



PV MODULE

EverExceed Industrial Co., Ltd.

Polycrystalline 5W-300W
Monocrystalline 5W-310W

EverExceed[®]
power your applications

PV MODULE

WE MAKE **SOLAR ENERGY**
MORE EFFICIENT AND SIMPLE!



OUR MISSION

Supply worldwide reliable power solutions with continuous innovative technologies.



OUR VALUES

Every staff is equal in personality and dignity. Mutual respect and understanding are advocated. Enterprising spirit and initiative are encouraged.

EverExceed has been devoting to maximizing the value to its worldwide users through its commitments to people, advanced technologies and quality services. With its strong penetration into international markets, EverExceed will continue its high-speed development in the coming years.

Following globalization strategy, EverExceed is becoming an important vendor of global network & motive power and power protection products, solar energy in the industry. EverExceed's products have been applied in over 50 countries and regions including the United States, Canada, United Kingdom, Italy, France, Austria, Belgium, Turkey, Greece, Thailand, Spain, Mexico, Egypt, Sri Lanka, Pakistan, Indonesia, Australia etc.

EverExceed is a fast growing, aggressive and forward-looking international organization that expects the new century to be marked by challenge, more and different opportunities, and steady growth. We are well placed to take full advantage of these opportunities for ourselves and our customers.



PRODUCTS INFORMATION

EverExceed's standard modules deliver the most reliable solar power for on-grid and off-grid residential and commercial systems.

Our photovoltaic modules are built with EverExceed's highly regulated manufacturing standards and latest standard technology.

EverExceed's standard modules are built to deliver the most cost effective performance.

EverExceed's solar module incorporates an advanced surface texturing process to increase light absorption.



PRODUCT CHARACTERISTICS

- High conversion efficiency with high reliability
- Low mismatch of cell performance during encapsulation
- Excellent performance under low lighting
- Low hot spot effect
- Low degradation under light exposure



125x125mm Monocrystalline Solar Module Specification

Model	Maximum power at STC	Optimum operating voltage	Optimum operating current	Open circuit voltage	Short circuit current	Size of module	Weight	Cell array
Spec	Wp(W)	Vmp(V)	Imp(A)	Voc(V)	Isc(A)	L×W×H(mm)	Kg	PCS
ESM5S-125	5w	17	0.29	21	0.32	295*185*18	1	4x9
ESM10S-125	10w	17.2	0.58	21.2	0.63	295*295*18	1.5	4x9
ESM15S-125	15w	17.2	0.87	21.2	0.96	465*295*25	2.6	2x18
ESM20S-125	20w	17.4	1.15	21.6	1.25	295*545*25	3.2	4x9
ESM25S-125	25w	17.4	1.44	21.6	1.57	350*545*25	3.9	4x9
ESM30S-125	30w	17.3	1.73	21.5	1.86	430*545*25	4.1	4x9
ESM35S-125	35w	17.4	2.01	21.6	2.18	460*545*25	4.2	4x9
ESM40S-125	40w	17.5	2.29	21.6	2.47	520*545*25	4.4	4x9
ESM45S-125	45w	17.5	2.57	21.6	2.78	575*545*25	4.6	4x9
ESM50S-125	50w	17.5	2.86	21.6	3.09	635*545*30	4.8	4x9
ESM55S-125	55w	17.5	3.14	21.7	3.41	690*545*30	5.3	4x9
ESM60S-125	60w	17.5	3.43	21.7	3.71	745*545*30	5.6	4x9
ESM65S-125	65w	17.6	3.69	21.8	3.99	810*545*30	5.8	4x9
ESM70S-125	70w	17.7	3.95	21.7	4.27	880*545*30	6	4x9
ESM75S-125	75w	17.7	4.24	21.7	4.58	925*545*30	6.3	4x9
ESM80S-125	80w	17.6	4.55	21.6	4.91	1000*545*30	6.8	4x9
ESM85S-125	85w	17.5	4.86	21.6	5.26	1060*545*30	7.3	4x9
ESM90S-125	90w	17.6	5.11	21.8	5.52	1105*545*30	7.5	4x9
ESM95S-125	95w	17.8	5.34	22.1	5.76	1200*545*30	7.8	4x9
ESM100S-125	100w	18	5.56	22.2	6.01	1200*545*30	7.8	4x9
ESM125S-125	125w	23.8	5.25	29.6	5.64	1070*808*35	9.3	6x8
ESM130S-125	130w	24	5.42	29.8	5.79	1070*808*35	9.3	6x8
ESM135S-125	135w	24.2	5.58	30.1	5.94	1070*808*35	9.3	6x8
ESM145S-125	145w	26.6	5.45	33.1	5.83	1200*808*35	11	6x9
ESM150S-125	150w	26.8	5.6	33.3	5.94	1200*808*35	11	6x9
ESM160S-125	160w	29.6	5.41	36.9	5.78	1325*808*35	12.5	6x10
ESM165S-125	165w	30	5.5	37.3	5.85	1325*808*35	12.5	6x10
ESM190S-125	190w	35.8	5.31	44.5	5.68	1580*808*35	14.9	6x12
ESM195S-125	195w	36	5.42	44.6	5.78	1580*808*35	14.9	6x12
ESM200S-125	200w	36.2	5.53	44.8	5.88	1580*808*35	14.9	6x12

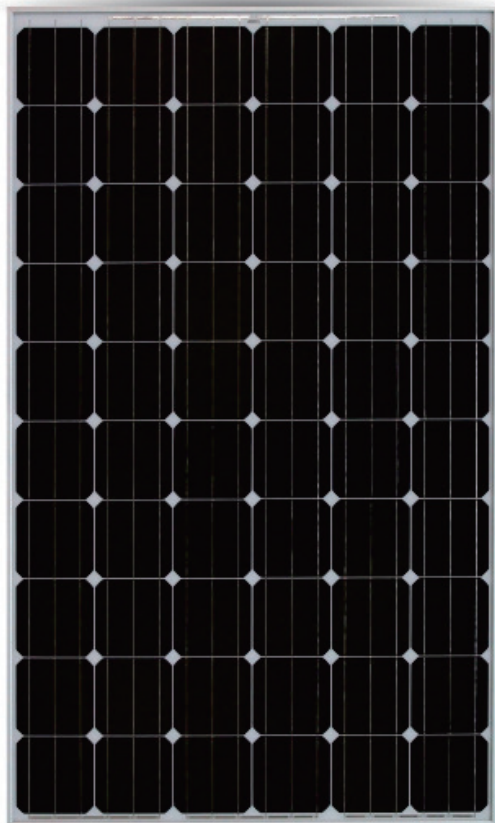
Mono 60 Cell Series

Cell size 125x125mm

ESM160S-125

ESM165S-125

EverExceed®
power your applications



PERFORMANCE

High efficiency, Monocrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.45%, minimizing installation costs and maximizing the kWh output of your system per unit area.

Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.

RELIABILITY

Tests by independent laboratories prove that EverExceed Solar modules:

- ✓ Fully conform to certification and regulatory standards.
- ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004.

WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM160S-125	ESM165S-125
Power output	P_{max}	W	160	165
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.9	15.4
Voltage at P_{max}	V_{mpp}	V	29.6	30.0
Current at P_{max}	I_{mpp}	A	5.41	5.50
Open-circuit voltage	V_{oc}	V	36.9	37.3
Short-circuit current	I_{sc}	A	5.78	5.85

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	129.8	133.8
Voltage at P_{max}	V_{mpp}	V	30.4	30.9
Current at P_{max}	I_{mpp}	A	4.27	4.33
Open-circuit voltage	V_{oc}	V	37.1	37.5
Short-circuit current	I_{sc}	A	4.61	4.67

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature, 1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature		°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.48
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.33
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	15A
Operating temperature range	-40°C to 85°C
Surface Max. load capacity	60m/s(200kg/sq.m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

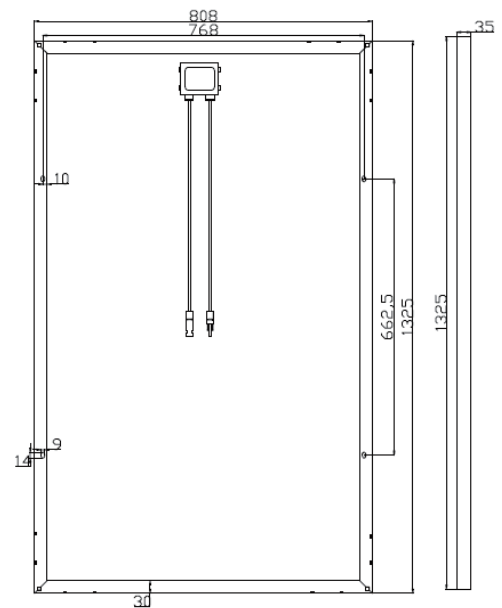
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	60/ monocrystalline silicon / 125×125mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

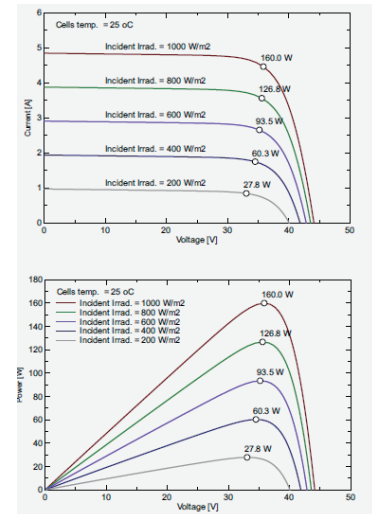
Dimensions (L / W / H)	1325mm/ 808 mm/ 35mm
Weight	12.5kg

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Dimension



Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 160W type



PERFORMANCE

High efficiency, Monocrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.45%, minimizing installation costs and maximizing the kWh output of your system per unit area.

Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.

RELIABILITY

Tests by independent laboratories prove that EverExceed Solar modules:

- ✓ Fully conform to certification and regulatory standards.
- ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004.

WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM190S-125	ESM195S-125	ESM200S-125
Power output	P_{max}	W	190	195	200
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.9	15.3	15.7
Voltage at P_{max}	V_{mpp}	V	35.8	36.0	36.2
Current at P_{max}	I_{mpp}	A	5.31	5.42	5.53
Open-circuit voltage	V_{oc}	V	44.5	44.6	44.8
Short-circuit current	I_{sc}	A	5.68	5.78	5.88

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	153.8	157.7	161.8
Voltage at P_{max}	V_{mpp}	V	36.7	37.0	37.2
Current at P_{max}	I_{mpp}	A	4.19	4.27	4.34
Open-circuit voltage	V_{oc}	V	44.7	44.8	45.0
Short-circuit current	I_{sc}	A	4.53	4.61	4.69

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.48
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.33
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	15A
Operating temperature range	-40°C to 85°C
Surface Max. load capacity	60m/s(200kg/sq.m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

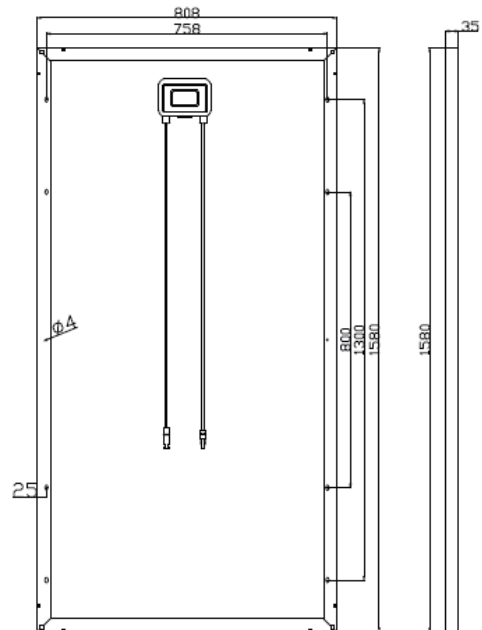
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	72/ monocrystalline silicon / 125×125mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

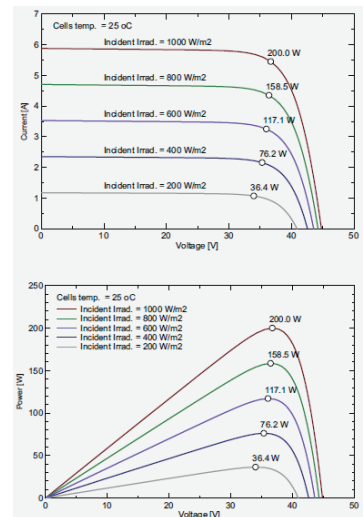
Dimensions (L / W / H)	1580mm×808mm×35mm
Weight	14.9kg

