PRODUCT CATALOGUE 2020

Solarever USA

TIER 1 Bloomberg NEW ENERGY FINANCE

ZNSHINESOLAR

www.solareverusa.com

SOLAREVER USA, SOLAR PANELS WITH HIGH QUALITY MADE IN MEXICO

**Variety in cells and solar panels with high photovoltaic technology.
the future to reliable, powerful, and sustainable energy supply
Today and for future generations.**

THINK SOLAR, ACT GREEN.
Solarever USA and ZNShine Solar offers a wide-ranging product portfolio from solar modules and cells to complete systems for private, industrial and commercial rooftop installations, and up to turn-key solar power plants. We develop and test our products at our headquarters for technology and innovation in Mexico until they are ready for serial production. They are then manufactured at our international production locations and marketed through our international distribution network.

AN ALLIANCE OF TECHNOLOGY AND FINANCE
Since 2016, Solarever USA has been part of the ZNShine Solar. Founded in 1986, the Solar Elite Group is one of the eight largest companies in China and Mexico. The group is comprised of more than 25 Countrys and three main business areas of Production and Construction, Finance, Services and Leisure. Through this strong, long-term alliance, we are ideally positioned both financially and technologically for the future.

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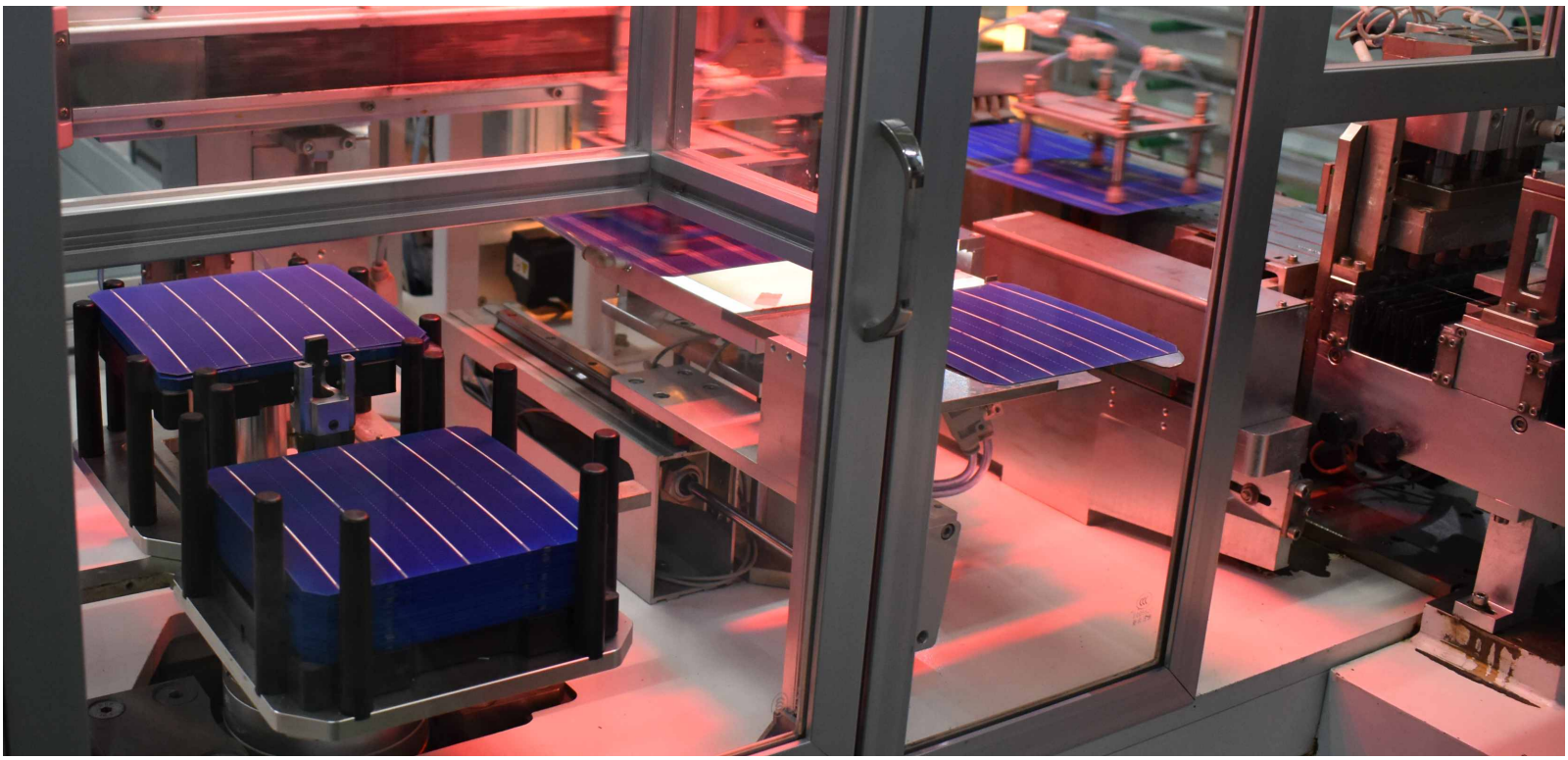


