



NINE 9 ENERGY™
CONNECT SOLAR



IT'S A SUNNY WORLD WITH 9ENERGY SOLAR



Email: info@9energysolar.com, 9energysolar@gmail.com | Web: www.9energysolar.com

PRODUCTS & SERVICES



Solar Energy & Solar Products :

Solar power is most convenient because it is clean (does not produce fume), renewable (easily can be renewed every day by the Sun), and also quite (contrary to Diesel/Petrol generator). The cost of traditional mode of electricity is increasing consistently. The installation of the solar infrastructure may initially be a little high, but after this initial expense, there is no recurrence cost. On the other hand, Traditional power generation systems such as thermal etc are fast consuming natural resources where as solar generation is a renewable each day without any natural resource consumption. Consequently, we will soon be without these natural resources. That is why; solar power is useful, as it can be renewed every day with the rays of Sun.

EPC

The highly skilled and dedicated EPC Team at **NINE ENERGY** Solar ensures the completion of each solar plant from concept to commissioning including its operation and maintenance for the complete lifespan of the plant. The company, over the years, has developed an internationally accredited expertise in engineering and technology, procurement and project management, construction and commissioning, with a strong command over asset management. Its business model ranges from the acquisition of developed sites to the servicing and maintenance of completed solar arrays throughout its lifespan.



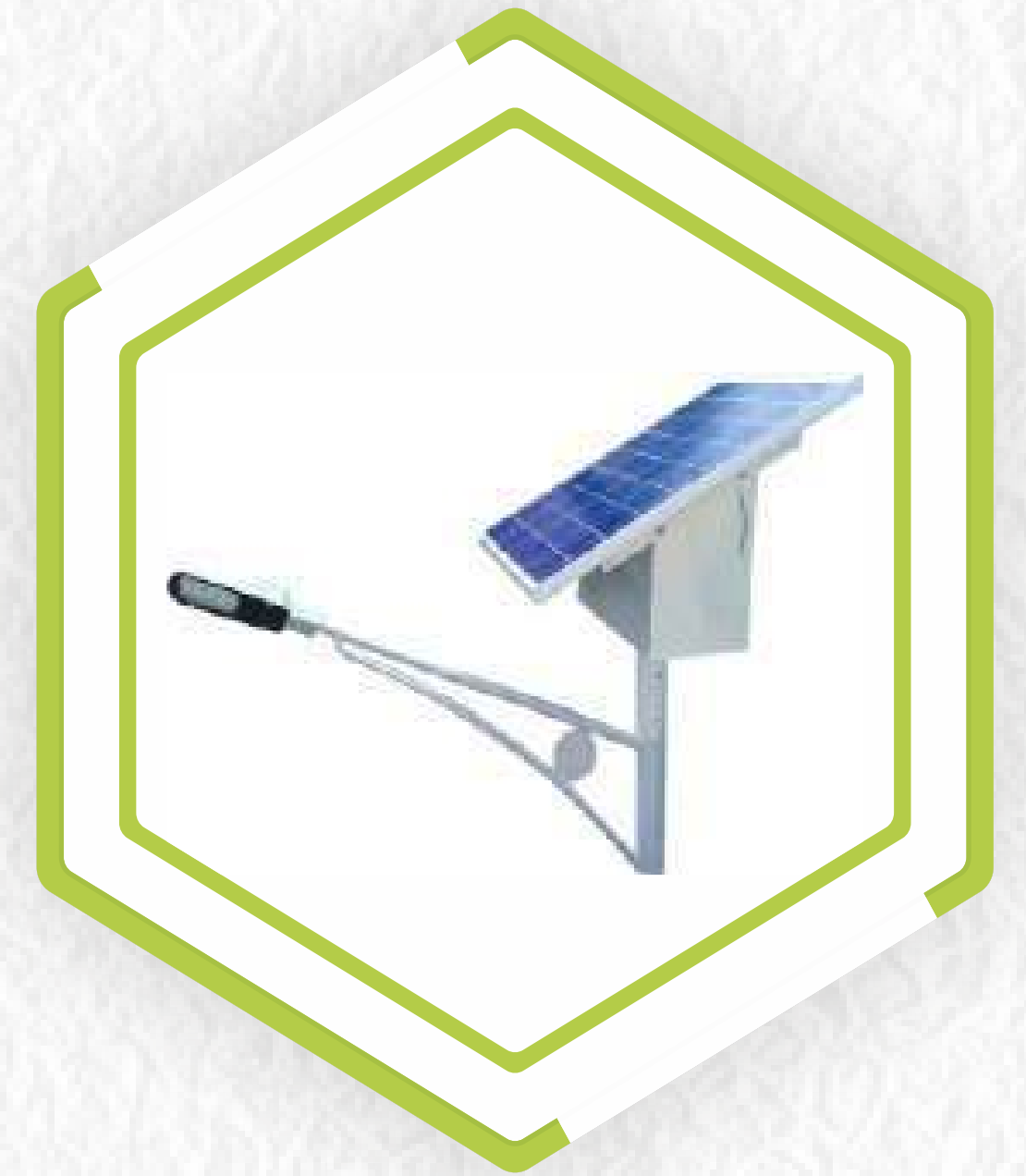


Solar Rooftop System:

Solar rooftop system is a useful way of producing cost effective electricity for domestic and commercial purpose. This infrastructure can be mounted on the roof of houses and offices for domestic power generation. For commercial power generation usually large commercial fields are required. It is made up of a set of PV modules, and it converts solar power into electrical power.

Solar Street Light

Solar Street Light are a independent light sources which are wireless and not connected to any electricity provider. That is why the risk of the accident is minimized than the conventional light. Solar street light are dependent of the heat energy given off by the SUN, storing as much of it throughout the day. These light have lower chances of overheating compare than the conventional light. Solar Street Lightning systems are more efficient & handy solution to the lightning problems in remote areas.



Solar Pump:

Solar Pump has a small power house and calibrated solar modules. It can be tuned with any particular pumping system for any particular work, like irrigation pump, submersible pump. Deep or surface well can easily be associated with this drip irrigation for enhancing the results.

Water Heating system

Water Heating System powered by solar energy is very cost effective and eco friendly. This system is very effective in any climate. Generally two types of Solar Water Heating systems are available in the market; these are Active Solar Water Heating System and another is Passive Water Heating System.