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Dimension



Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 200W type

156x156mm Monocrystalline Solar Module Specification

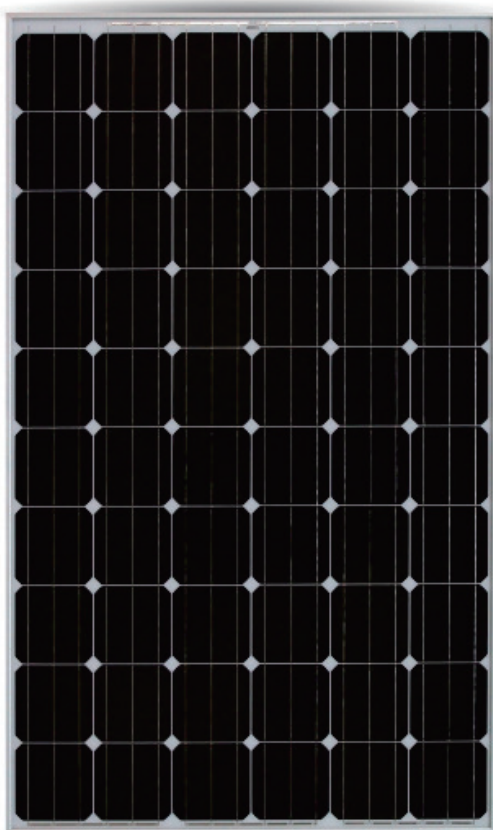
Model	Maximum power at STC	Optimum operating voltage	Optimum operating current	Open circuit voltage	Short circuit current	Size of module	Weight	Cell array
Spec	Wp(W)	Vmp(V)	Imp(A)	Voc(V)	Isc(A)	L×W×H(mm)	Kg	PCS
ESM145S-156	145	18.4	7.88	22.9	8.51	1480*670*35	12	4x9
ESM150S-156	150	18.6	8.06	23	8.66	1480*670*35	12	4x9
ESM155S-156	155	18.8	8.24	23.3	8.74	1480*670*35	12	4x9
ESM195S-156	195	24.1	8.09	30	8.61	1320*992*35	14.5	6x8
ESM200S-156	200	24.3	8.23	30.2	8.72	1320*992*35	14.5	6x8
ESM205S-156	205	24.5	8.37	30.3	8.79	1320*992*35	14.5	6x8
ESM210S-156	210	24.7	8.5	30.4	8.92	1320*992*35	14.5	6x8
ESM220S-156	220	27.1	8.12	33.6	8.61	1480*992*35	16	6x9
ESM225S-156	225	27.3	8.24	33.7	8.74	1480*992*35	16	6x9
ESM230S-156	230	27.5	8.36	33.8	8.86	1480*992*35	16	6x9
ESM240S-156	240	30.1	7.97	37.1	8.56	1640*992*40	18.6	6x10
ESM245S-156	245	30.2	8.11	37.2	8.6	1640*992*40	18.6	6x10
ESM250S-156	250	30.3	8.25	37.3	8.67	1640*992*40	18.6	6x10
ESM255S-156	255	30.5	8.36	37.4	8.7	1640*992*40	18.6	6x10
ESM260S-156	260	30.7	8.47	37.5	8.81	1640*992*40	18.6	6x10
ESM295S-156	295	36.4	8.1	45.3	8.59	1956*992*45	27.6	6x12
ESM300S-156	300	36.8	8.15	45.6	8.63	1956*992*45	27.6	6x12
ESM305S-156	305	37	8.24	45.8	8.66	1956*992*45	27.6	6x12
ESM310S-156	310	37.2	8.33	45.9	8.75	1956*992*45	27.6	6x12

Mono 60 Cell Series

Cell size 156x156mm

ESM240S-156
ESM245S-156
ESM250S-156
ESM255S-156
ESM260S-125

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PERFORMANCE

High efficiency, monocrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.45%, minimizing installation costs and maximizing the kWh output of your system per unit area.

Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.

RELIABILITY

Tests by independent laboratories prove that EverExceed Solar modules:

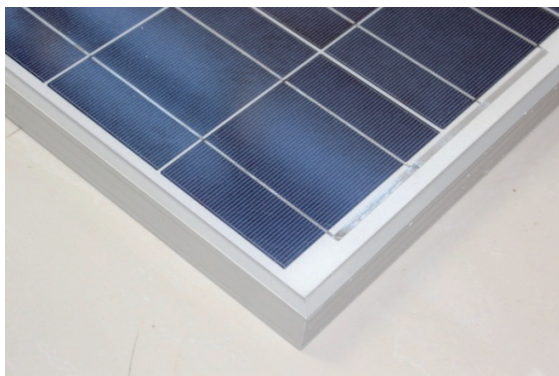
- ✓ Fully conform to certification and regulatory standards.
- ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004.

WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM240 S-156	ESM245 S-156	ESM250 S-156	ESM255 S-156	ESM260 S-156
Power output	P_{max}	W	240	245	250	255	260
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.7	15.1	15.4	15.7	16.0
Voltage at P_{max}	V_{mpp}	V	30.1	30.2	30.3	30.5	30.7
Current at P_{max}	I_{mpp}	A	7.97	8.11	8.25	8.36	8.47
Open-circuit voltage	V_{oc}	V	37.1	37.2	37.3	37.4	37.5
Short-circuit current	I_{sc}	A	8.56	8.60	8.67	8.70	8.81

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	193.8	197.9	202.3	207.1	211.1
Voltage at P_{max}	V_{mpp}	V	30.7	31.1	31.4	31.8	32.0
Current at P_{max}	I_{mpp}	A	6.31	6.36	6.43	6.51	6.60
Open-circuit voltage	V_{oc}	V	37.3	37.4	37.5	37.6	37.7
Short-circuit current	I_{sc}	A	6.83	6.86	6.92	6.94	7.03

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.43
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.34
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	15A
Operating temperature range	-40°C to 85°C
Surface Max. load capacity	60m/s(200kg/sq-m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

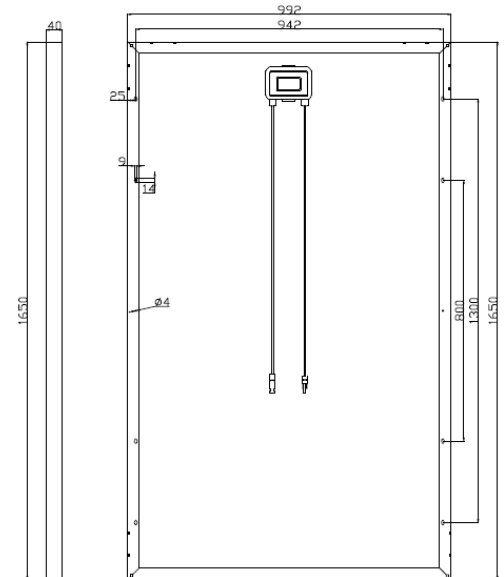
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	60/ monocrystalline silicon / 156×156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