Monocrystalline PV Module

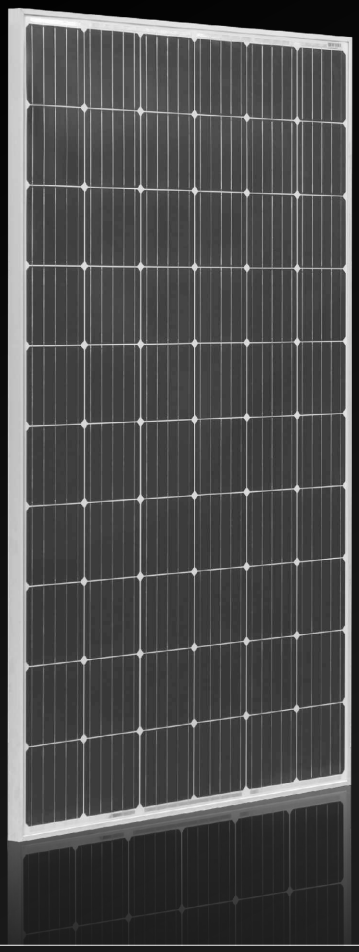
SE-156*156-P-60

Znshinesolar **5BB**

295~305 Watts

Solarever USA | ZNSHINESOLAR

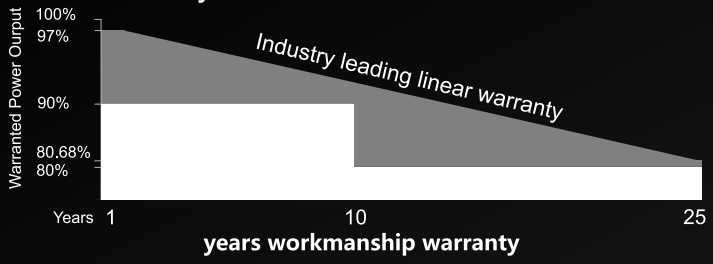
Mono **Poly** **Solutions**



Made with selected materials and components to grant quality, duration, efficiency and through outputs, the SE-156*156-P-60 monocrystalline modules by ZNSHINE SOLAR represent a highly flexible solution for diverse installation types, from industrial rooftop plants to small home PV systems or large ground surfaces. This allows you to produce clean energy whilst reducing your energy bill.

ZNSHINE SOLAR SE-156*156-P-60 monocrystalline solar modules are tested and approved by international acknowledged laboratories, so that we can offer our customers a reliable and price-quality optimized product. The linear warranty on product outputs further ensures increased security and return on investments over time.

25 years output warranty(monocrystalline):3.0% in the first year, thereafter 0.68% per year ending with 80.68% in the 25th year from the Warranty Start Date



5 Busbar Solar Cell

No power loss thanks to improved temperature co-efficient caused by 5 busbar solar cell

High Efficiency

High module efficiency up to 19.48%
Graphene coating can increase about 2W of the module efficiency by rising around 0.5% of the light transmission

Anti PID

Limited power degradation of ZXM6-60 module caused by PID effect is guaranteed under strict testing condition for mass production

Linear Warranty

25-year linear warranty on outputs

Certified to withstand the most challenging environmental conditions

5400 Pa snow load
2400 Pa wind load

Customerization

We can customize the graphene glass modules with self-cleaning function according to customer requirements
Graphene glass modules can increase light transmittance and increase component efficiency

ZNShine PV-Tech Co., LTD, founded in 1988, is a world-leading high-performance PV module manufacturer, PV power station developer, EPC and power station operator. With its state-of-the-art production lines, the company boasts module output of 3.2GW. Bloomberg has listed ZNShine as a global Tier 1 PV manufacturer and Top 10 reliable PV supplier.