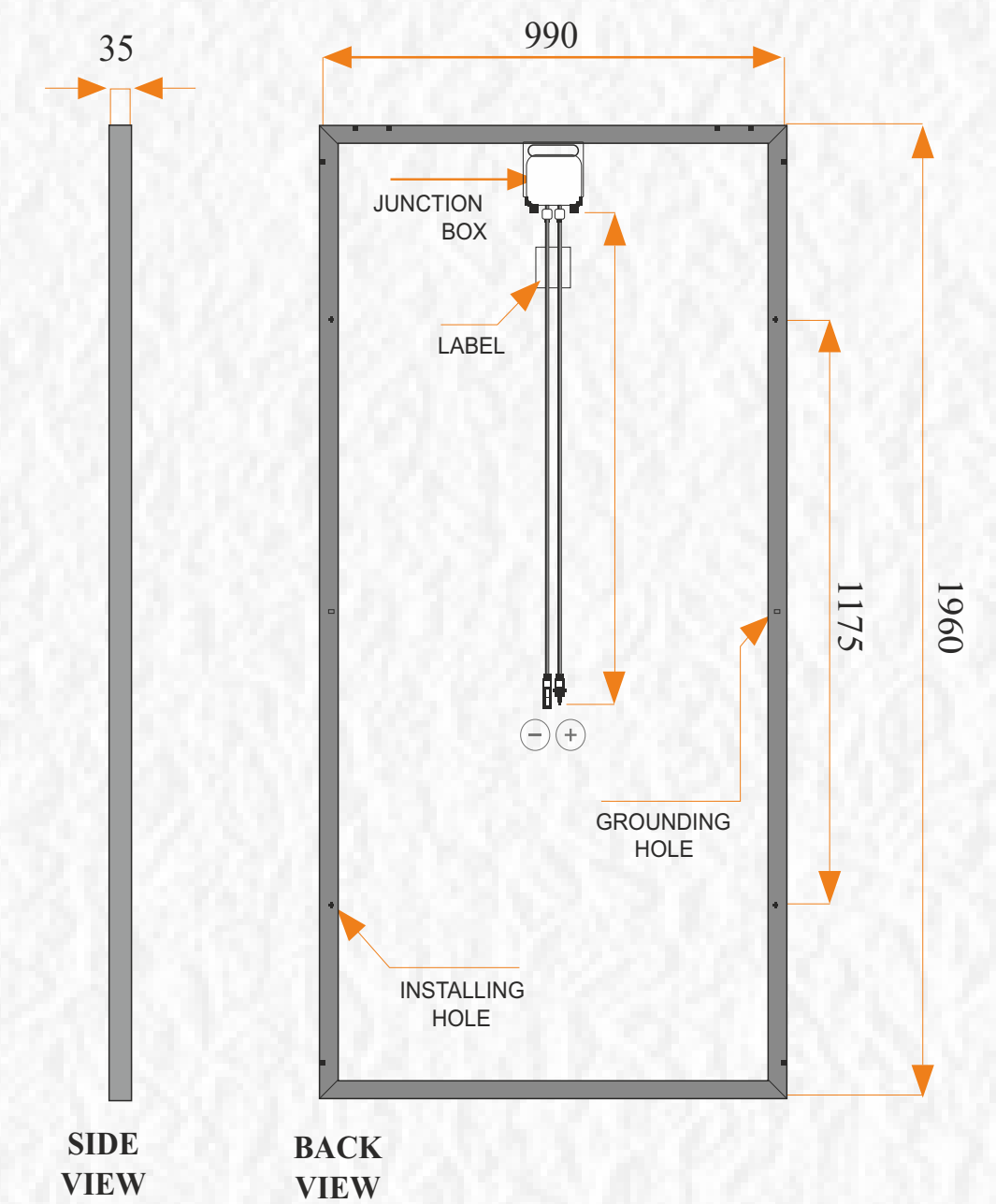
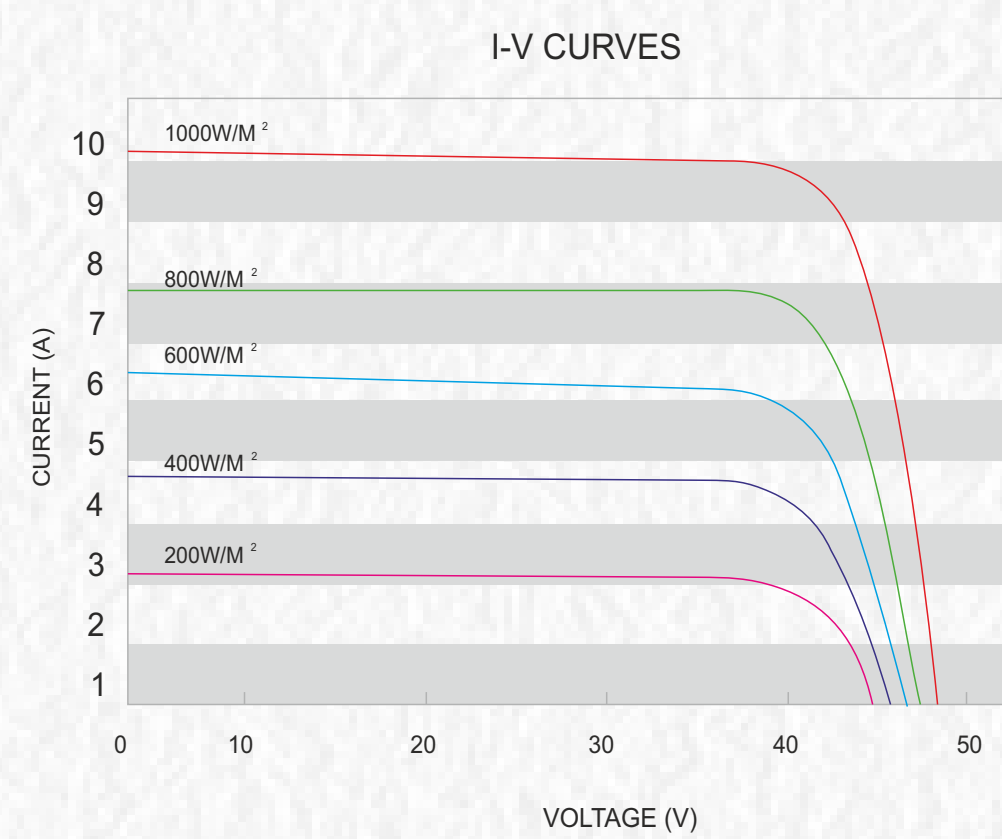




MODULE:
370-400W(72 CELLS)
310-320W(60 CELLS)

MECHANICAL DATA

- Cell Type : 157mm x 157mm
- Cell Arrangement : 72Cells / 60 Cells in series
- Dimensions : 1960 x 990 x 40/35mm / 1645 x 990 x 35mm
- Weight : 22.00kg / 18.00 kg
- Front Cover : 3.2 mm tempered glass
- Frame Material : Anodized Aluminium Alloy
- J-Box : IP68, 3 diodes
- Cable : 4mm²



ELECTRICAL SPECIFICATION

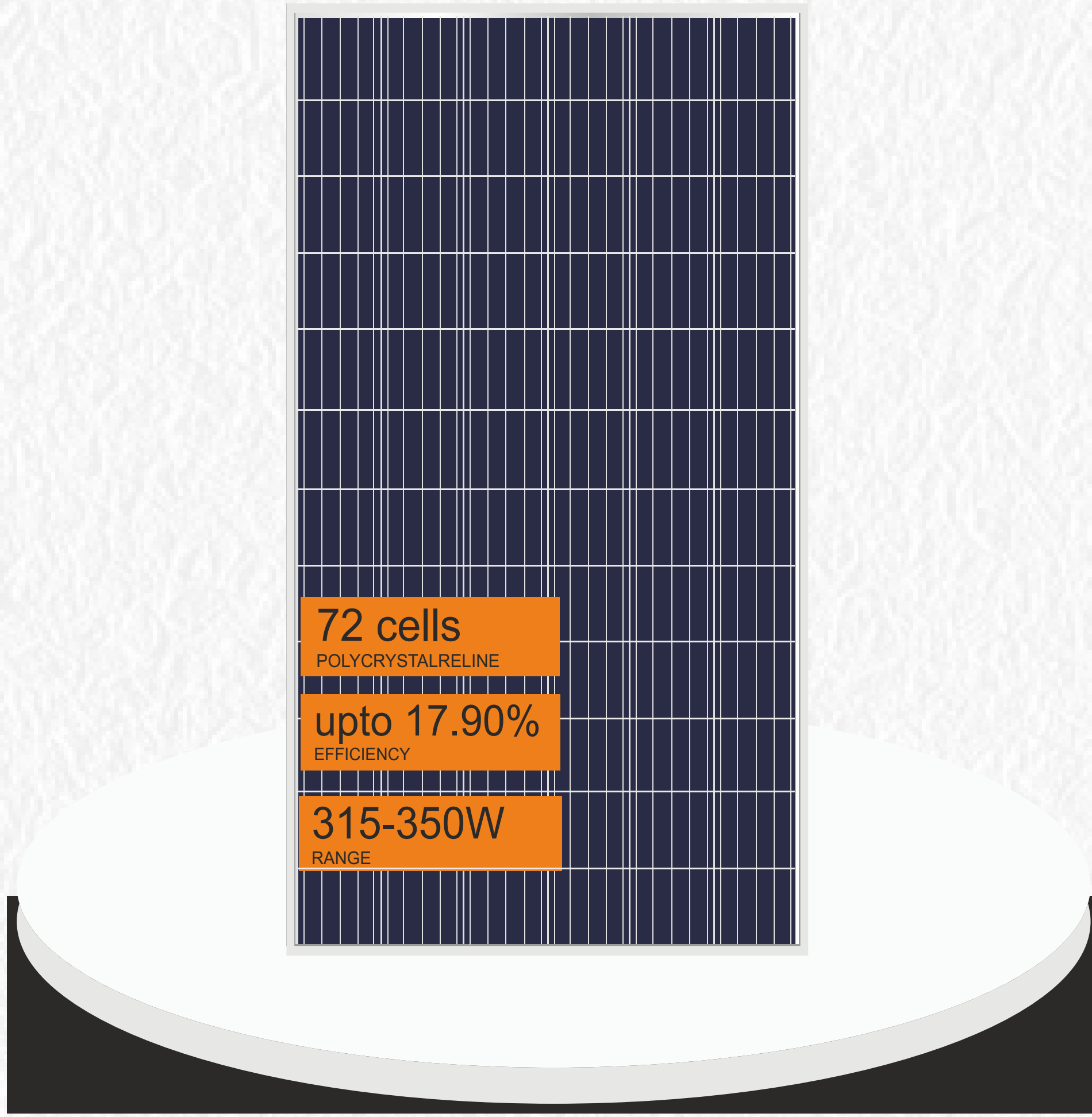
Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m², Cells Temperature 25°C)

Model Type	9ES-310	9ES-320	9ES-370	9ES-380	9ES-390	9ES-400
Nominal Max. Power (Pmax)	310W	320W	370W	380W	390W	400W
Optimum Operating Voltage (Vmp)	33.05V	33.80V	40.90V	41.50V	41.95V	42.01V
Optimum Operating Current (Imp)	9.30A	9.46A	9.10A	9.20A	9.61A	9.72A
Open Circuit Voltage (Voc)	40.56V	41.13V	48.20V	48.25V	49.28V	49.35V
Short Circuit Current (Isc)	9.85A	9.96A	9.70A	9.83A	10.16A	10.30A
Module Efficiency (%)	19.00%	19.59%	19.02%	19.50%	20.10%	20.50%
Power Tolerance	0 to +6W					
Maximum System Voltage	DC 1000V / 1500V					
Operating temperature	-40°C - +85°C					
Maximum Series Fuse Rating	20A					
Number of Bypass Diode	3					