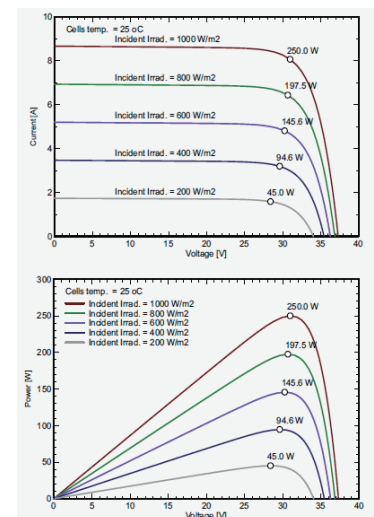
Dimensions (L / W / H)	1650mmx992mmx40mm
Weight	18.6kg

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Dimension



Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

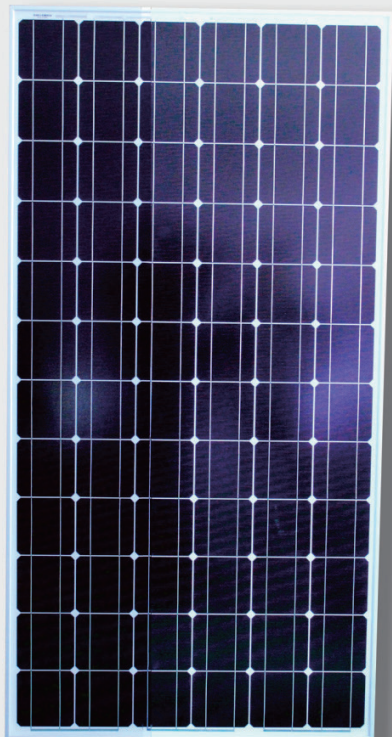
Above graphs are referred to 250W type

Mono 72 Cell Series

Cell size 156x156mm

ESM290S-156
ESM295S-156
ESM300S-156
ESM305S-156
ESM310S-125

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WARRANTIES

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QUALIFICATIONS & CERTIFICATES

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ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM290 S-156	ESM295 S-156	ESM300 S-156	ESM305 S-156	ESM310S -156
Power output	P_{max}	W	290	295	300	305	310
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.9	15.2	15.4	15.7	16.0
Voltage at P_{max}	V_{mpp}	V	36.2	36.4	36.8	37.0	37.2
Current at P_{max}	I_{mpp}	A	8.01	8.10	8.15	8.24	8.33
Open-circuit voltage	V_{oc}	V	45.1	45.3	45.6	45.8	45.9
Short-circuit current	I_{sc}	A	8.51	8.59	8.63	8.66	8.75

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	234.9	238.8	242.8	247.0	250.9
Voltage at P_{max}	V_{mpp}	V	37.3	37.6	37.9	38.4	38.6
Current at P_{max}	I_{mpp}	A	6.29	6.35	6.40	6.43	6.50
Open-circuit voltage	V_{oc}	V	45.3	45.5	45.8	46.0	46.1
Short-circuit current	I_{sc}	A	6.79	6.85	6.88	6.91	6.98

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.43
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.34
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	15A
Operating temperature range	-40°C to 85°C
Surface Max. load capacity	60m/s(200kg/sq.m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

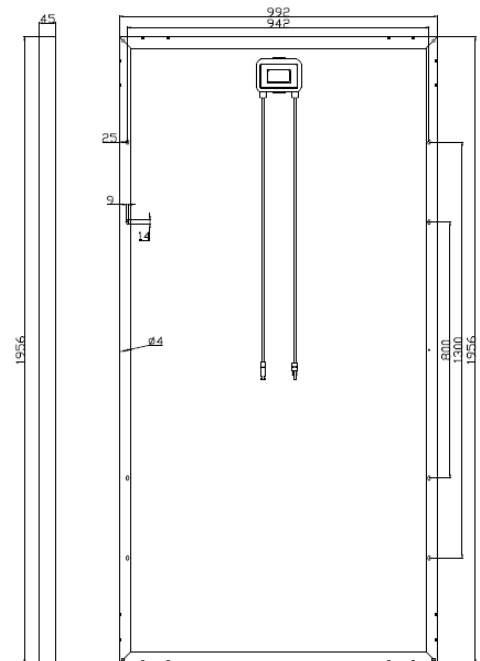
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions)	72/ monocrystalline silicon / 156×156mm
Encapsulant (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

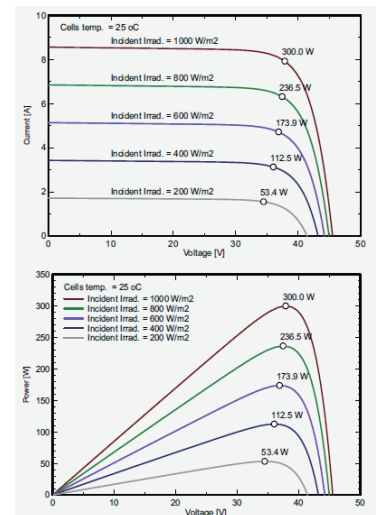
Dimensions (L / W / H)	1956mm×992mm×45mm
Weight	27.6kg

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Dimension



Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 300W type



PERFORMANCE

High efficiency, polycrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.2%, minimizing installation costs and maximizing the kWh output of your system per unit area.

Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.

RELIABILITY

Tests by independent laboratories prove that EverExceed Solar modules:

- ✓ Fully conform to certification and regulatory standards.
- ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004.

WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM140-156	ESM145-156	ESM150-156	ESM155-156
Power output	P_{max}	W	140	145	150	155
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.1	14.6	15.1	15.6
Voltage at P_{max}	V_{mpp}	V	17.8	18.0	18.2	18.4
Current at P_{max}	I_{mpp}	A	7.87	8.05	8.24	8.35
Open-circuit voltage	V_{oc}	V	22.5	22.4	22.6	22.8
Short-circuit current	I_{sc}	A	8.4	8.58	8.76	8.85

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	114.7	118.9	123.0	128.4
Voltage at P_{max}	V_{mpp}	V	18.1	18.3	18.5	18.6
Current at P_{max}	I_{mpp}	A	6.33	6.57	6.80	6.92
Open-circuit voltage	V_{oc}	V	22.6	22.6	22.6	22.7
Short-circuit current	I_{sc}	A	6.77	7.02	7.26	7.39

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.43
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.34
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	12A
Operating temperature range	-40°C~85°C
Surface Max. load capacity	60m/s(200kg/sq-m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