Solarever de América S.A de C.V, founded in 2002, is currently the number one PV module manufacturer in Mexico.

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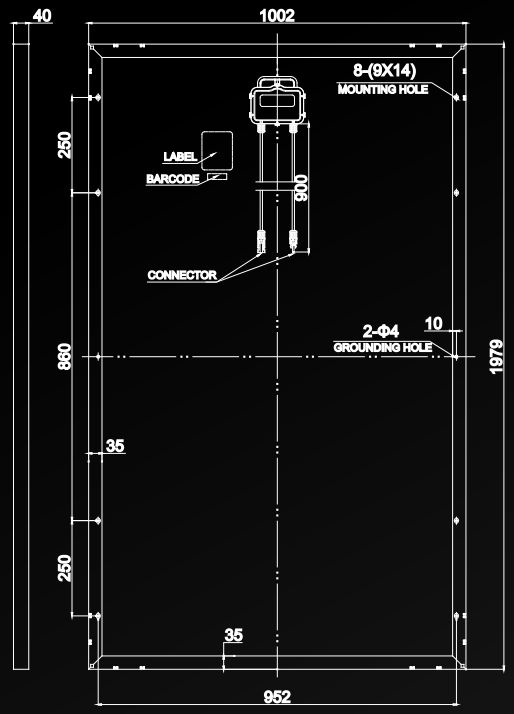
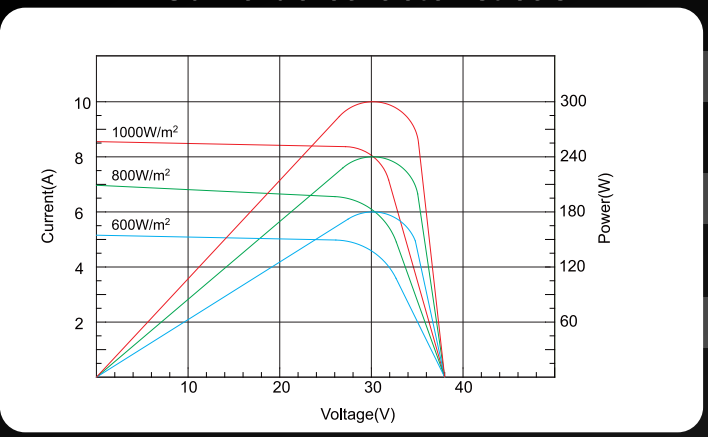
ZXM6-TLD60-370~390/M

Mechanical Characteristics

Tipo de celda	Monocristalino(PERC) 156x156mm
Número y arreglo de celdas	6x10(60pzs)
Dimensiones	1640x990x40mm
Peso	18.0Kg
Front Glass	3.2mm Tempered Glass
Frame	Anodized Aluminium Alloy(black)
Encapsulation	Glass/EVA/Cells/EVA/TPT(black)
Relative Humidity	0 to 100%
Resistance	227g steel ball fall down from 1m height and 60m/s wind
Snow load parameters	5400Pa



Curva de características I-V



Temperature Coefficients

Nominal Operating Cell Temperature(NOCT)	45℃±2℃
Temperature Coefficient of Pmax	-(0.370±0.05)%/K
Temperature Coefficient of Voc	-(0.280±0.02)%/K
Temperature Coefficient of Isc	+(0.048±0.005)%/K
Maximum SeriesFuse/current rating	20A

Electrical Characteristics

Characteristics	295W	300W	305W
Open-Circuit Voltage(Voc/V)	39.7	40.1	40.3
Short-Circuit Current(Isc/A)	9.61	9.72	9.83
Optimum Circuit Voltage(Vmp/V)	32.4	32.6	32.8
Optimum Circuit Current(Imp/A)	9.10	9.21	9.3
Maximum Power at STC(Pmax/W)	295	300	305
Module Efficiency	18.02%	18.33%	18.63%
Operating Temperature		-40℃ to +85℃	
Maximum System Voltage		1000V DC	
Output Power Tolerance		0~+5W	
STC: Irradiance 1000W/m², Module temperature 25℃,AM=1.5			

