



# TS-M10/120H

## Monocrystalline Module

### 460W-480W

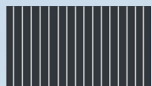


**480W**  
Maximum Power Output

**22.20%**  
Maximum Module Efficiency

**0~+3%**  
Power Output Guarantee

### N-Type



16BB(182mm)

- FIRE CLASS A**  
Maximum fire protection through double glazing according to the highest safety requirements
- REINSURANCE COVERAGE**  
Taoistic is reinsured for 25 years of performance guarantee

<p>High quality silicon wafers guarantee high power module output and excellent cost-effectiveness, making it an ideal choice for large power plants</p>	<p>Selected packaging materials and strict process plans to ensure component PID resistance</p>	<p>Lower oxygen and carbon content leads to lower LID</p>
<p>Adapt to harsh outdoor environments through weather resistance tests such as sand and dust, salt spray, and ammonia gas</p>	<p>The design of series and parallel connection reduces the series resistance <math>R_s</math> of components, reduces internal electrical performance losses, and improves the power generation capacity of the system end</p>	<p>Our company has concluded a reinsurance agreement with Ariel Re - Lloyd's syndicate 1910 Please see <a href="http://verification.arielre-cleanenergy.com">http://verification.arielre-cleanenergy.com</a></p>

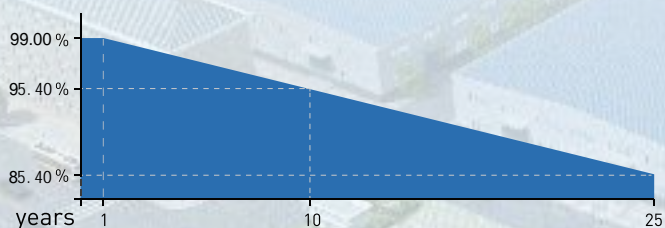
### Deliver Reliable Performance Over Time

- manufacturer of crystalline silicon photovoltaic modules
- Fully automatic facility and world-class technology
- Rigorous quality control to meet the highest standard: ISO9001:2015, ISO14001: 2015 and ISO45001: 2008
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing test: IEC 61701, IEC 62716)
- Long term reliability tests
- 2x100% EL inspection ensuring defect-free modules
- Fire class1 certificate for ITALY

### WARRANTY

- 12 years product warranty
- 25 years performance warranty

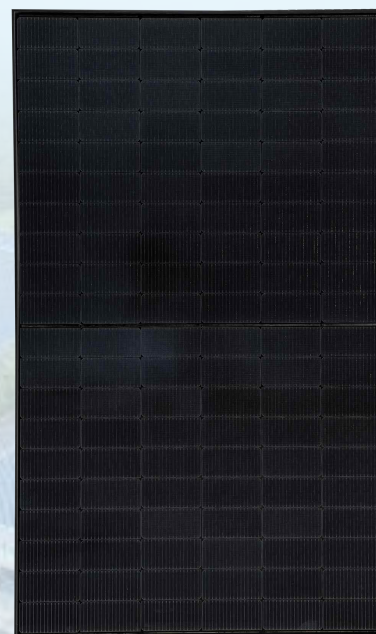
### Linear Performance Warranty



12 Years Product Warranty 25 Years Linear Power Warranty

\* Please refer to standard warranty for details

### Product Certification



# TS-M10/120H

## Monocrystalline Module

### 460W-480W

#### Electrical Specification [ STC\* ]

	Pmax[W]	460	465	470	475	480
Maximum Power	Pmax[W]	460	465	470	475	480
Maximum Power Voltage	Vmp[V]	34.73	34.89	35.05	35.21	35.38
Maximum Power Current	Imp[A]	13.25	13.33	13.41	13.49	13.57
Open Circuit Voltage	Voc[V]	42.06	42.22	42.38	42.54	42.71
Short Circuit Current	Isc[A]	13.99	14.07	14.15	14.23	14.31
Module Efficiency	[%]	21.40	21.60	21.80	22.00	22.20
Power Output Tolerance	[W]		0~+3%			