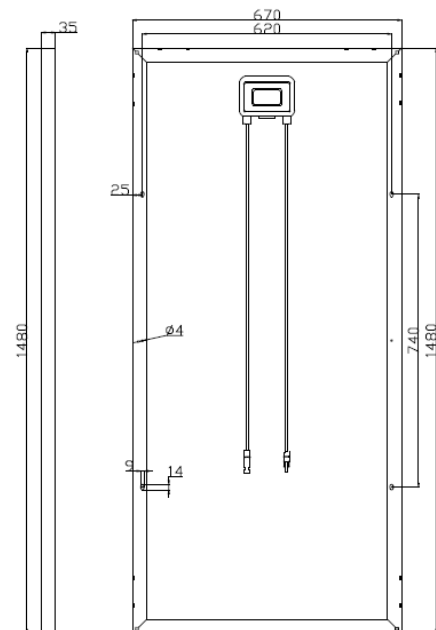
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions / number of busbars)	36/ polycrystalline silicon / 156mmx156mm
Encapsulate (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

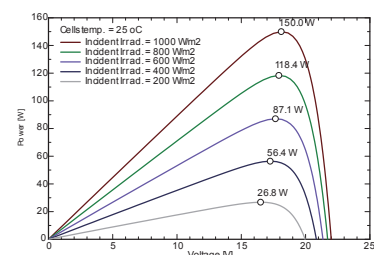
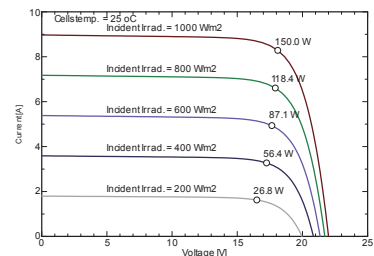
Dimensions (L / W / H)	1480mmx 670mmx 35mm
Weight	12.5Kg

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Dimension



Electrical parameters curve



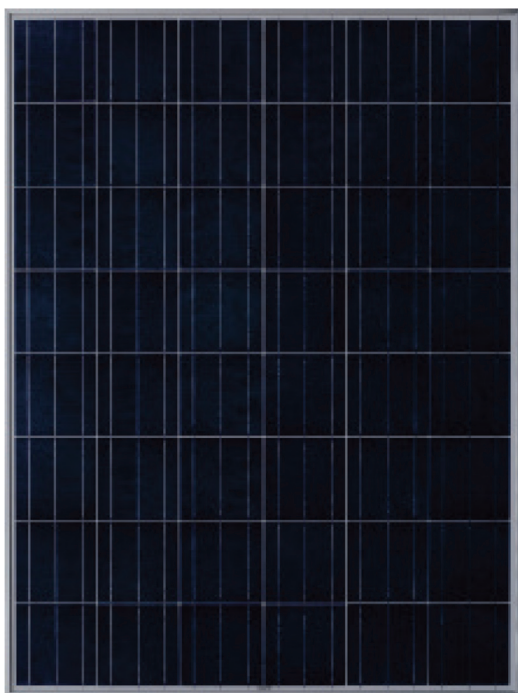
STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 150W type

Polycrystalline Solar Module Specification

Model	Maximum power at STC	Optimum operating voltage	Optimum operating current	Open circuit voltage	Short circuit current	Size of module	Weight	Cell array
Spec	Wp(W)	Vmp(V)	Imp(A)	Voc(V)	Isc(A)	LxWxH(mm)	kg	PCS
ESM5-156	5	17	0.29	21	0.32	300*180*18	1kg	2x18
ESM10-156	10	17.2	0.56	21.2	0.64	285*340*18	1.4kg	2x18
ESM15-156	15	17.3	0.86	21.5	0.93	390*340*18	1.8kg	2x18
ESM20-156	20	17.3	1.17	21.5	1.26	465*350*25	3.0kg	2x18
ESM25-156	25	17.3	1.45	21.5	1.72	670*310*25	3.8kg	2x18
ESM30-156	30	17.3	1.75	21.6	1.95	645*350*25	4.0kg	2x18
ESM35-156	35	17.5	1.98	21.9	2.15	420*670*25	4.7kg	4x9
ESM40-156	40	17.4	2.31	21.8	2.52	480*670*25	5.3kg	4x9
ESM45-156	45	17.8	2.53	22.3	2.73	520*670*25	5.5kg	4x9
ESM50-156	50	17.3	2.89	21.5	3.21	550*670*30	5.8kg	4x9
ESM55-156	55	17.5	3.14	21.9	3.39	625*670*30	6.5kg	4x9
ESM60-156	60	17.5	3.42	21.9	3.7	670*670*30	6.8kg	4x9
ESM65-156	65	17.5	3.71	21.9	4.01	700*670*30	7.0kg	4x9
ESM70-156	70	17.5	4.1	21.9	4.33	790*670*30	7.3kg	4x9
ESM75-156	75	17.6	4.26	22.1	4.61	820*670*30	7.7kg	4x9
ESM80-156	80	17.6	4.55	22.1	4.91	845*670*30	8.0kg	4x9
ESM85-156	85	17.6	4.83	22.1	5.22	915*670*30	8.6kg	4x9
ESM90-156	90	17.6	5.11	22.1	5.52	960*670*30	9.0kg	4x9
ESM95-156	95	17.6	5.4	22.1	5.83	1005*670*30	9.1kg	4x9
ESM100-156	100	17.7	5.65	22.3	6.11	1005*670*30	9.1kg	4x9
ESM105-156	105	17.7	5.93	22.3	6.41	1125*670*35	10.1kg	4x9
ESM110-156	110	17.7	6.22	22.3	6.71	1125*670*35	10.1kg	4x9
ESM120-156	120	17.8	6.74	22.5	7.28	1275*670*35	10.6kg	4x9
ESM130-156	130	17.7	7.35	22.3	7.94	1375*670*35	11.2kg	4x9
ESM135-156	135	17.7	7.63	22.3	8.24	1375*670*35	11.2kg	4x9
ESM140-156	140	17.8	7.87	22.5	8.49	1480*670*35	12kg	4x9