* power testing tolerance: ±3%

Monocrystalline PV Module

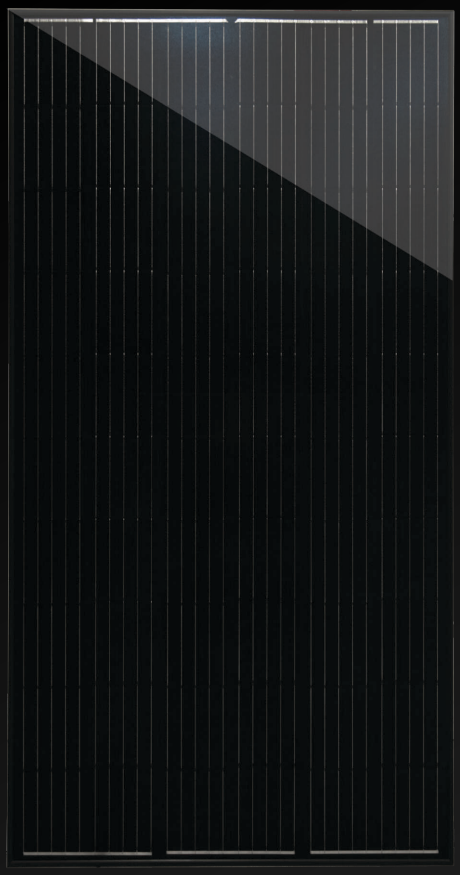
ZXM6-TLD60 **Series**

Znshinesolar **5BB**

Solarever USA | ZNSHINESOLAR

Mono **Poly** **Solutions**

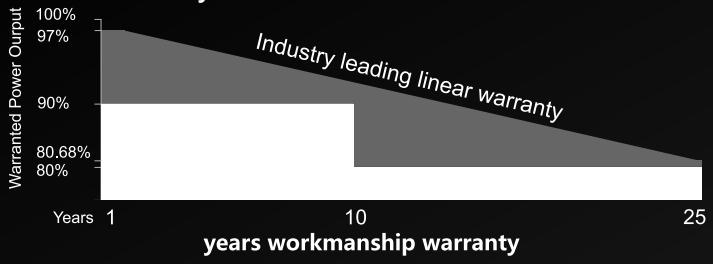
305W | 310W | 315W | 320W | 325W



Made with selected materials and components to grant quality, duration, efficiency and through outputs, the ZXM6-TLD60 monocrystalline modules by ZNSHINE SOLAR represent a highly flexible solution for diverse installation types, from industrial rooftop plants to small home PV systems or large ground surfaces. This allows you to produce clean energy whilst reducing your energy bill.

ZNSHINE SOLAR' S ZXM6-TLD60 monocrystalline solar modules are tested and approved by international acknowledged laboratories, so that we can offer our customers a reliable and price-quality optimized product. The linear warranty on product outputs further ensures increased security and return on investments over time.

25 years output warranty(monocrystalline):3.0% in the first year, thereafter 0.68% per year ending with 80.68% in the 25th year from the Warranty Start Date



5 Busbar Solar Cell

No power loss thanks to improved temperature co-efficient caused by 5 busbar solar cell

High Efficiency

High module efficiency up to 19.48%
Graphene coating can increase about 2W of the module efficiency by rising around 0.5% of the light transmission

Anti PID

Limited power degradation of ZXM6-60 module caused by PID effect is guaranteed under strict testing condition for mass production

Linear Warranty

25-year linear warranty on outputs

Certified to withstand the most challenging environmental conditions

5400 Pa snow load
2400 Pa wind load

Customerization

We can customize the graphene glass modules with self-cleaning function according to customer requirements
Graphene glass modules can increase light transmittance and increase component efficiency

