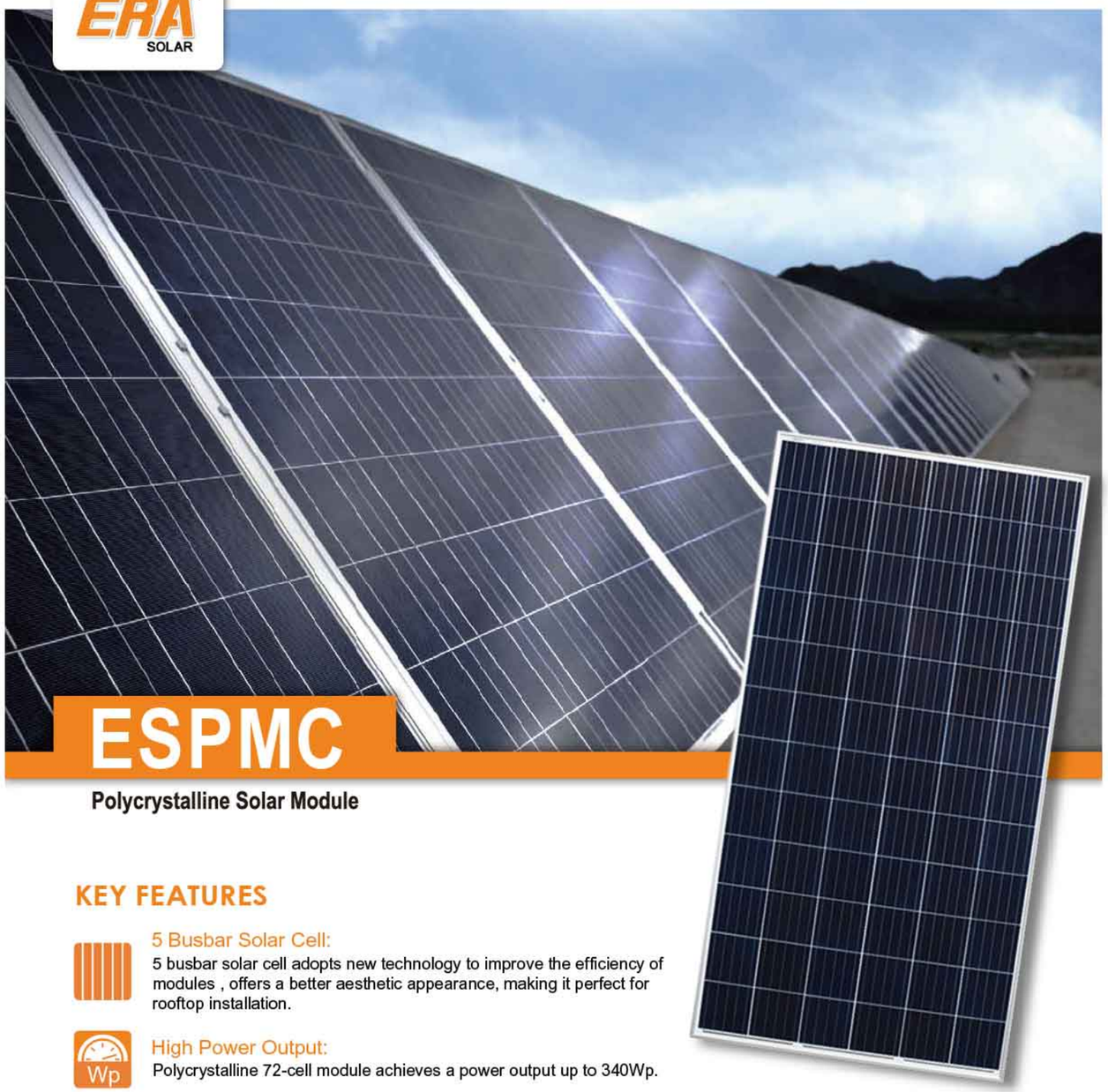


Module characteristics at different module temperatures and constant module irradiance (1.000 W/m²).

MODULE DIAGRAM:







ESPMC

Polycrystalline Solar Module

KEY FEATURES

5 Busbar Solar Cell:

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:

Polycrystalline 72-cell module achieves a power output up to 340Wp.