QUALITY DESIGN | GREAT DURABILITY | EASY INSTALLATION

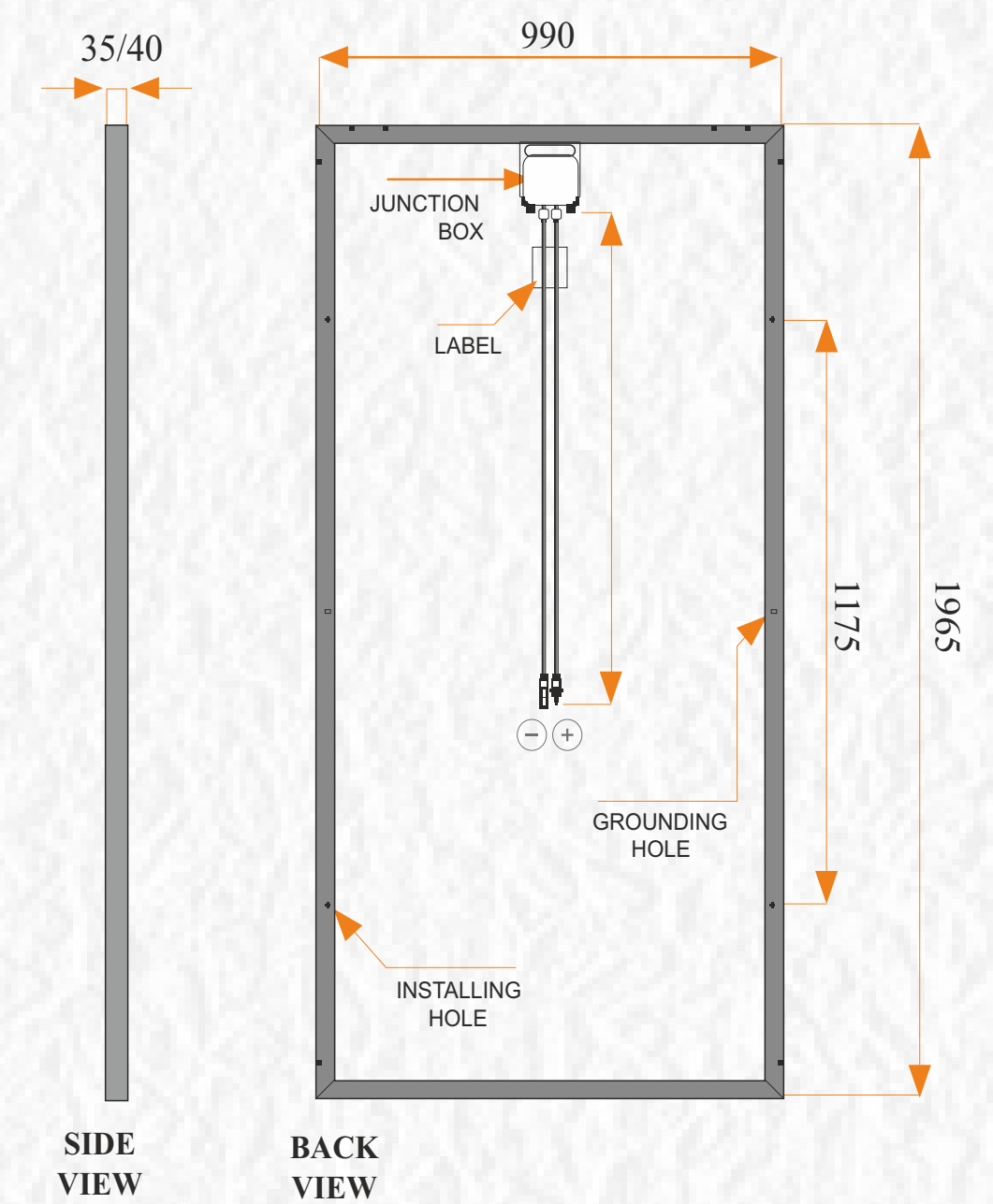
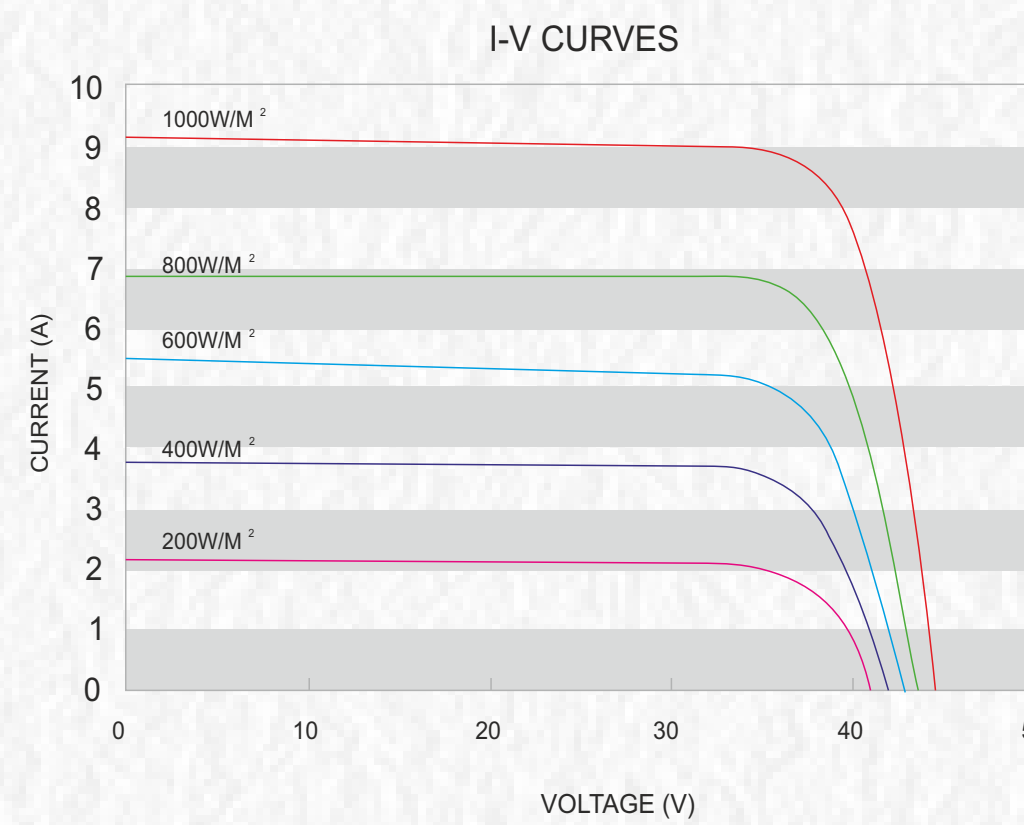
* All data as per standard test condition * Actual product specification make vary * Please check actual test report attached with each panel.



MODULE :
315W-350W (72 CELLS)

MECHANICAL DATA

- Cell Type : 157mm x 157mm
- Cell Arrangement : 72 Cells in series
- Dimensions : 1965 x 990 x 40/35mm
- Weight : 22.00kg
- Front Cover : 3.2 mm tempered glass
- Frame Material : Anodized Aluminium Alloy
- J-Box : IP68, 3 diodes
- Cable : 4mm²



ELECTRICAL SPECIFICATION

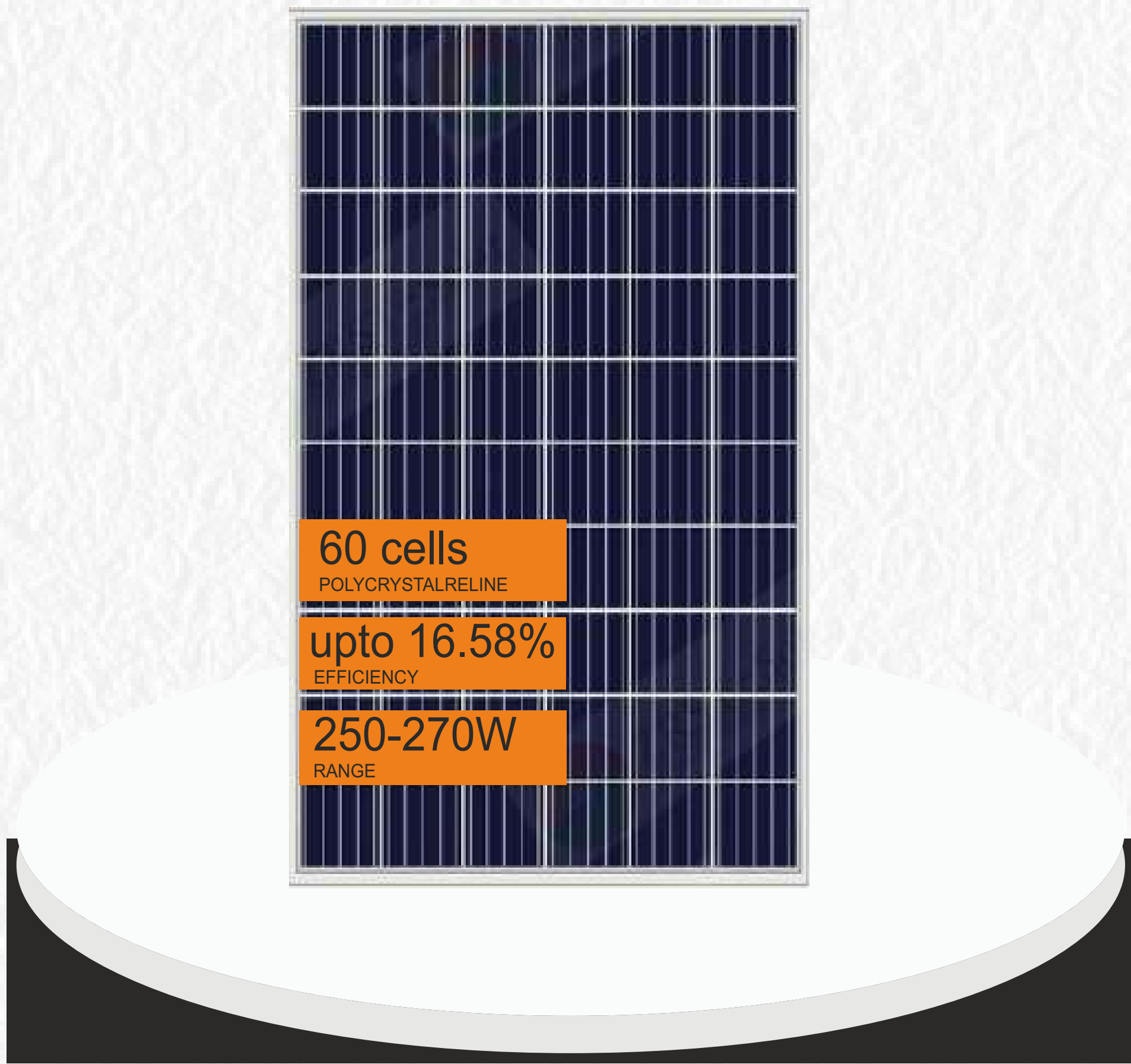
Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m², Cells Temperature 25°C)