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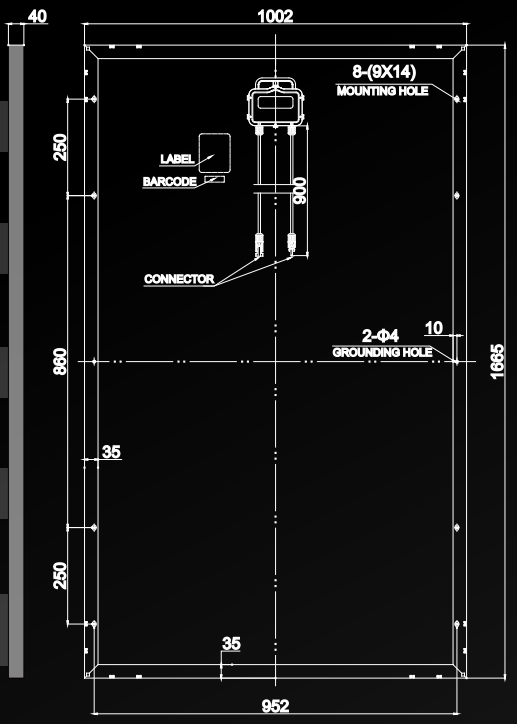
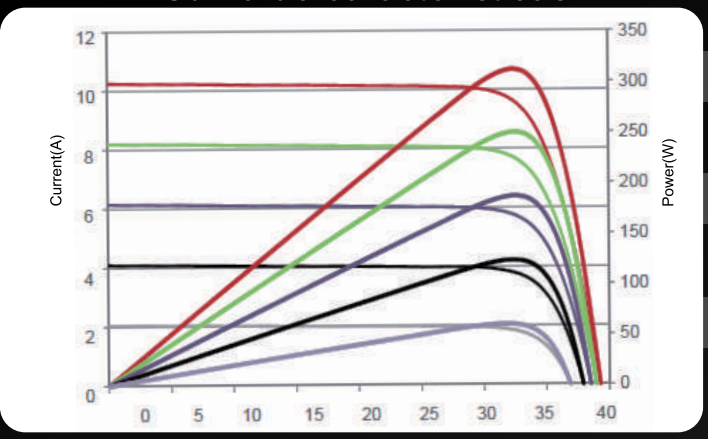
ZXM6-TLD60-305~325/M

Mechanical Characteristics

Type of cell	Mono-Crystalline(PERC) 158.75x158.75mm
CellsArray and Number	6x10(60pzs)
Dimensions	1665x1002x40mm
Weight	18.0Kg
Front Glass	3.2mm Tempered Glass
Frame	Anodized Aluminium Alloy(black)
Encapsulation	Glass/EVA/Cells/EVA/TPT(black)
Relative Humidity	0 to 100%
Resistance	227g steel ball fall down from 1m height and 60m/s wind
Snow load parameters	5400Pa



Curva de características I-V



Temperature Coefficients

Nominal Operating Cell Temperature(NOCT)	45℃±2℃
Temperature Coefficient of Pmax	-(0.370±0.05)%/K
Temperature Coefficient of Voc	-(0.280±0.02)%/K
Temperature Coefficient of Isc	+(0.048±0.005)%/K
Maximum SeriesFuse/current rating	20A

Electrical Characteristics

Characteristics	305W	310W	315W	320W	325W
Open-Circuit Voltage(Voc/V)	40.3	40.5	40.7	40.9	41.1
Short-Circuit Current(Isc/A)	9.83	9.92	10.04	10.15	10.20
Optimum Circuit Voltage(Vmp/V)	32.8	33.0	33.2	33.4	33.6
Optimum Circuit Current(Imp/A)	9.30	9.40	9.49	9.59	9.68
Maximum Power at STC(Pmax/W)	305	310	315	320	325
Module Efficiency	18.28%	18.58%	18.88%	19.18%	19.48%
Operating Temperature	-40℃ to +85℃				
Maximum System Voltage	1000V DC				
Output Power Tolerance	0~+5W				
STC: Irradiance 1000W/m², Module temperature 25℃,AM=1.5					

