

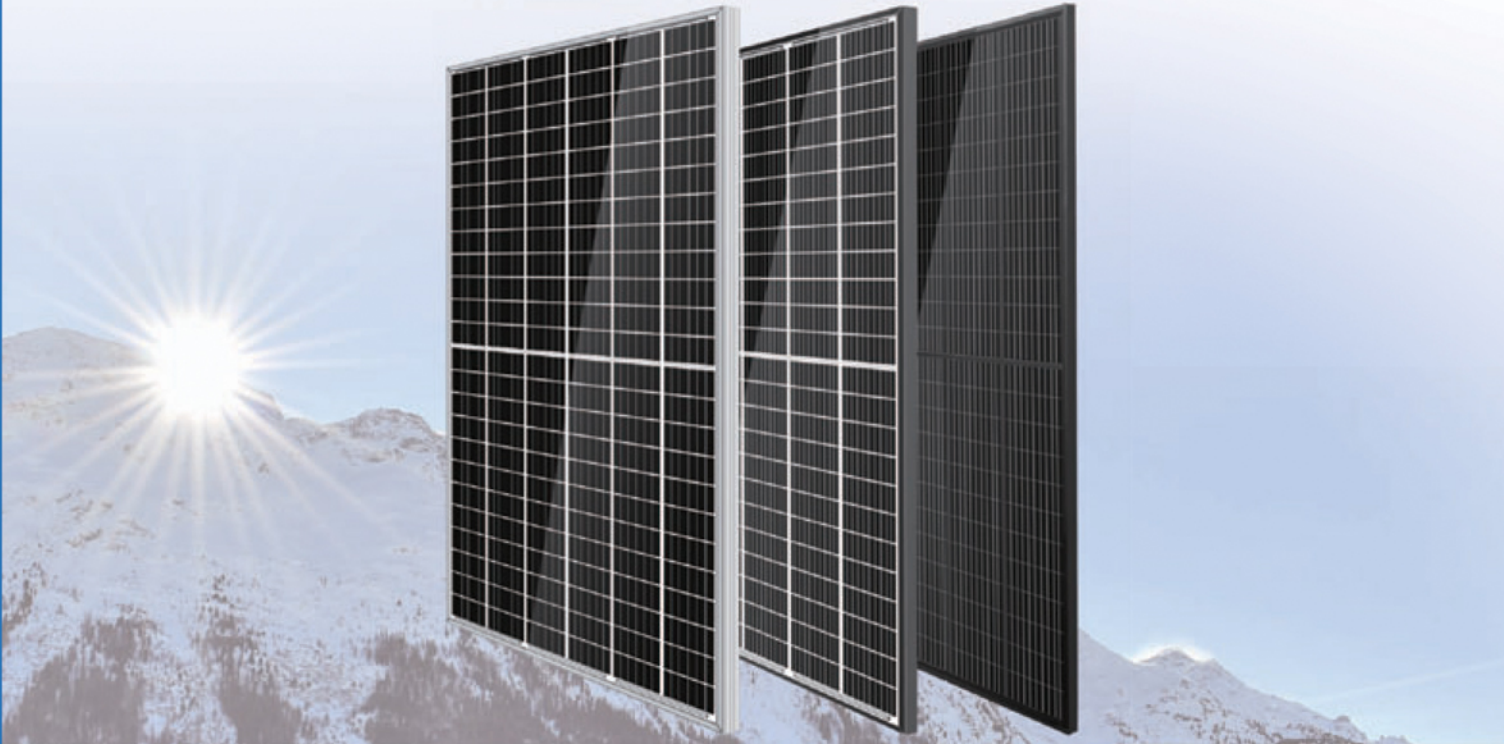
# HoRay Solar

## 禾润电力

### HS158-144M

Rated Power 390-415W

Monocrystalline



#### 5BB/9BB Cell

More uniform current collection capability, reducing the current heat loss of the internal cells.



#### Low Light Features

Higher performance under low light environment.



#### Higher Output Power

The output power of 144 half-cells Monocrystalline modules is up to 415W.



#### PID Protection

Ensure the attenuation probability caused by PID phenomenon is minimized.



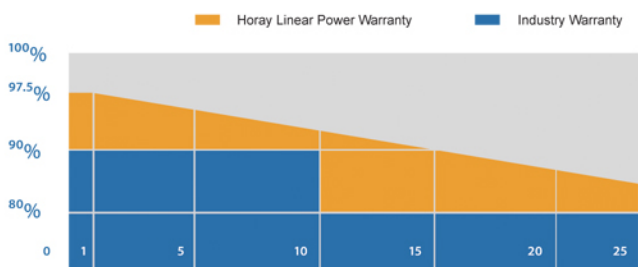
#### Harsh Environmental Adaptability

Strict salt spray and ammonia corrosion test by TUV.