Model Type	9ES-315	9ES-320	9ES-325	9ES-330	9ES-335	9ES-340	9ES-350
Nominal Maximum Power (Pmax)	315W	320W	325W	330W	335W	340W	350W
Optimum Operating Voltage (Vmp)	37.48V	37.78V	38.10V	38.42V	37.99V	38.25V	38.76V
Optimum Operating Current (Imp)	8.41A	8.47A	8.53A	8.59A	8.82A	8.91A	9.03A
Open Circuit Voltage (Voc)	45.07V	45.29V	45.50V	45.79V	45.80V	45.13V	45.73V
Short Circuit Current (Isc)	8.80A	8.87A	8.94A	9.01A	9.30A	9.38A	9.50A
Module Efficiency (%)	16.11	16.37	16.62	16.88	17.13	17.39	17.90
Power Tolerance	0 to +6W						
Maximum System Voltage	1500V						
Operating temperature	-40°C - +85°C						
Maximum Series Fuse Rating	20A						
Number of Bypass Diode	3						



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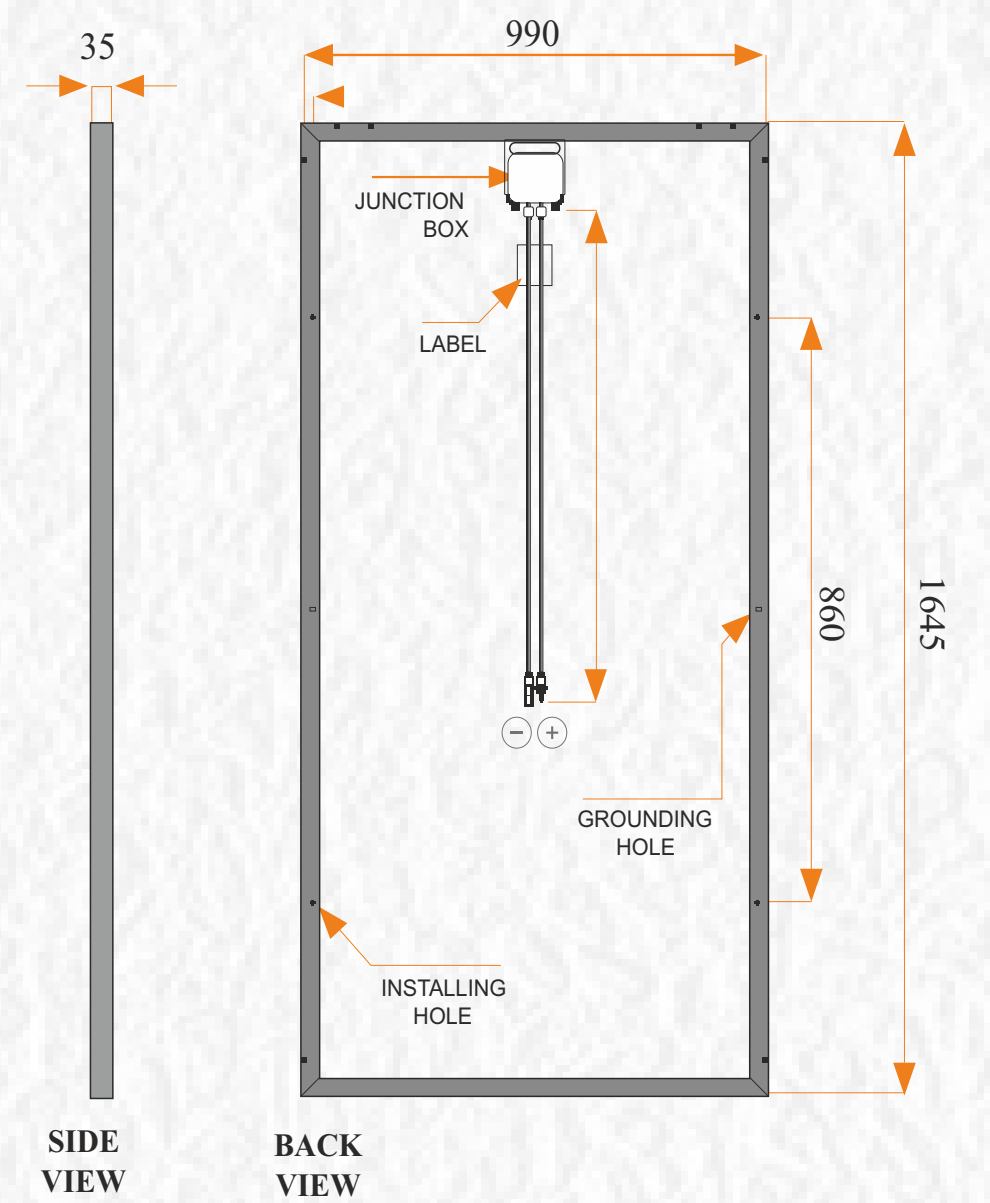
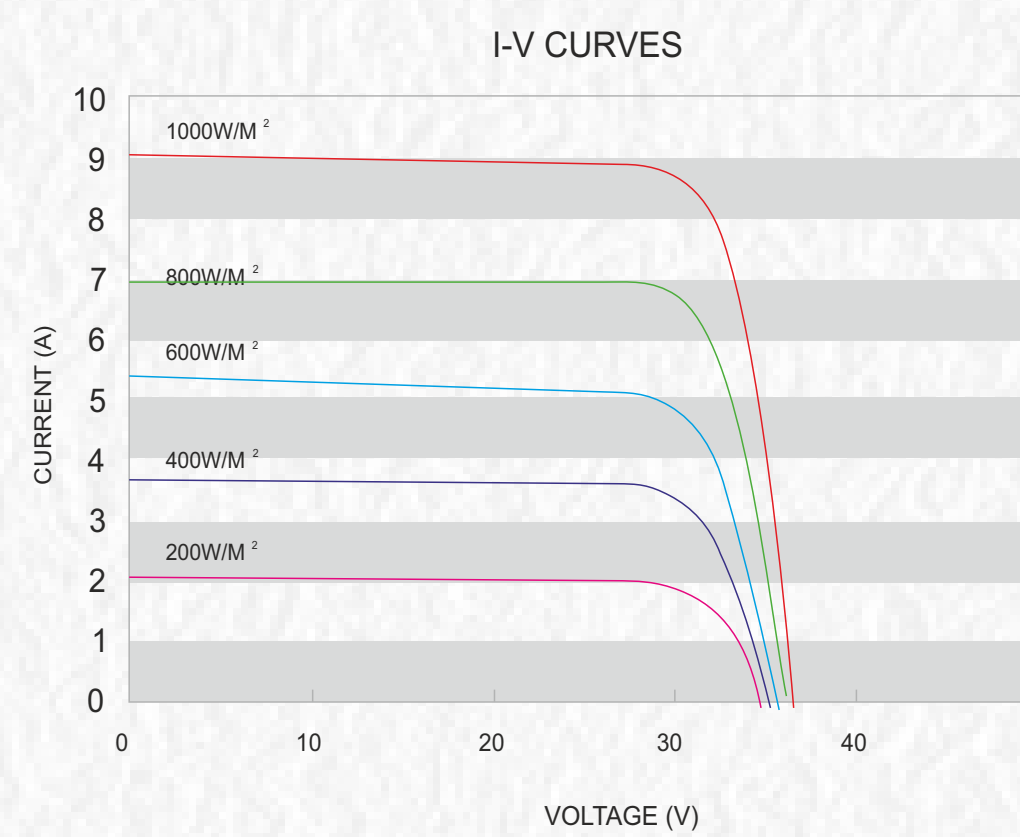
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MODULE :
250W-270W (60 CELLS)

MECHANICAL DATA

- Cell Type : 157mm x 157mm
- Cell Arrangement : 60 Cells in series
- Dimensions : 1645 x 990 x 35mm
- Weight : 18.00kg
- Front Cover : 3.2 mm tempered glass
- Frame Material : Anodized Aluminium Alloy
- J-Box : IP68, 3 diodes
- Cable : 4mm²