* power testing tolerance: ±3%

Monocrystalline PV Module

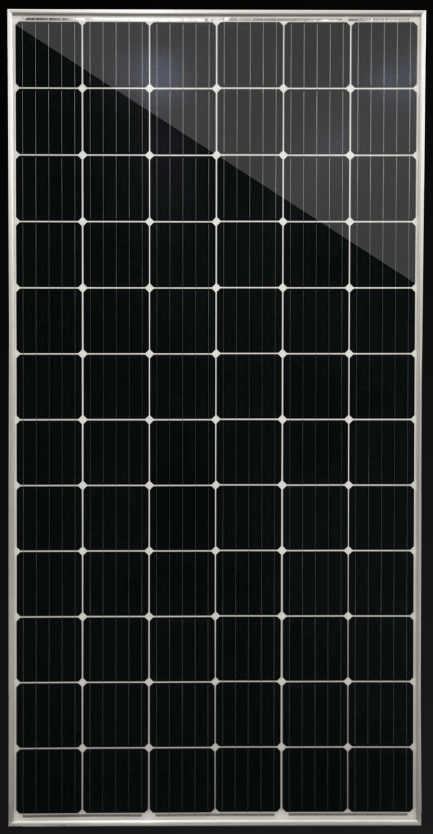
ZXM6-TLD72 **Series**

Znshinesolar **5BB**

Solarever USA | ZNSHINESOLAR

Mono **Poly** **Solutions**

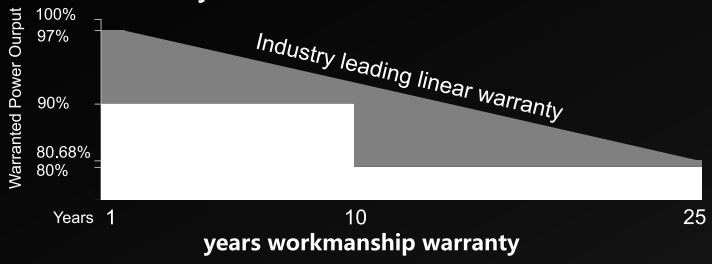
370W | 375W | 380W | 385W | 390W



Made with selected materials and components to grant quality, duration, efficiency and through outputs, the ZXM6-TLD72 monocrystalline modules by ZNSHINE SOLAR represent a highly flexible solution for diverse installation types, from industrial rooftop plants to small home PV systems or large ground surfaces. This allows you to produce clean energy whilst reducing your energy bill.

ZNSHINE SOLAR' S ZXM6-TLD72 monocrystalline solar modules are tested and approved by international acknowledged laboratories, so that we can offer our customers a reliable and price-quality optimized product. The linear warranty on product outputs further ensures increased security and return on investments over time.

25 years output warranty(monocrystalline):3.0% in the first year, thereafter 0.68% per year ending with 80.68% in the 25th year from the Warranty Start Date



5 Busbar Solar Cell

No power loss thanks to improved temperature co-efficient caused by 5 busbar solar cell

High Efficiency

High module efficiency up to 19.48%
Graphene coating can increase about 2W of the module efficiency by rising around 0.5% of the light transmission

Anti PID

Limited power degradation of ZXM6-60 module caused by PID effect is guaranteed under strict testing condition for mass production

Linear Warranty

25-year linear warranty on outputs

Certified to withstand the most challenging environmental conditions

5400 Pa snow load
2400 Pa wind load

Customerization

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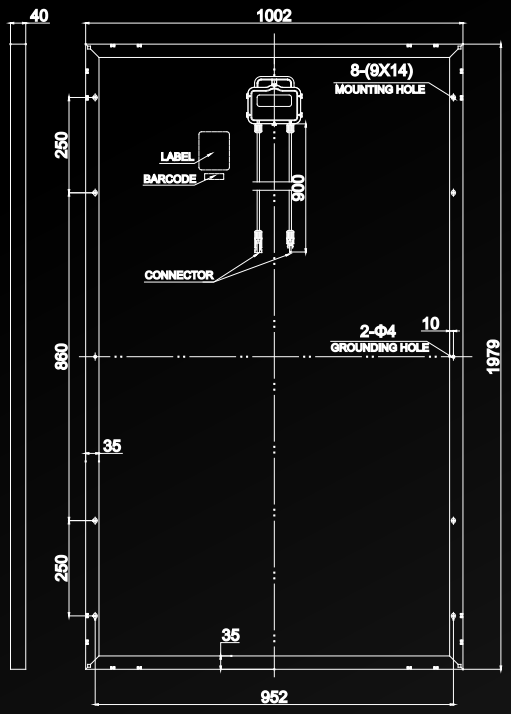
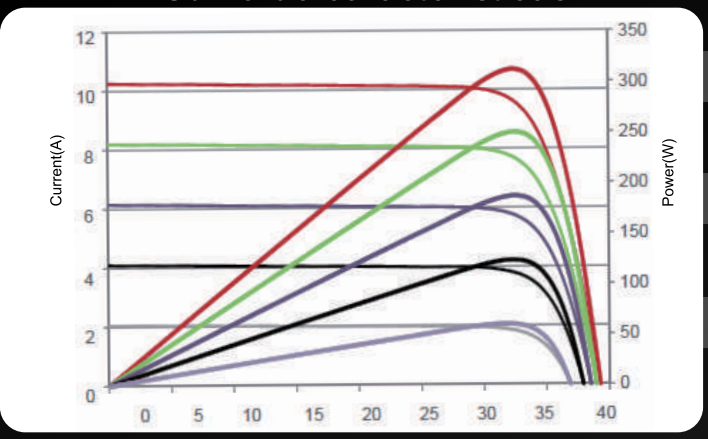
ZXM6-TLD60-370~390/M