Low-light Performance:

Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:

10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+	WATTS POSITIVE TOLERANCE	10	YEARS PRODUCT WARRANTY	10	YEARS PERFORMANCE GUARANTEE 90%	25	YEARS PERFORMANCE GUARANTEE 80%

Zhejiang ERA Solar Technology Co., Ltd.
www.erasolar.com.cn

ERA SOLAR Worldwide

POLYCRYSTALLINE, 72-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPMC	320 /	325 /	330 /	335 /	340
Maximum Power(Wp)	320W	325W	330W	335W	340W
Open circuit Voltage(Voc)	45.45V	45.6V	45.75V	46.1V	46.4V
Short circuit Current(Isc)	9.1A	9.2A	9.3A	9.38A	9.45A
Maximum Power Voltage(Vm)	37.65V	37.8V	37.95V	38.2V	38.5V
Maximum Power Current(Im)	8.5A	8.6A	8.7A	8.77A	8.84A
Module efficiency	16.5%	16.8%	17%	17.2%	17.5%
Maximum Series Fuse	15A				
Watts positive tolerance	0~+3%				
Number of Diode	3				
Standard Test Conditions	1000W/M²,25°C,AM1.5				
Maximum System Voltage	1000V/DC				
Temperature-Coefficient Isc	+0.08558%/°C				
Temperature-Coefficient Uoc	-0.29506%/°C				
Temperature-Coefficient Pmpp	-0.38001%/°C				
Normal Operating Cell Temperature	-40°C...+85°C				
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)				
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)				
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO				
Company Certificate	ISO9001,ISO14001,ISO18001				

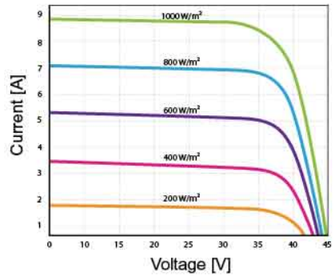
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	72 / Polycrystalline silicon / 156.75x156.75mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1956x992x40mm
Module Weight	20.9kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

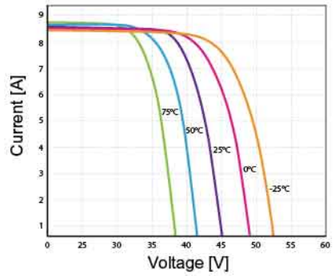
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	26	570	2000x1130x1120	260
40HQ	26	570	2000x1130x1120	627
	31	676	2000x1130x1340	

CURRENT-VOLTAGE CURVES:

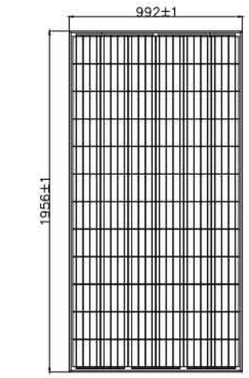


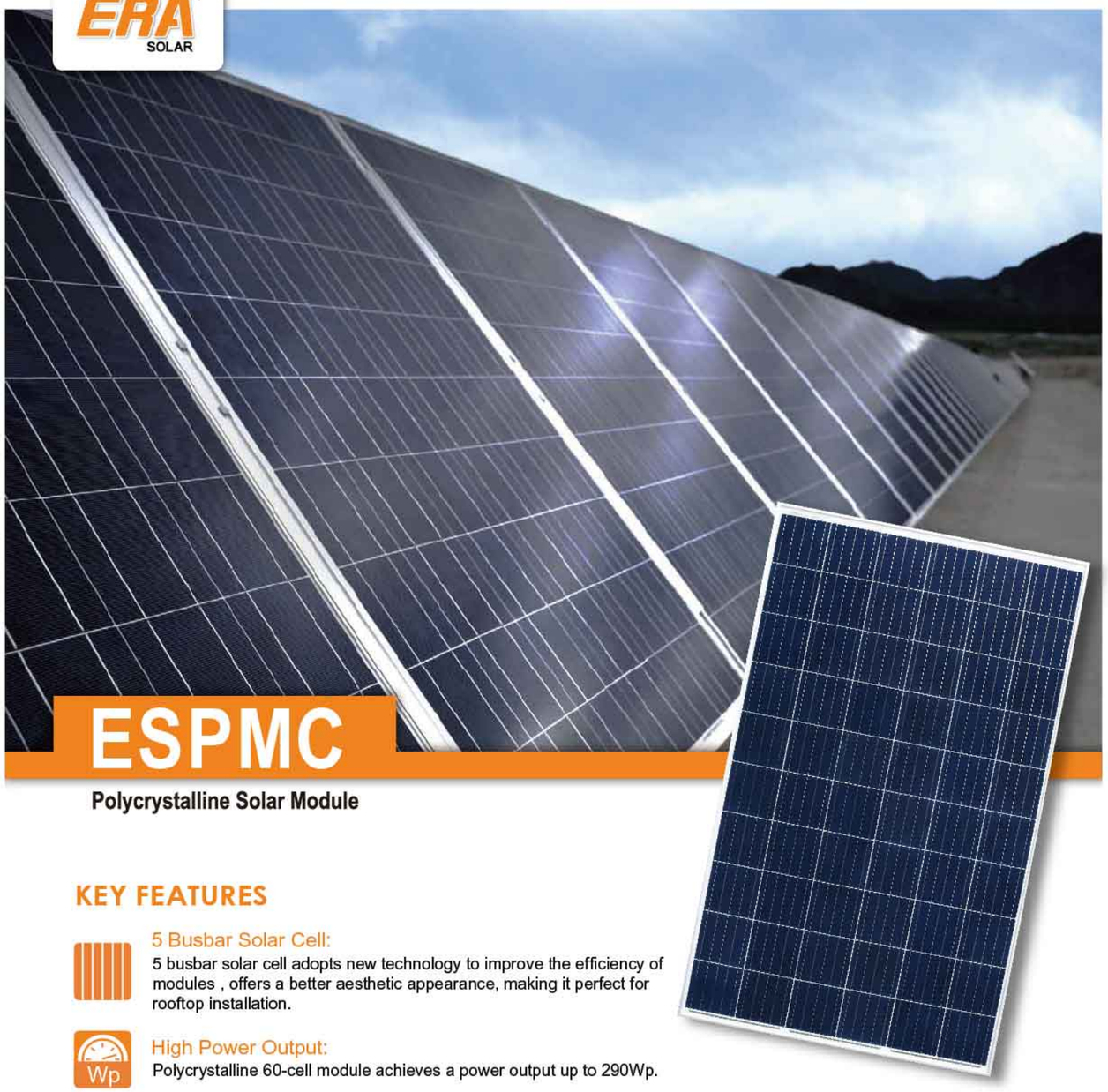
Module characteristics at constant module temperatures (25°C) and different levels of irradiance.



Module characteristics at different module temperatures and constant module irradiance (1.000 W/m²).

MODULE DIAGRAM:





ESPMC

Polycrystalline Solar Module

KEY FEATURES

5 Busbar Solar Cell:

5 busbar solar cell adopts new technology to improve the efficiency of modules , offers a better aesthetic appearance, making it perfect for rooftop installation.

High Power Output:

Polycrystalline 60-cell module achieves a power output up to 290Wp.

Low-light Performance:

Advanced glass and surface texturing allow for excellent performance in low-light environments.

Reliabale Warranty:

10 years' product warranty.
Power warranty of 90% up to 10 years and 80% up to 25 years.

+	WATTS POSITIVE TOLERANCE	10	YEARS PRODUCT WARRANTY	10	YEARS PERFORMANCE GUARANTEE 90%	25	YEARS PERFORMANCE GUARANTEE 80%

Zhejiang ERA Solar Technology Co., Ltd.
www.erasolar.com.cn

ERA SOLAR Worldwide

POLYCRYSTALLINE, 60-CELL SERIES

ELECTRICAL PERFORMANCE

Module type: ESPMC	270 /	275 /	280 /	285 /	290
Maximum Power(Wp)	270W	275W	280W	285W	290W
Open circuit Voltage(Voc)	37.4V	37.6V	37.8V	38V	38.2V
Short circuit Current(Isc)	9.14A	9.25A	9.36A	9.47A	9.58A
Maximum Power Voltage(Vm)	31.8V	32V	32.2V	32.4V	32.6V
Maximum Power Current(Im)	8.5A	8.6A	8.7A	8.8A	8.9A
Module efficiency	16.5%	16.9%	17.2%	17.4%	17.7%
Maximum Series Fuse	15A				
Watts positive tolerance	0~+3%				
Number of Diode	3				
Standard Test Conditions	1000W/M²,25°C,AM1.5				
Maximum System Voltage	1000V/DC				
Temperature-Coefficient Isc	+0.08558%/°C				
Temperature-Coefficient Uoc	-0.29506%/°C				
Temperature-Coefficient Pmpp	-0.38001%/°C				
Normal Operating Cell Temperature	-40°C...+85°C				
Load Capacity for the cover of the module (glass)	5400Pa(IEC61215)(snow)				
Load Capacity for the front & back of the module	2400Pa(IEC61215)(wind)				
Product Certificate	TUV(IEC 61215,IEC 61730),CE, ROHS,PID Resisitant,INMETRO				
Company Certificate	ISO9001,ISO14001,ISO18001				