ELECTRICAL SPECIFICATION

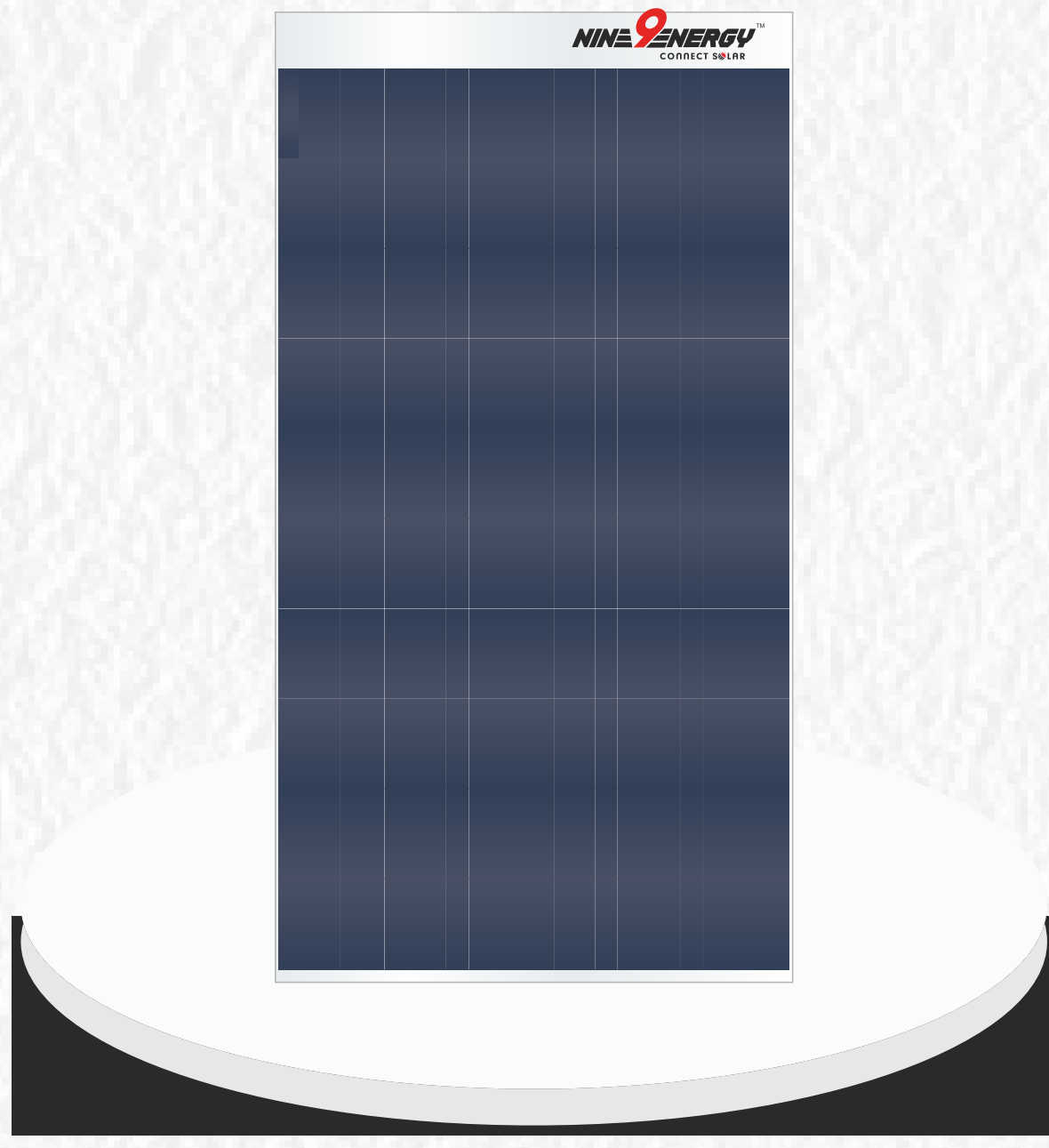
Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m², Cells Temperature 25°C)

Model Type	9ES-250	9ES-255	9ES-260	9ES-265	9ES-270
Nominal Maximum Power (Pmax)	: 250W	255W	260W	265W	270W
Optimum Operating Voltage (Vmp)	: 30.30V	30.72V	31.06V	31.40V	32.46V
Optimum Operating Current (Imp)	: 8.254A	8.30A	8.37A	8.44A	8.48A
Open Circuit Voltage (Voc)	: 37.08V	37.26V	37.50V	37.68V	38.16V
Short Circuit Current (Isc)	: 8.67A	8.78A	8.83A	8.85A	8.96A
Module Efficiency (%)	: 15.35	15.66	15.96	16.27	16.58
Power Tolerance	:		0 to +6W		
Maximum System Voltage	:		DC 1000V		
Operating Temperature	:		-40°C ~ +85°C		
Maximum Series fuse Rating	:		20A		
Numbers of Bypass Diode	:		3		