ESM145-156	145	17.8	8.15	22.5	8.8	1480*670*35	12kg	4x9
ESM150-156	150	17.8	8.42	22.5	9.1	1480*670*35	12kg	4x9
ESM155-156	155	18.8	8.35	23.84	8.74	1480*670*35	12kg	4x9
ESM180-156	180	23.6	7.63	29.42	8.09	1330*992*35	14.5kg	6x8
ESM185-156	185	23.8	7.77	29.65	8.34	1330*992*35	14.5kg	6x8
ESM190-156	190	23.9	7.95	29.9	8.46	1330*992*35	14.5kg	6x8
ESM195-156	195	24.1	8.09	30.06	8.61	1330*992*35	14.5kg	6x8
ESM200-156	200	24.3	8.23	30.38	8.73	1330*992*35	14.5kg	6x8
ESM205-156	205	26.6	7.71	33.21	8.17	1480*992*35	16kg	6x9
ESM210-156	210	26.8	7.82	33.41	8.34	1480*992*35	16kg	6x9
ESM215-156	215	26.9	7.95	33.65	8.46	1480*992*35	16kg	6x9
ESM220-156	220	27.1	8.09	33.89	8.61	1480*992*35	16kg	6x9
ESM225-156	225	27.3	8.22	34.11	8.73	1480*992*35	16kg	6x9
ESM240-156	240	30.1	7.97	36.92	8.56	1640*992*40	18.6kg	6x10
ESM245-156	245	30.4	8.06	37.01	8.67	1640*992*40	18.6kg	6x10
ESM250-156	250	30	8.33	37.1	8.99	1640*992*40	18.6kg	6x10
ESM280-156	280	35.6	7.87	44.5	8.49	1956*992*45	27.6kg	6x12
ESM285-156	285	35.7	7.98	44.63	8.62	1956*992*45	27.6kg	6x12
ESM290-156	290	35.9	8.08	44.7	8.64	1956*992*45	27.6kg	6x12
ESM295-156	295	36	8.19	44.82	8.76	1956*992*45	27.6kg	6x12
ESM300-156	300	36.2	8.28	44.88	8.85	1956*992*45	27.6kg	6x12



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- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004.

WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM180 -156	ESM185 -156	ESM190 -156	ESM195 -156	ESM200 -156
Power output	P_{max}	W	180	185	190	195	200
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	13.7	14.1	14.5	14.9	15.3
Voltage at P_{max}	V_{mpp}	V	23.6	23.8	23.9	24.1	24.3
Current at P_{max}	I_{mpp}	A	7.63	7.77	7.95	8.09	8.23
Open-circuit voltage	V_{oc}	V	29.4	29.6	29.9	30.06	30.38
Short-circuit current	I_{sc}	A	8.09	8.34	8.46	8.61	8.73

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	148.4	151.0	155.4	159.5	153.7
Voltage at P_{max}	V_{mpp}	V	24.4	24.4	24.7	24.9	25.2
Current at P_{max}	I_{mpp}	A	6.08	6.18	6.28	6.41	6.50
Open-circuit voltage	V_{oc}	V	29.7	29.9	30.2	30.3	30.7
Short-circuit current	I_{sc}	A	6.45	6.65	6.75	6.87	6.96

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.43
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.34
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	15A
Operating temperature range	-40°C~85°C
Surface Max. load capacity	60m/s(200kg/sq.m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

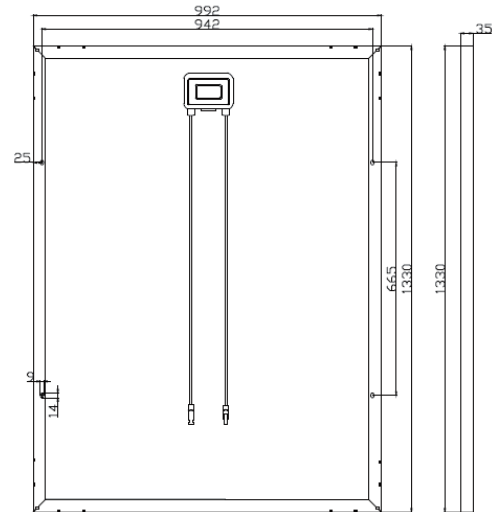
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions / number of busbars)	48/ polycrystalline silicon / 156mmx156mm
Encapsulate (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

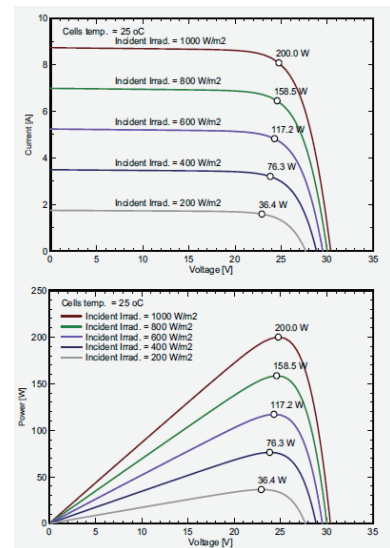
Dimensions (L / W / H)	1330mm*992mm*35mm
Weight	14.5Kg

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Dimension

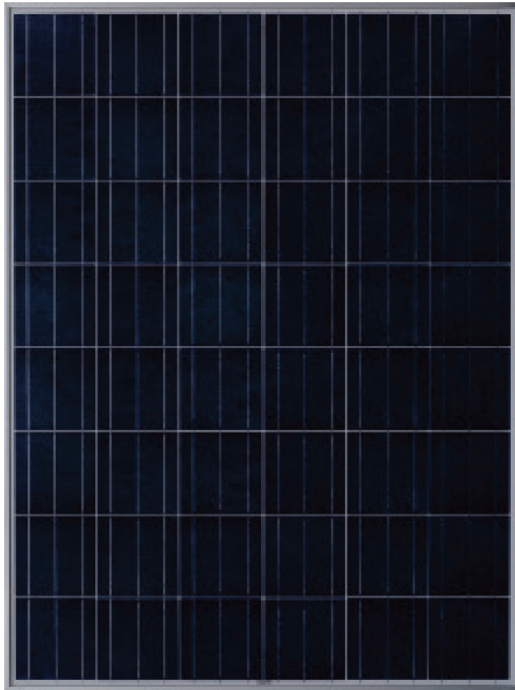


Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 200W type



PERFORMANCE

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RELIABILITY

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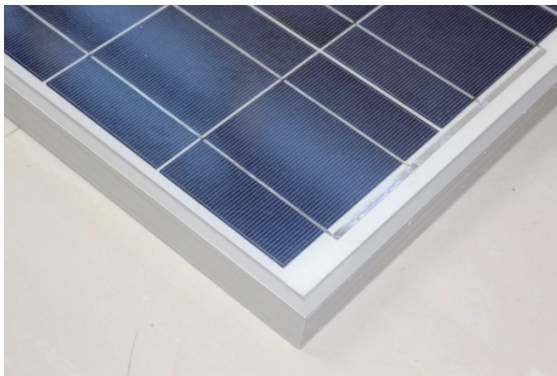
- ✓ Fully conform to certification and regulatory standards.
- ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