\* Irradiance 1000W/m<sup>2</sup>, Module Temperature 25°C, Air Mass 1.5

#### Electrical Specification [ NOCT\* ]

	Pmax[W]	346	350	353	357	361
Maximum Power	Pmax[W]	346	350	353	357	361
Maximum Power Voltage	Vmp[V]	32.60	32.77	32.94	33.10	33.27
Maximum Power Current	Imp[A]	10.61	10.67	10.73	10.79	10.85
Open Circuit Voltage	Voc[V]	39.94	40.10	40.25	40.41	40.57
Short Circuit Current	Isc[A]	11.29	11.36	11.42	11.49	11.55

\* Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s

#### Mechanical Data

Number of Cells	120pieces [6 × 20]
Dimensions of Module L*W*H (mm)	1908 × 1134 × 30/35mm
Weight (kg)	Approx 23.7/24.0 kg
Front Side Glass	3.2, Anti-reflection coating glass
Backsheet	Black
Frame	Anodized aluminium
J-Box	Protection level IP68
Cable	4.0mm <sup>2</sup> , 300mm
Number of diodes	3
Wind/Snow Load	2400 Pa/5400 pa*
Connector	MC4 compatible or MC compatible

\* For more details please check the installation manual

#### Temperature Ratings

Nominal Operating Cell Temperature [ NOCT ]	44 ± 2
Temperature Coefficient of Isc	+0.046%/
Temperature Coefficient of Voc	-0.250%/
Temperature Coefficient of P <sub>MAX</sub>	-0.300%/

#### Temperature Ratings

Operational Temperature	-40~+85
Maximum System Voltage	1500V DC-[H]
Max Series Fuse Rating	25A

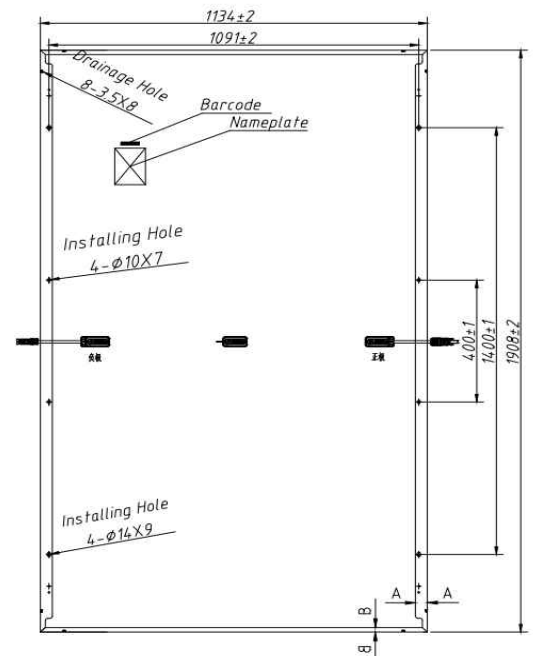
#### Packaging Configuration

Module per box	36/31 pieces
Module per 17.5 flatcar	1188/1116pieces
Module per 40 container	864/744 pieces

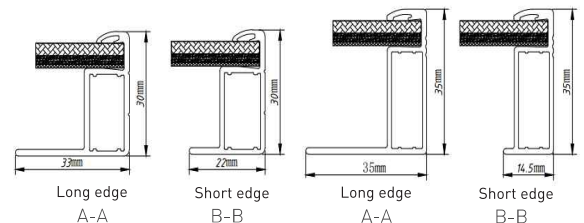
#### Optional

Connector	Original MC
Cable length	1200mm
Frame	Silver
Backsheet	White

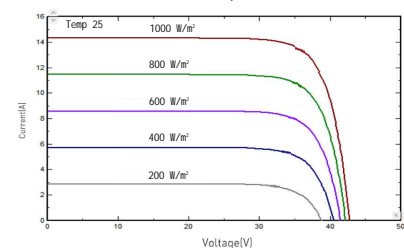
#### Module Dimension



#### Back View



#### I-V Curve at Different Temperature (480W)



#### I-V/P-V Curve at Different Irradiation (480W)