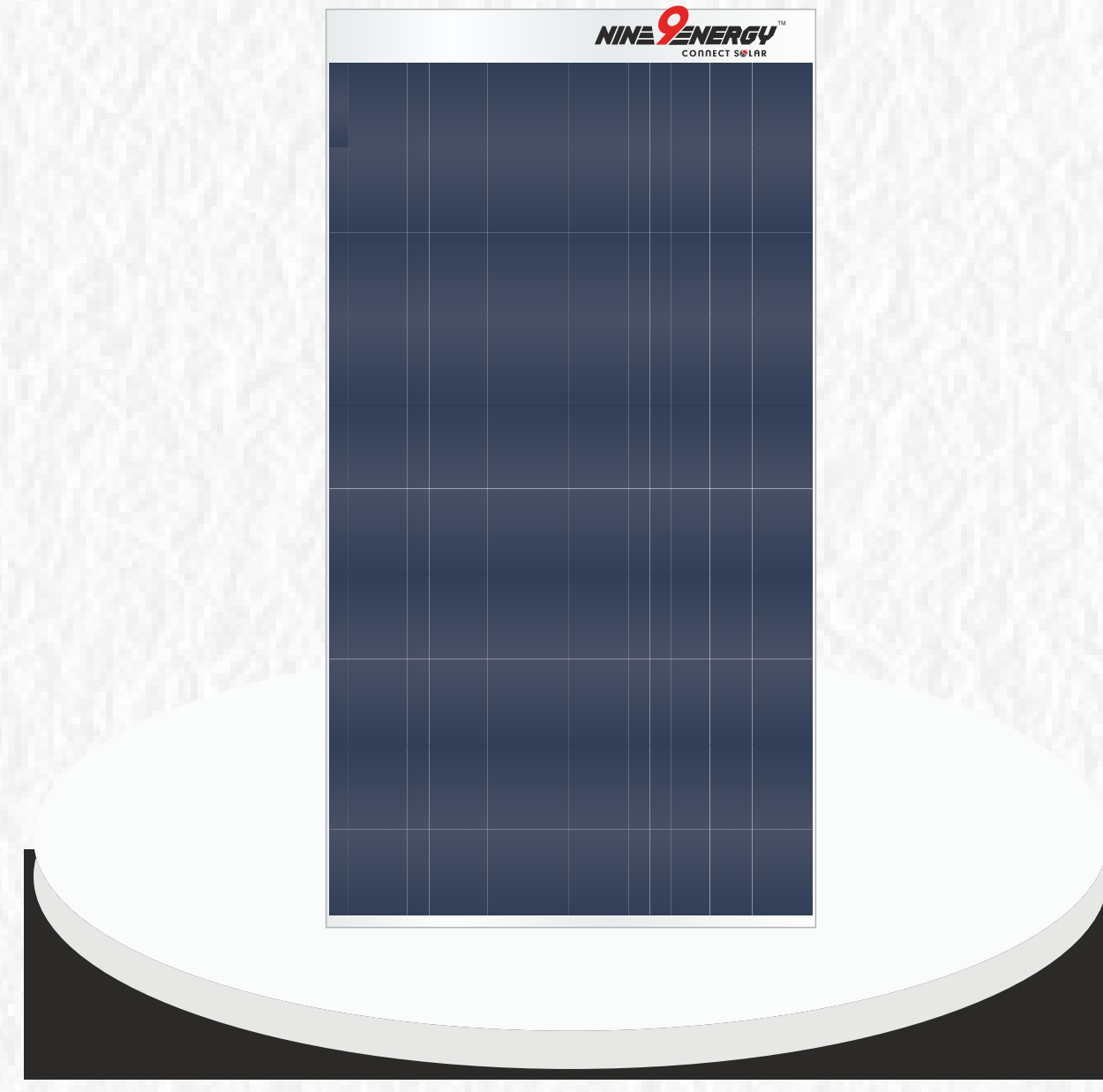


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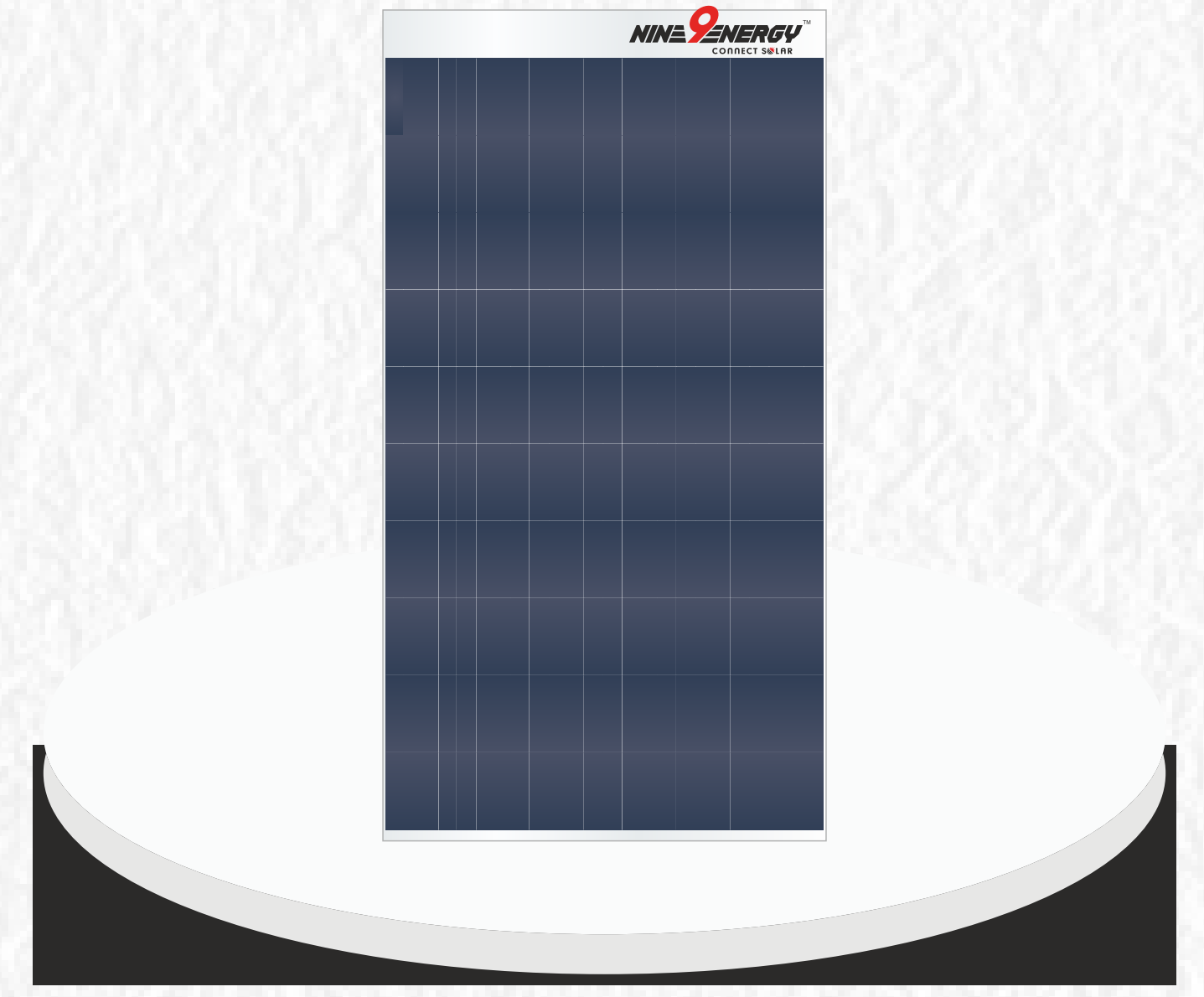
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MODULE :
200W-220W



MODULE :
160W-165W



MODULE :
100W-110W

MECHANICAL DATA	MODULE : 200-220W	MODULE : 160W-165W	MODULE : 100-110W
Cell Type	: 104mm x 156.75mm	: 78.37mm x 156.75mm	: 104/52mm x 156.75mm
Cell Arrangement	: 72 Cells in series	: 72 Cells in series	: 36/72 Cells in series
Dimensions	: 1335x990x35mm	: 1490x670x35mm	: 1010x665x30mm
Weight	: 13.50kg	: 12kg	: 7.8kg
Front Cover	: 3.2 mm tempered glass	: 3.2 mm tempered glass	: 3.2 mm tempered glass
Frame Material	: Anodized Aluminium Alloy	: Anodized Aluminium Alloy	: Anodized Aluminium Alloy
J-Box	: IP68, 3 diodes	: IP67, 2 diodes	: IP67, 2 diodes
Cable	: 4mm ²	: 4mm ²	

ELECTRICAL SPECIFICATION

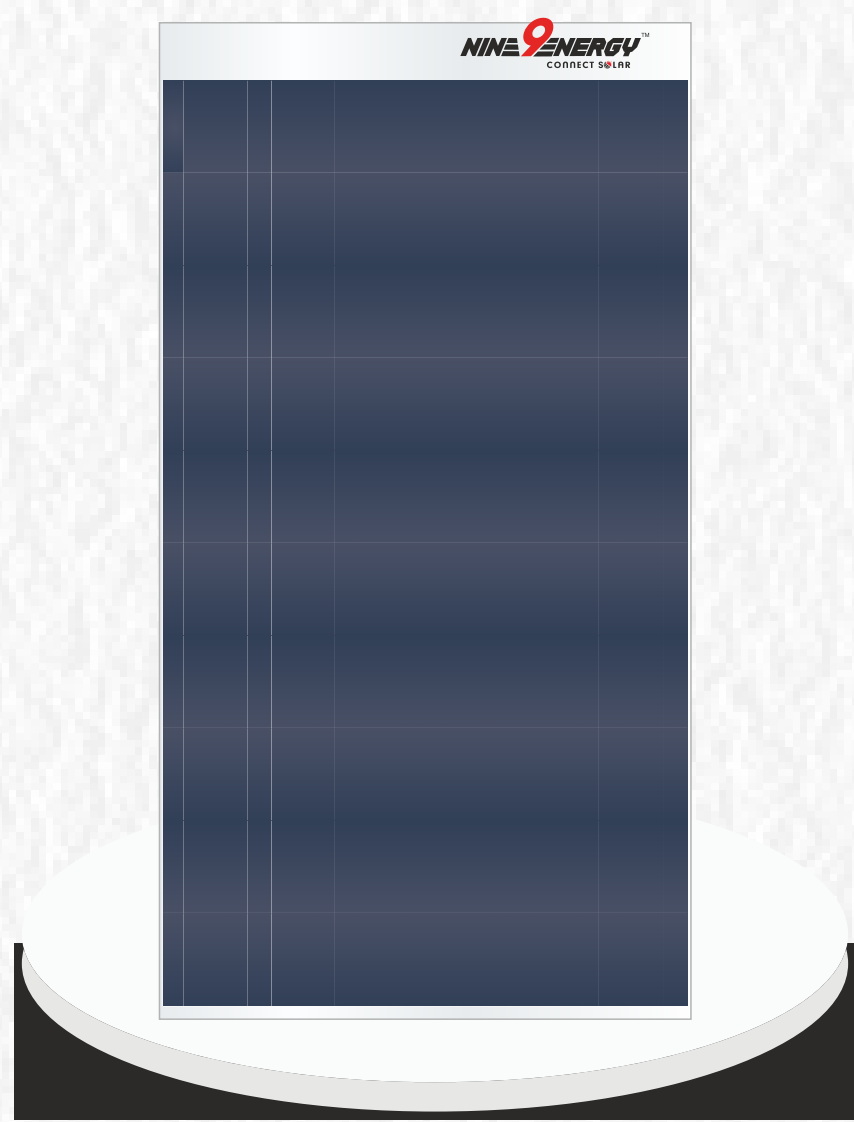
Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m2, Cells Temperature 25°C)

Model Type	9ES-220	9ES-200	9ES-165	9ES-110	9ES-100
Nominal Maximum Power (Pmax)	: 220W	: 200W	: 165W	: 110W	: 100W
Optimum Operating Voltage (Vmp)	: 19.35V	: 19.04V	: 19.35	: 19.00	: 18.95V
Optimum Operating Current (Imp)	: 11.37A	: 10.09A	: 8.46A	: 5.69A	: 5.29A
Open Circuit Voltage (Voc)	: 23.69V	: 23.39V	: 23.01V	: 22.97V	: 22.68V
Short Circuit Current (Isc)	: 11.97A	: 11.06A	: 8.84A	: 5.99A	: 5.53A
Module Efficiency (%)	: 16.52	: 15.02	: 15.83	: 15.91	: 14.46
Power Tolerance	: 0 to +6W				
Maximum System Voltage	: DC 1000V				
Operating Temperature	: -40°C ~ +85°C				
Maximum Series fuse Rating	: 20A	: 20A	: 10A	: 10A	: 10A
Numbers of Bypass Diode	: 3	: 3	: 2	: 2	: 2