Mechanical Characteristics

Type of cell	Mono-Crystalline(PERC) 158.75x158.75mm
CellsArray and Number	6x12(72pcs)
Dimensions	1979x1002x40mm
Weight	22.5Kg
Front Glass	3.2mm Tempered Glass
Frame	Anodized Aluminium Alloy(black)
Encapsulation	Glass/EVA/Cells/EVA/TPT(black)
Relative Humidity	0 to 100%
Resistance	227g steel ball fall down from 1m height and 60m/s wind
Snow load parameters	5400Pa



Curva de características I-V



Temperature Coefficients

Nominal Operating Cell Temperature(NOCT)	45℃±2℃
Temperature Coefficient of Pmax	-(0.370±0.05)%/K
Temperature Coefficient of Voc	-(0.280±0.02)%/K
Temperature Coefficient of Isc	+(0.048±0.005)%/K
Maximum SeriesFuse/current rating	20A

Electrical Characteristics

Characteristics	370W	375W	380W	385W	390W
Open-Circuit Voltage(Voc/V)	48.5	48.7	48.9	49.1	49.3
Short-Circuit Current(Isc/A)	9.61	9.68	9.75	9.92	10.12
Optimum Circuit Voltage(Vmp/V)	39.9	40.2	40.5	40.8	41.1
Optimum Circuit Current(Imp/A)	9.28	9.33	9.39	9.44	9.49
Maximum Power at STC(Pmax/W)	370	375	380	385	390
Module Efficiency	18.66%	18.91%	19.16%	19.42%	19.67%
Operating Temperature	-40℃ to +85℃				
Maximum System Voltage	1000V DC				
Output Power Tolerance	0~+5W				
STC: Irradiance 1000W/m², Module temperature 25℃,AM=1.5					

* power testing tolerance: ±3%

Monocrystalline PV Module
SE-158*158-M-72
380~400 Watts
Znshinesolar 5BB

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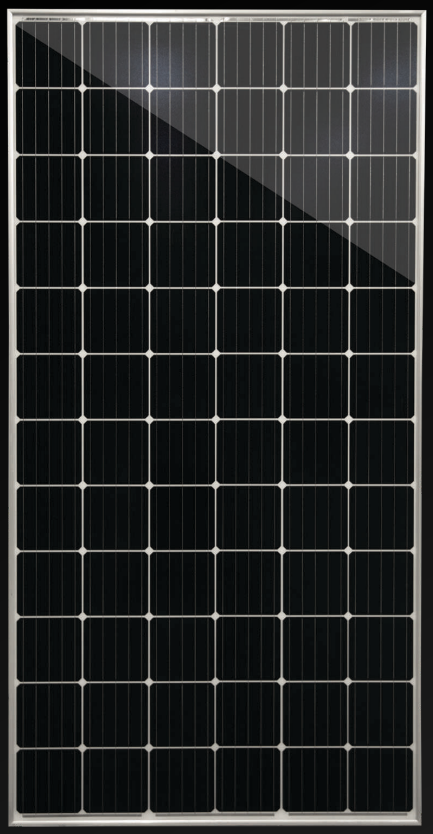
Mono Poly Solutions



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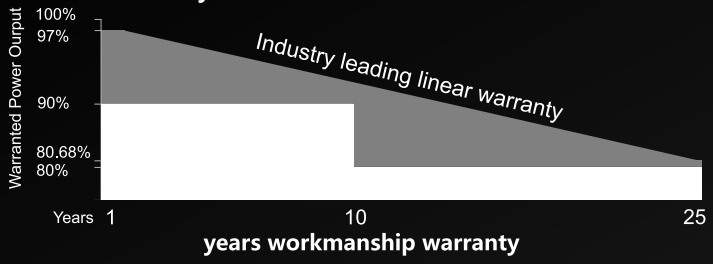