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WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM205 -156	ESM210 -156	ESM215 -156	ESM220 -156	ESM225 -156
Power output	P_{max}	W	205	210	215	220	225
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.0	14.3	14.6	15.0	15.3
Voltage at P_{max}	V_{mpp}	V	26.6	26.8	26.9	27.1	27.3
Current at P_{max}	I_{mpp}	A	7.71	7.82	7.95	8.09	8.22
Open-circuit voltage	V_{oc}	V	33.2	33.4	33.6	33.9	34.1
Short-circuit current	I_{sc}	A	8.17	8.34	8.46	8.61	8.73

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	166.2	169.7	173.3	177.7	181.9
Voltage at P_{max}	V_{mpp}	V	27.5	27.6	27.7	28.0	28.2
Current at P_{max}	I_{mpp}	A	6.04	6.15	6.25	6.36	6.45
Open-circuit voltage	V_{oc}	V	33.3	33.5	33.7	34.0	34.2
Short-circuit current	I_{sc}	A	6.51	6.65	6.75	6.87	6.96

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.43
Temperature coefficient of V_{oc}	β_{Voc}	%/°C	-0.34
Temperature coefficient of I_{sc}	α_{Isc}	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	15A
Operating temperature range	-40°C~85°C
Surface Max. load capacity	60m/s(200kg/sq.m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

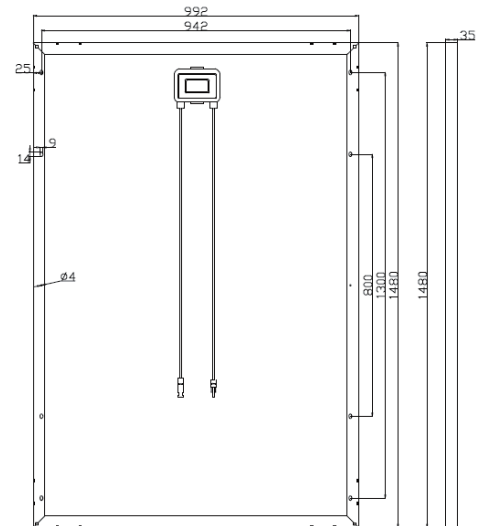
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions / number of busbars)	54/ polycrystalline silicon / 156mmx156mm
Encapsulate (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

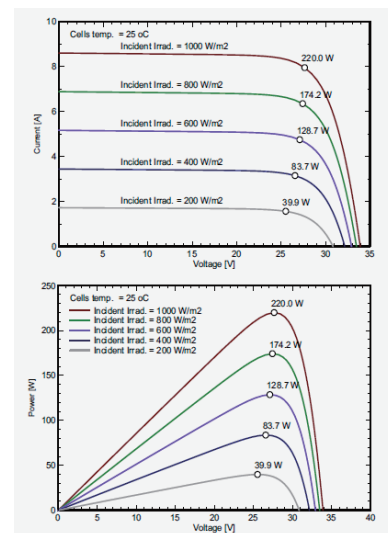
Dimensions (L / W / H)	1480mm*992mm*35mm
Weight	18.6Kg

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Dimension



Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 220W type



PERFORMANCE

High efficiency, polycrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.2%, minimizing installation costs and maximizing the kWh output of your system per unit area.

Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.

RELIABILITY

Tests by independent laboratories prove that EverExceed Solar modules:

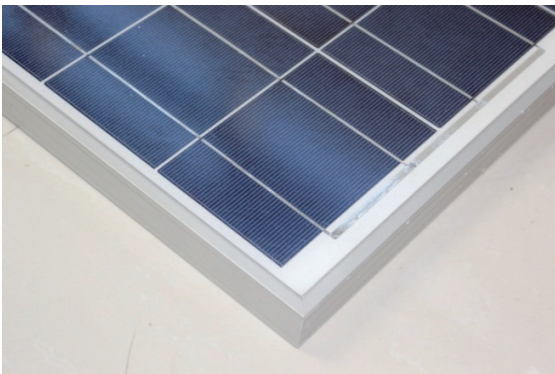
- ✓ Fully conform to certification and regulatory standards.
- ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004.

WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM230 -156	ESM235 -156	ESM240 -156	ESM245 -156	ESM250 -156
Power output	P_{max}	W	230	235	240	245	250
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.1	14.4	14.7	15.0	15.4
Voltage at P_{max}	V_{mpp}	V	29.5	29.6	30.1	30.4	30.6
Current at P_{max}	I_{mpp}	A	7.80	7.94	7.97	8.06	8.24
Open-circuit voltage	V_{oc}	V	36.6	36.7	36.9	37.0	37.1
Short-circuit current	I_{sc}	A	8.34	8.42	8.56	8.67	8.79

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	186.4	190.2	193.6	197.4	202.1
Voltage at P_{max}	V_{mpp}	V	30.3	30.6	30.7	30.9	30.6
Current at P_{max}	I_{mpp}	A	6.15	6.22	6.31	6.39	6.61
Open-circuit voltage	V_{oc}	V	36.7	36.9	37.1	37.2	37.2
Short-circuit current	I_{sc}	A	6.66	6.72	6.83	6.92	7.17

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.43
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.34
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

Max. system voltage	1000V(DC)
Max. series fuse rating	15A
Operating temperature range	-40°C~85°C
Surface Max. load capacity	60m/s(200kg/sq-m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

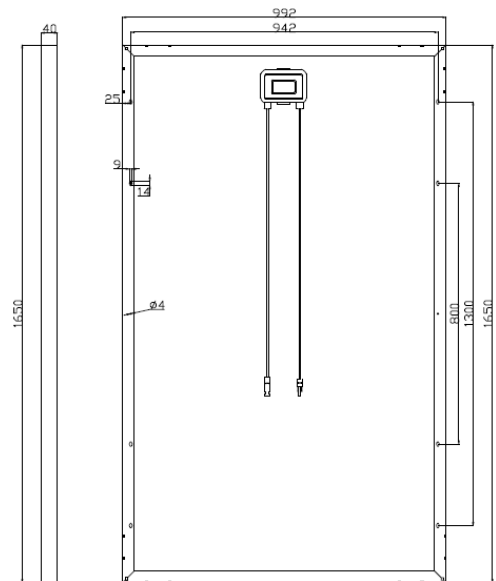
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions / number of busbars)	60/ polycrystalline silicon / 156mmx156mm
Encapsulate (material)	ethylene vinyl acetate (EVA)
Frame (material)	anodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

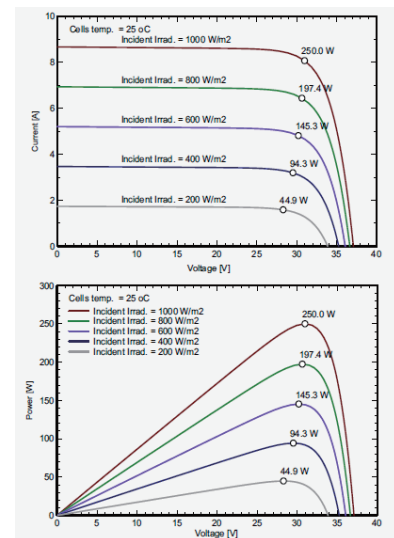
Dimensions (L / W / H)	1650mmx 992mmx 40mm
Weight	18.6Kg

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- The data do not refer to a single module and they are not part of the offer, they only serve for comparison to different module types.