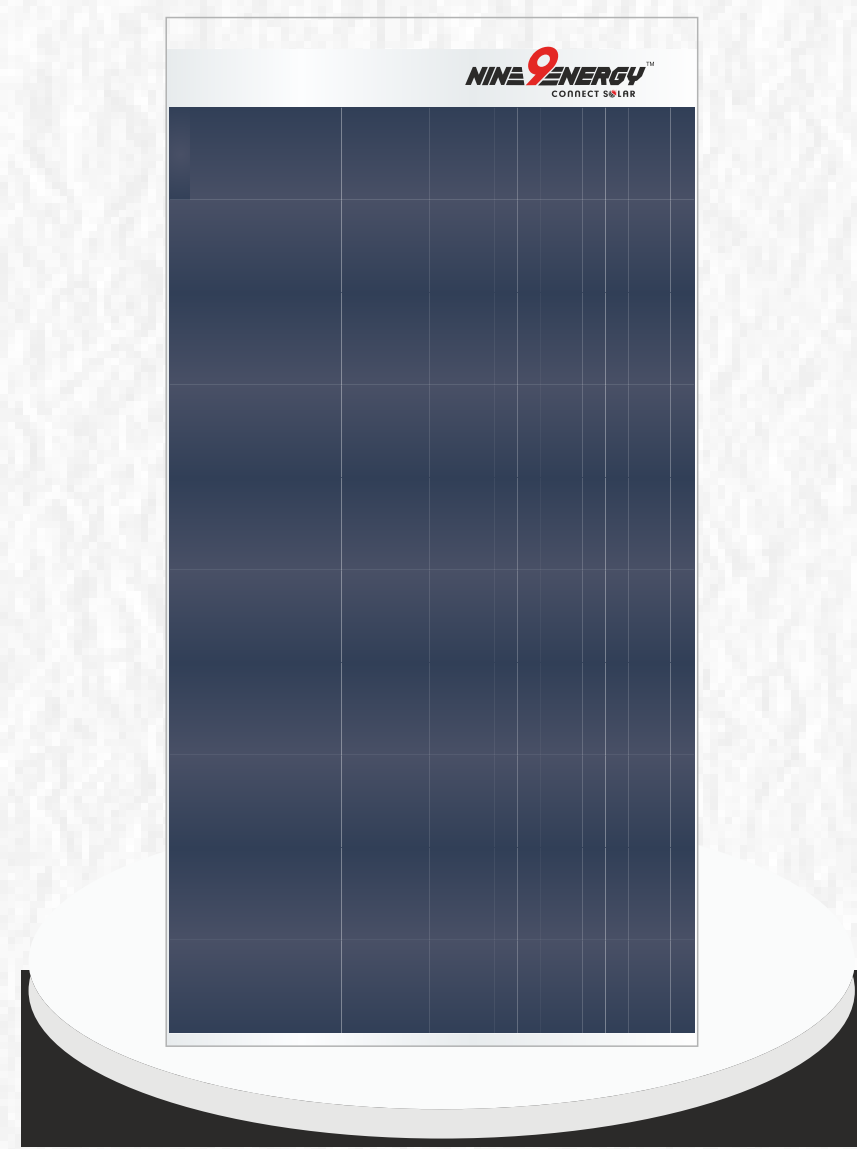


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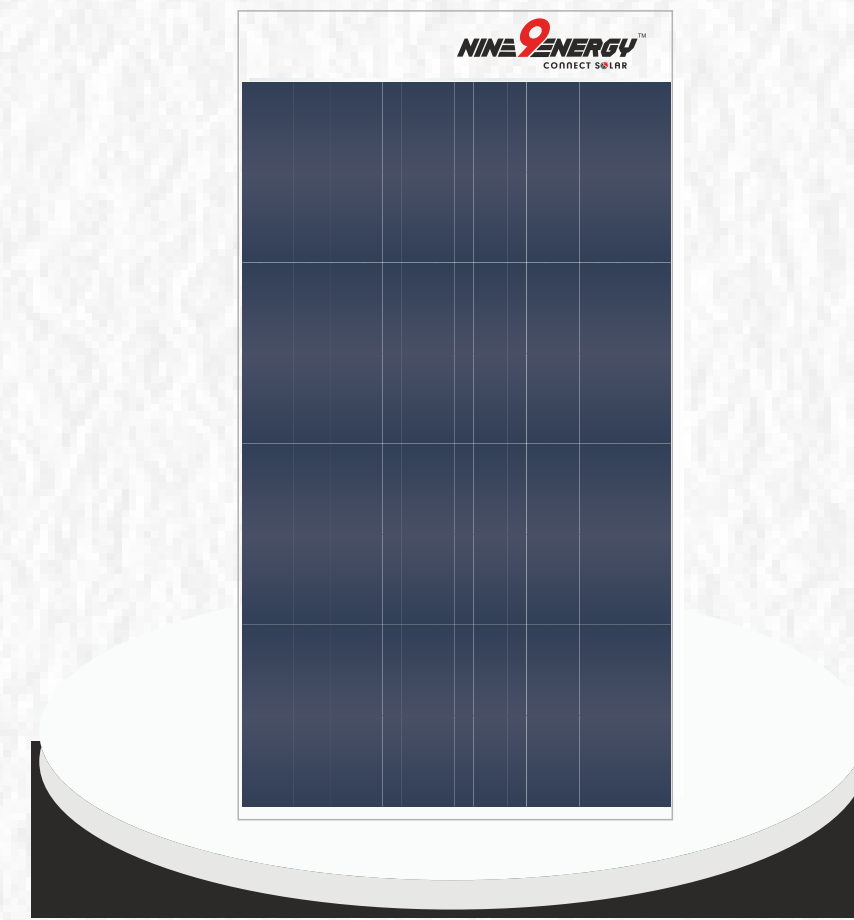
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MODULE : 160W



MODULE : 150W



MODULE : 140W



MODULE : 120W

MECHANICAL DATA	MODULE : 160W	MODULE : 150W	MODULE : 140W	MODULE : 120W
Cell Type	: 156.75mm x 156.75mm	156.75mm x 156.75mm	136mm x 156.75mm	120mm x 156.75mm
Cell Arrangement	: 36 Cells in series	36 Cells in series	36 Cells in series	36 Cells in series
Dimensions	: 1490x670x35mm	1490x670x35mm	1305x 665 x 35mm	1165x 665 x 35mm
Weight	: 12kg	12kg	10.5kg	9.5kg
Front Cover	: 3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass	3.2 mm tempered glass
Frame Material	: Anodized Aluminium Alloy	Anodized Aluminium Alloy	Anodized Aluminium Alloy	Anodized Aluminium Alloy
J-Box	: IP67, 2 diodes	IP67, 2 diodes	IP67, 2 diodes	IP67, 2 diodes

ELECTRICAL SPECIFICATION

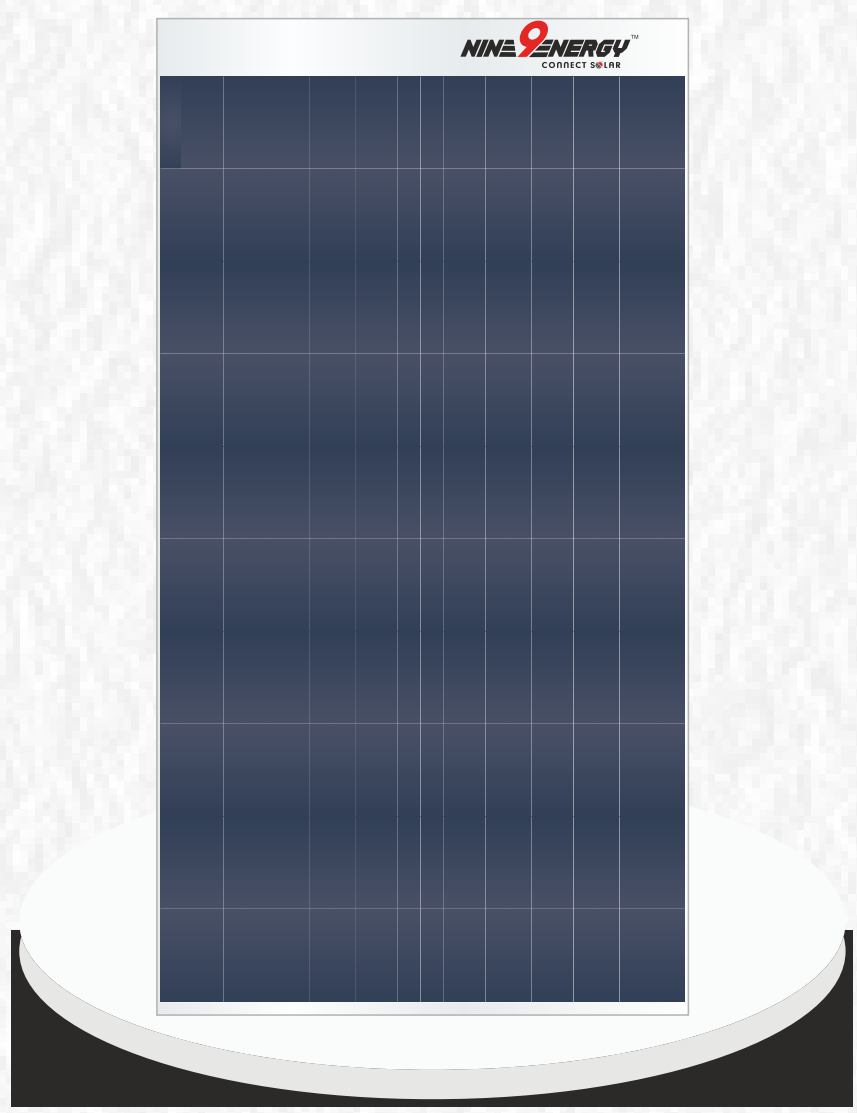
Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m2, Cells Temperature 25°C)

Model Type	9ES-160	9ES-150	9ES-140	9ES-120
	160W	150W	140W	120W
Optimum Operating Voltage (Vmp)	: 18.89V	18.18V	19.03V	18.71V
Optimum Operating Current (Imp)	: 8.47A	8.25A	7.36A	6.42A
Open Circuit Voltage (Voc)	: 22.64V	22.25V	22.72V	22.54
Short Circuit Current (Isc)	: 8.87A	8.67A	7.72A	6.7A
Module Efficiency (%)	: 16.45	15.14	16.07	15.49
Power Tolerance	:	0 to + 6W		
Maximum System Voltage	:	DC 1000V		
Operating Temperature	:	-40°C ~ +85°C		
Maximum Series fuse Rating	: 10A	10A	10A	10A
Numbers of Bypass Diode	: 2	2	2	2