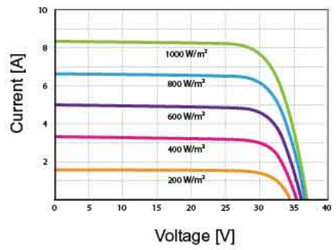
MECHANICAL CHARACTERISTICS

Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Backsheet (color)	TPT in white
Cell (quantity / material / dimensions)	60 / Polycrystalline silicon / 156.75x156.75mm
Frame (material / color)	aluminum hollow-chamber frame on each side anodized aluminum alloy / silver
Junction box (protection degree)	≥IP68
Cables & Plug connectors	2x900mm / 4mm² & MC4 compatible
Module Dimensions (L / W / H)	1640x992x35mm (A) / 1650x990x35mm (B)
Module Weight	17.75kg
Application class	Class A
Electrical protection class	Class II
Fire safety class	Class C

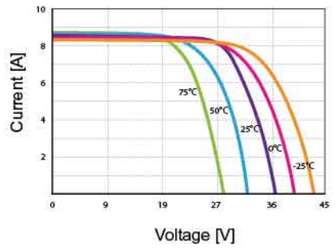
PACKING

Container Size	Units/Pallet (PCS)	Weight/Pallet (KG)	Pallet Measurment (mm)	Units/Container (PCS)
20GP	30	560	1690x1130x1120	360
40HQ	30	560	1690x1130x1120	910
	35	650	1690x1130x1300	

CURRENT-VOLTAGE CURVES:

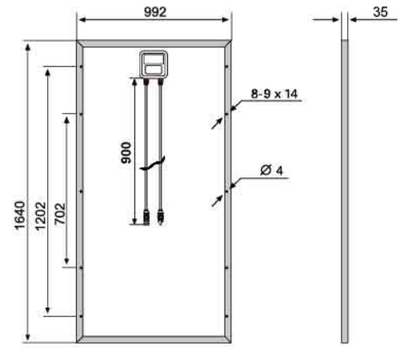


Module characteristics at constant module temperatures of 25°C and variable levels of irradiance



Module characteristics at variable module temperatures and constant module irradiance of 1.000 W/m²

MODULE DIAGRAM:



ERA SOLAR

Monocrystalline Solar Module / 50W-180W

Polycrystalline Solar Module /50W-200W

Module Type	Dimensions	Weight (kg)	Cell Type	Number ofCells	Maximum Power (Wp)	Open Circuit Voltage (Voc)	Short Circuit Current (Isc)	Maximum Power Voltage (Vm)	Maximum Power Current (Im)	Maximum Series Fuse	Number of Diodes	Cable Type and Length	Standard Test Conditions
ESPSC050	532X674X25mm	3.8kg	52x156mm	36(4x9)	50W	22.7V	2.9A	18.3V	2.73A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPSC080	766×674×30mm	7.6kg	78x156mm	36(4×9)	80W	23.2 V	4.55A	18.85 V	4.25A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPSC085	766×674×30mm	7.6kg	78x156mm	36(4x9)	85W	23.5 V	4.75A	19.1 V	4.45A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPSC100	1022X674X30mm	8kg	104X156mm	36(4x9)	100W	22.7V	5.8A	18.35V	5.45A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPSC100	1022X674X30mm	8kg	52X156mm	72(6x12)	100W	22.7V	5.8A	18.35V	5.45A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPSC150	1478×678×30mm	11.1kg	156x156mm	36(4x9)	150W	22.7V	8.69A	18.3V	8.2A	15A	2	4mm² 90cm	1000W/M², 25C,AM1.5
ESPSC160	1478×678×30mm	11.1kg	156x156mm	36(4x9)	160W	23.2 V	9.05A	18.85 V	8.5A	15A	2	4mm² 90cm	1000W/M², 25C,AM1.5
ESPSC170	1478×678×30mm	11.1kg	156x156mm	36(4x9)	170W	23.5 V	9.45A	19.21 V	8.85A	15A	2	4mm² 90cm	1000W/M², 25C,AM1.5
ESPSC180	1478×678×30mm	11.1kg	156x156mm	36(4x9)	180W	23.8 V	9.8A	19.8 V	9.1A	15A	2	4mm² 90cm	1000W/M², 25C,AM1.5
ESPMC050	532x674x25mm	5kg	52x156mm	36(4x9)	50W	22.7V	2.90A	18.3V	2.73A	10A	1	without cable	1000W/M², 25C,AM1.5
ESPMC075	766x674x30mm	6kg	78x156mm	36(4x9)	75W	22.7V	4.34A	18.3V	4.10A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPMC080	766x674x30mm	7.6kg	78x156mm	36(4x9)	80W	22.7V	4.63A	18.3V	4.37A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPMC100	1022x674x30mm	8kg	104x156mm	36(4X9)	100W	22.7V	5.79A	18.3V	5.46A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPMC100	1022x674x30mm	8kg	52x156mm	72(6X12)	100W	22.7V	5.79A	18.3V	5.46A	10A	2	without cable	1000W/M², 25C,AM1.5
ESPMC150	1478x678x30mm	11.1kg	156X156mm	36(4X9)	150W	22.7V	8.69A	18.3V	8.20A	15A	2	4mm² 90cm	1000W/M², 25C,AM1.5
ESPMC160	1478x678x30mm	11.1kg	156X156mm	36(4X9)	160W	23.2V	9.05A	18.85V	8.5A	15A	2	4mm² 90cm	1000W/M², 25C,AM1.5
ESPMC170	1478x678x30mm	11.1kg	156X156mm	36(4X9)	170W	23.5V	9.45A	19.21V	8.85A	15A	2	4mm² 90cm	1000W/M², 25C,AM1.5
ESPMC200	1330x990x30mm	14.3kg	104x156mm	72(6X12)	200W	44.5V	5.81A	36.5V	5.48A	15A	3	4mm² 90cm	1000W/M², 25C,AM1.5

FOLDABLE SOLAR PANEL POWER KIT

SPECIFICATION

Item No.	ESPSA050x3	ESPSA060x2	ESPSA050x2
Maximum Power	150W(50Wx3)	120W(60Wx2)	100W(50Wx2)
Size Closed(mm)	650x541x105mm	847x541x70mm	630x541x70mm
Weight(Kgs)	14.2Kgs	12.5Kgs	9.5Kgs
Open circuit Voltage(Voc)	22.6V	22.7V	22.7V
Short circuit Current(Isc)	8.80A	6.96A	5.80A
Maximum Power Voltage(Vmpp)	18.30V	18.35V	18.35V
Maximum Power Current(Impp)	8.2A	6.54A	6.54A
STC(Stand Test Condition): AM1.5,1000W/M2 Module Temperature:25 C			

How to use the solar panel

The best use

The foldable solar panel kit is an ideal choice for indoor and outdoor using. It charges the 12V(24V), Battery and is suitable for home (lighting,TV,fans) and outdoor camping,With this foldable design provide you excellent using experience.

ERA SOLAR

WORLD-WIDE REFERENCE

ERA Solar is dedicated to provide customers with the best solar energy solution. From the small roofing-projects to the MW scale projects, from the off-grid application to the on-grid application, No matter what kinds of service you need, ERA Solar module will always be your perfect choice for the PV system installation.

For the past 10 years, ERA Solar has built a strong sales network in Europe, Australia, United States and Japan, sharing a good partnership with the local installers and the distributors. ERA Solar will continu-ously work with our partners, providing the market with excellent products and service.

ERA SOLAR

COMMERCIAL & INDUSTRIAL ROOFTOPS

ERA modules with high conversion efficiency are the perfect solution where high performance is required. They are perfect for the surfaces of limited size such as house roofs, which can provide larger energy with low installation cost.

For solar parks and industrial application，ERA Solar focuses on reliability and longtime performance for maximum return on solar investment.