#### Load Capacity

Mechanical load tests including wind load 2400 Pa and snow load 5400 Pa done by TUV.



IEC 61215  
IEC 61730



IEC 6125 IEC 61730 with  
China Standard GB/T9535-1995



TUV Standard



ISO 9001:2015

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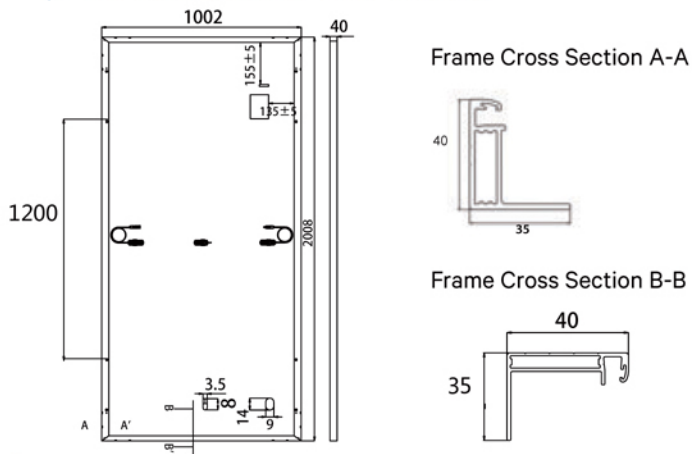
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**MECHANICAL DIAGRAMS**



**SPECIFICATIONS**

Weight	22.5kg
Dimensions	2008mm*1002mm*40mm
Cell Amount	72*2 pcs
Maximum System Voltage	1000/1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm <sup>2</sup> , Landscape: N 1300mm/P 1300mm Portrait: N 150mm/P 300mm
Connector	MC4 compatible
Application Level	Class A

**ELECTRICAL PARAMETERS AT STC**

Power	390W	395W	400W	405W	410W	415W
Open Circuit Voltage	49.30V	49.50V	49.70V	49.80V	50.00V	50.20V
Short Circuit Current	10.12A	10.21A	10.30A	10.21A	10.25A	10.29A
Maximum Power Voltage	41.00V	41.25V	41.50V	42.30V	42.60V	42.90V
Maximum Power Current	9.51A	9.58A	9.64A	9.58A	9.63A	9.67A
Module Efficiency	19.4%	19.7%	19.9%	20.1%	20.4%	20.6%

\* Under Standard Test Conditions (STC) of irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.

**ELECTRICAL PARAMETERS AT NMOT**

Power	294W	298W	302W	305W	309W	312W
Open Circuit Voltage	48.00V	48.20V	48.40V	47.50V	47.70V	47.90V
Short Circuit Current	8.03A	8.10A	8.18A	8.23A	8.27A	8.31A
Maximum Power Voltage	39.95V	39.20V	39.20V	39.90V	40.20V	40.50V
Maximum Power Current	7.55A	7.60A	7.60A	7.65A	7.69A	7.73A
Module Efficiency	14.6%	14.8%	15.0%	15.2%	15.4%	15.5%

\* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m<sup>2</sup>, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

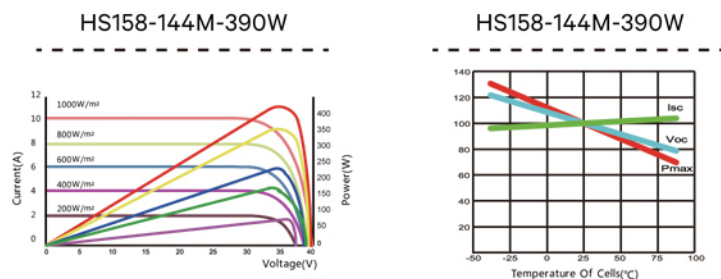
**TEMPERATURE CHARACTERISTICS**

NMOT	41±3°C	Temp Coefficient of I <sub>SC</sub>	+0.05%/°C
Temp Coefficient of V <sub>OC</sub>	-0.28%/°C	Temp Coefficient of P <sub>max</sub>	-0.36%/°C

**PACKING CONFIGURATION**

Modules/Pallet	27 Pieces	Modules/40'Container	638 Pieces
Packing Description	22 Pallets, Total=(27+27+4)x11=638 Pieces		

**CHARACTERISTICS**



**MAXIMUM RATING**

Output Tolerance	0~+5W
Operating Temperature	-40°C~+85°C
Wind Load/Snow Load	2400pa/5400pa
Fuse Current	15A

15 YEARS Quality Warranty 25 YEARS Power Warranty