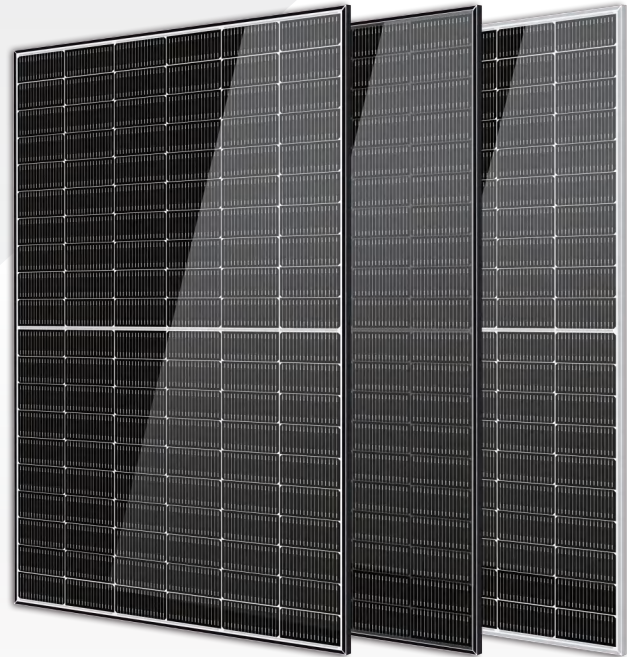


Solar Ocean

470–490 Watt TOPCon MONO-FACIAL MODULE

- IEC61215: 2021
- IEC61730: 2016
- TUV Rheinland Standard
- Lloyd'S Ariel Re
- Solar Performance Insurance
- ISO9001: 2015
- Quality Management System
- ISO14001:
- Environmental Management System
- CE: Europe Standard
- Inmetro Certificate
- Japan JP-AC



KEY FEATURES



SMBB 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 120 half-cells Monocrystalline modules is up to 490W.



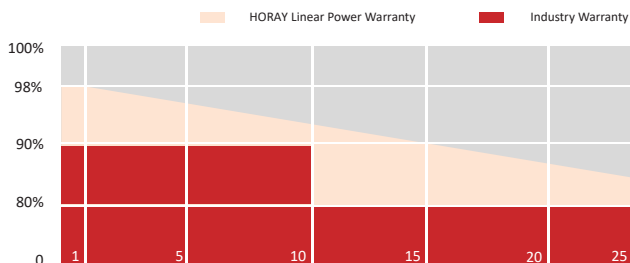
LID Free
N-type solar cell has no LID naturally which can increase power generation.



Harsh Environmental Adaptability
Strict salt spray and ammonia corrosion test by the third party.



Load Capacity
Mechanical load tests including wind load 2400 Pa and snow load 5400 Pa.



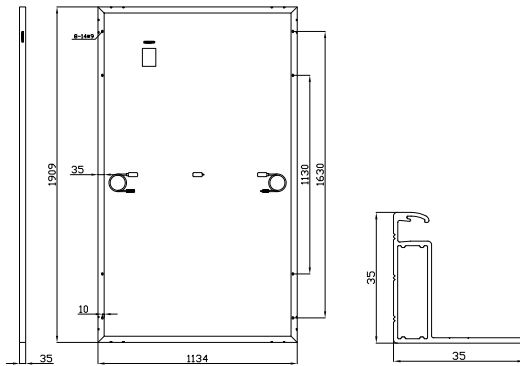
HEADQUARTER: HORAY SOLAR CO., LTD.

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MECHANICAL DIAGRAMS



SPECIFICATIONS

Weight	24.0kg
Dimension	1909mm*1134mm*35mm
Cell Dimension	182*91mm
Cell Amount	60*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm ² ,+300,-300mm/±1100mm Length can be customized
Connector	MC4 compatible
Application Level	Class A

ELECTRICAL PARAMETERS AT STC

Module Type	HS470TC-MHO	HS475TC-MHO	HS480TC-MHO	HS485TC-MHO	HS490TC-MHO
Power	470W	475W	480W	485W	490W
Open Circuit Voltage	42.86V	43.06V	43.26V	43.46V	43.66V
Short Circuit Current	14.08A	14.15A	14.22A	14.3A	14.37A
Maximum Power Voltage	36.04V	36.24V	36.44V	36.64V	36.84V
Maximum Power Current	13.04A	13.11A	13.17A	13.23A	13.3A
Module Efficiency	21.71%	21.94%	22.17%	22.40%	22.63%

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL PARAMETERS AT NMOT

Power	357W	361W	365W	369W	374W
Open Circuit Voltage	40.5V	40.7V	41.0V	41.2V	41.4V
Short Circuit Current	11.38A	11.43A	11.49A	11.55A	11.61A
Maximum Power Voltage	33.4V	33.6V	33.8V	34.0V	34.2V
Maximum Power Current	10.7A	10.76A	10.82A	10.88A	10.93A

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

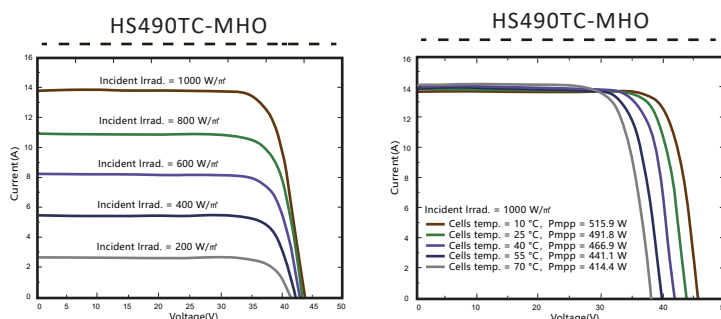
TEMPERATURE CHARACTERISTICS

NMOT	45±2°C	Temp Coefficient of ISC	+0.05%/°C
Temp Coefficient of VOC	-0.28%/°C	Temp Coefficient of Pmax	-0.34%/°C

PACKING CONFIGURATION

Modules/Pallet	31 Pieces	Modules/40' Container	744 Pieces
Packaging Description	24 Pallets, Total=(31+31)x12=744 Pieces		

IV CHARACTERISTICS



MAXIMUM RATING

Power selection	0~+5W
Measuring uncertainty of Pm	0~±3%
Operating Temperature	-40°C~+85°C
Wind Load/Snow Load	2400pa/5400pa
Fuse Current	25A

15 YEARS Quality Warranty

25 YEARS Power Warranty

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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