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Linear Warranty

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2400 Pa wind load

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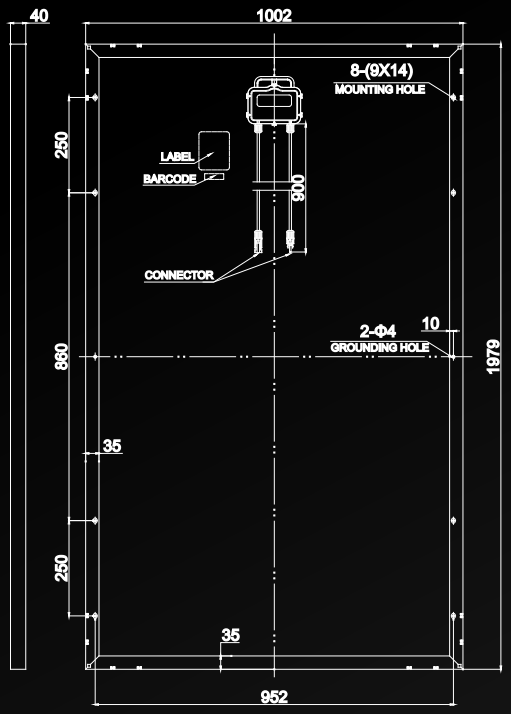
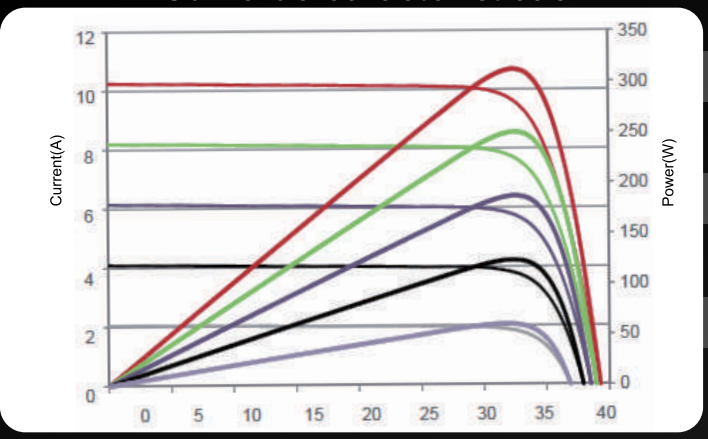
SE-158*158-M-72

Mechanical Characteristics

Type of cell	Mono-Crystalline(PERC) 158.75x158.75mm
CellsArray and Number	6x12(72pcs)
Dimensions	1979x1002x40mm
Weight	22.5Kg
Front Glass	3.2mm Tempered Glass
Frame	Anodized Aluminium Alloy(black)
Encapsulation	Glass/EVA/Cells/EVA/TPT(black)
Relative Humidity	0 to 100%
Resistance	227g steel ball fall down from 1m height and 60m/s wind
Snow load parameters	5400Pa



Curva de características I-V



Temperature Coefficients

Nominal Operating Cell Temperature(NOCT)	45℃±2℃
Temperature Coefficient of Pmax	-(0.370±0.05)%/K
Temperature Coefficient of Voc	-(0.280±0.02)%/K
Temperature Coefficient of Isc	+(0.048±0.005)%/K
Maximum SeriesFuse/current rating	20A

Electrical Characteristics

Characteristics	380W*	385W	390W	395W	400W
Open-Circuit Voltage(Voc/V)	48.9	49.1	49.3	49.5	49.8
Short-Circuit Current(Isc/A)	9.75	9.92	10.12	10.23	10.36
Optimum Circuit Voltage(Vmp/V)	40.5	40.8	41.1	41.4	41.7
Optimum Circuit Current(Imp/A)	9.39	9.44	9.49	9.55	9.60
Maximum Power at STC(Pmax/W)	380	385	390	395	375
Module Efficiency	19.16%	19.42%	19.67%	19.91%	20.16%
Operating Temperature	-40℃ to +85℃				
Maximum System Voltage	1000V DC				
Output Power Tolerance	0~+5W				
STC: Irradiance 1000W/m², Module temperature 25℃,AM=1.5					

* power testing tolerance: ±3%