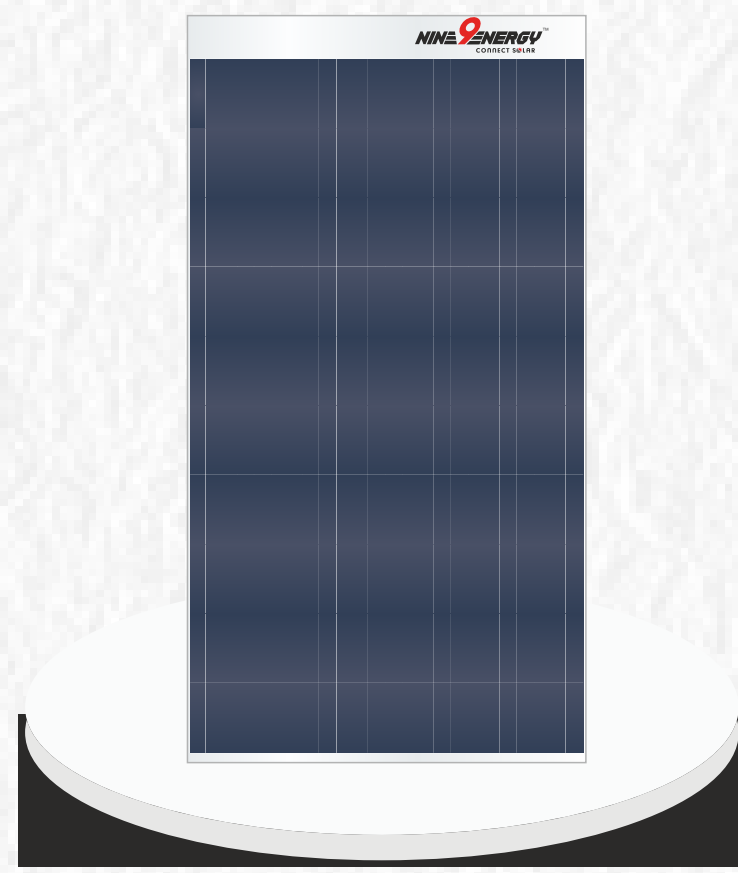


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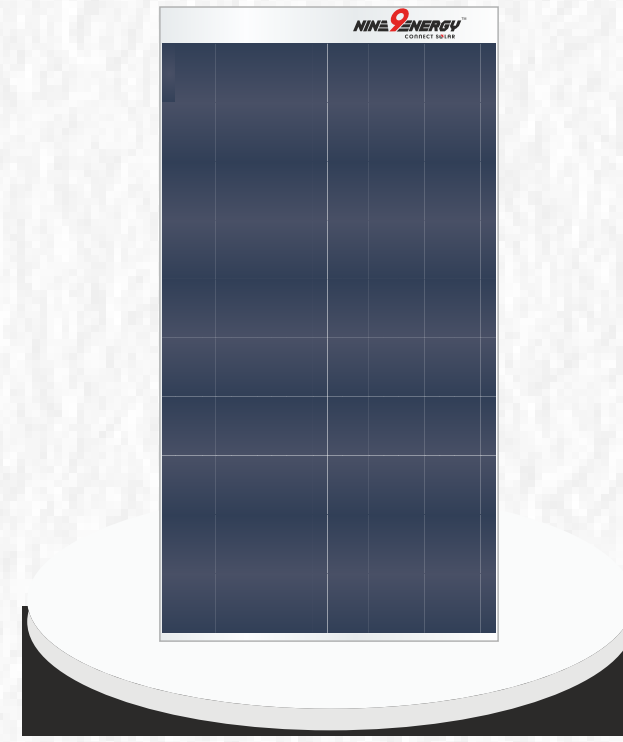
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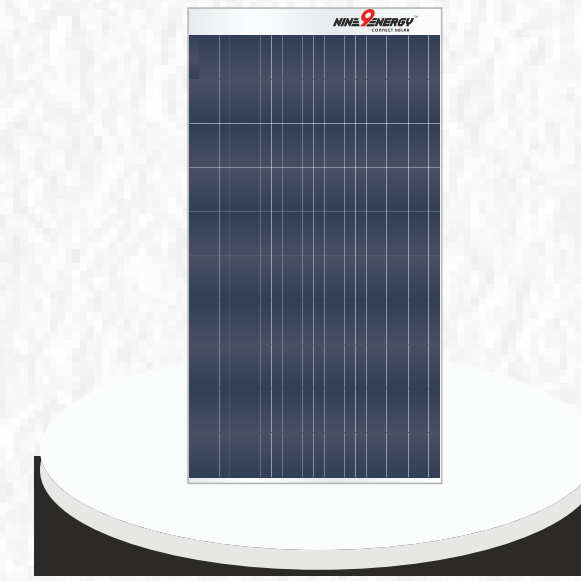
MODULE : 80W



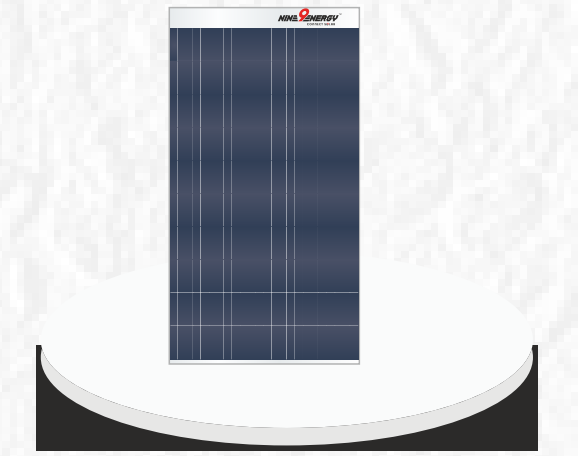
MODULE : 75W



MODULE : 60W



MODULE : 50W



MODULE : 40W

MECHANICAL DATA	MODULE : 80W	MODULE : 75W	MODULE : 60W	MODULE : 50W	MODULE : 40W
Cell Type	: 78.37mm x 156.75mm	78.37mmx156.75mm	62mmx156.75mm	52.25mmx156.75mm	39x156mm.75mm
Cell Arrangement	: 36 Cells in series	36 Cells in series	36 Cells in series	36 Cells in series	36 cells in series
Dimensions	: 780 x 665 x 30mm	780 x 665 x 30	635 x 665 x 30	545 x 665 x 30	425 x 665 x 30
Weight	: 6.2kg	6.2kg	4.8kg	4.6kg	3.8kg
Front Cover	: 3.2 mm tempered glass	3.2mm tempered glass	3.2mm tempered glass	3.2mm tempered glass	3.2mm tempered glass
Frame Material	: Anodized Aluminium Alloy	Anodized Aluminium alloy	Anodized Aluminium alloy	Anodized Aluminium alloy	Anodized Aluminium alloy
J-Box	: IP65, 2 diodes	IP65 , 2 diodes	IP65 , 2 diodes	IP65 , 2 diodes	IP65 , 2 diodes

ELECTRICAL SPECIFICATION

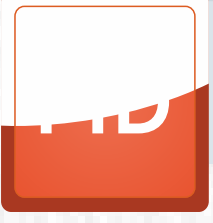
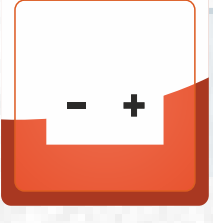
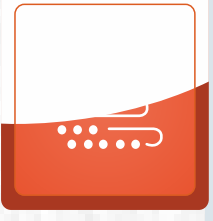
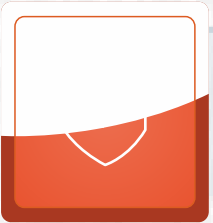
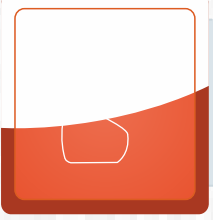
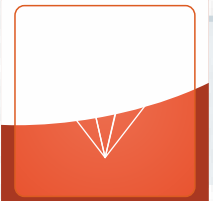
Electrical parameters at standard test conditions (STC:AM=1.5, 1000W/m2, Cells Temperature 25°C)

Model Type	9ES-80	9ES-75	9ES-60	9ES-50	9ES-40
Nominal Maximum Power (Pmax)	: 80W	75W	60W	50W	40W
Optimum Operating Voltage (Vmp)	: 18.91V	18.45V	18.52V	18.43V	19.00V
Optimum Operating Current (Imp)	: 4.23A	4.06A	3.24A	2.71A	2.10A
Open Circuit Voltage (Voc)	: 22.68V	22.25V	22.32V	22.28V	22.68V
Short Circuit Current (Isc)	: 4.42A	4.34A	3.45A	2.88A	2.21A
Module Efficiency (%)	: 15.42	14.26	14.32	13.80	13.83
Power Tolerance	:		0 TO +2%		
Maximum System Voltage	:		DC 600V		
Operating Temperature	:		-40°C - +85°C		
Maximum Series fuse Rating	: 10A	10A	6A	6A	6A
Numbers of Bypass Diode	: 2	2	2	2	1



QUALITY DESIGN | GREAT DURABILITY | EASY INSTALLATION

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-  PID and snail trails free
-  Excellent performance under low irradiance
-  Additional environmental tested for salt mist \ ammonia \ sand, Ensure performance in harsh environment
-  Power tolerance 0~+5w Guaranteed power output
-  Additional yield and easy maintenance with high transparent self-cleaning glass
-  2 times EL testing during manufacturing, defect-free modules

Industry leading module power output warranty.

- International quality, safety and performance certifications
- Manufacturing facility certified to ISO9001 quality management system standards
- Beautiful appearance, good durability & easy installation
- Special design in accordance with requirement of customers

25 Years Performance Warranty

05 years product warranty

10 years workmanship

10 years warranty for 90% minimum power output

25 years warranty for 80% minimum power output

*T&C Apply