Dimension



Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 250W type



PERFORMANCE

High efficiency, polycrystalline silicon solar cells with high transmission and textured glass deliver a module efficiency of up to 16.2%, minimizing installation costs and maximizing the kWh output of your system per unit area.

Tight positive power tolerance of 0W to +5W ensures you receive modules at or above nameplate power and contributes to minimizing module mismatch losses leading to improved system yield.

RELIABILITY

Tests by independent laboratories prove that EverExceed Solar modules:

- ✓ Fully conform to certification and regulatory standards.
- ✓ Withstand wind loads of up to 2.4kPa and snow loads of up to 5.4kPa, confirming mechanical stability.
- ✓ Successfully endure ammonia and salt-mist exposure at the highest severity level, ensuring their performance in adverse conditions.

Manufacturing facility certified by TÜV Rheinland to ISO 9001:2008, ISO 14001:2004.

WARRANTIES

5 year limited product warranty.

Limited power warranty: 10 years at 90% of the minimal rated power output, 25 years at 80% of the minimal rated power output.



QUALIFICATIONS & CERTIFICATES

IEC 61215, IEC 61730, VDE, CE, ISO 9001:2008, ISO 14001:2004, EMC



ELECTRICAL PERFORMANCE

Electrical parameters at Standard Test Conditions (STC)

Module type			ESM280 -156	ESM285 -156	ESM290 -156	ESM295 -156	ESM300 -156
Power output	P_{max}	W	80	285	290	295	300
Power output tolerances	ΔP_{max}	%	0 ~+5	0 ~+5	0 ~+5	0 ~+5	0 ~+5
Module efficiency	η_m	%	14.4	14.7	14.7	15.0	15.4
Voltage at P_{max}	V_{mpp}	V	35.6	35.7	35.9	36.0	36.2
Current at P_{max}	I_{mpp}	A	7.87	.98	8.08	8.19	8.28
Open-circuit voltage	V_{oc}	V	44.5	44.6	44.7	44.8	44.9
Short-circuit current	I_{sc}	A	8.49	8.62	8.64	8.76	8.85

STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. Average relative efficiency reduction of 5% at 200W/m² according to EN 60904-1.

Electrical parameters at Nominal Operating Cell Temperature (NOCT)

Power output	P_{max}	W	227.2	231.1	234.8	238.7	241.3
Voltage at P_{max}	V_{mpp}	V	36.4	36.5	36.9	37.0	37.0
Current at P_{max}	I_{mpp}	A	6.24	6.34	6.37	6.46	6.53
Open-circuit voltage	V_{oc}	V	44.7	44.8	44.9	45.0	45.0
Short-circuit current	I_{sc}	A	6.77	6.88	6.89	6.99	7.06

NOCT: open-circuit module operation temperature at 800W/m² irradiance, 20°C ambient temperature,

1m/s wind speed.

THERMAL CHARACTERISTICS

Nominal operating cell temperature	NOCT	°C	45 +/- 2
Temperature coefficient of P_{max}	γ	%/°C	-0.43
Temperature coefficient of V_{oc}	$\beta_{V_{oc}}$	%/°C	-0.34
Temperature coefficient of I_{sc}	$\alpha_{I_{sc}}$	%/°C	0.045

OPERATING CONDITIONS

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Surface Max. load capacity	60m/s(200kg/sq.m)
Max. static load, front (e.g., snow and wind)	2400pa(wind)/5400pa(snow)

CONSTRUCTION MATERIALS

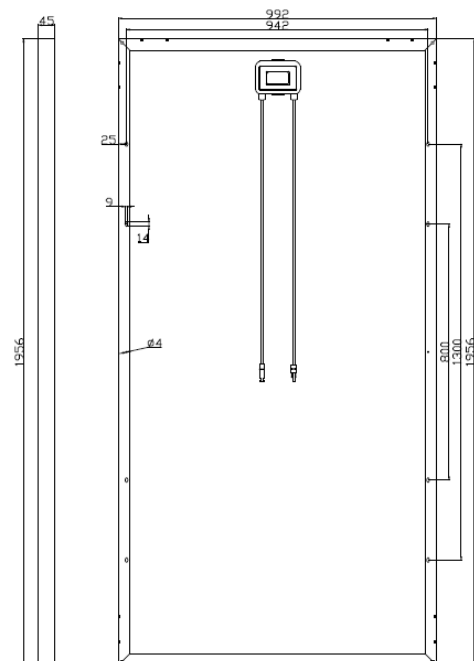
Front cover (material / thickness)	low-iron tempered glass / 3.2mm
Cell (quantity / material / dimensions / number of busbars)	72polycrystalline silicon / 156mmx156mm
Encapsulate (material)	ethylene vinyl acetate (EVA)
Frame (material)	nodized aluminum alloy
Junction box (protection degree)	IP65
Cable (length / cross-sectional area)	900mm / 4mm ²

GENERAL CHARACTERISTICS

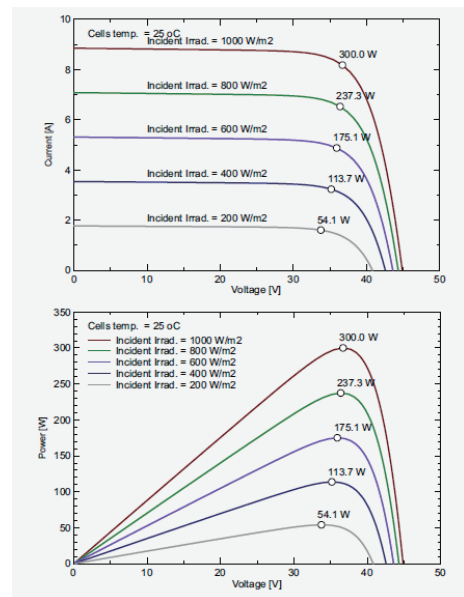
Dimensions (L / W / H)	1956x 992mmx45mm
Weight	27.6Kg

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Dimension



Electrical parameters curve



STC: Irradiance 1000W/m², Module temperature 25°C, AM1.5 spectrum.

Above graphs are referred to 250W type



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