

Mono

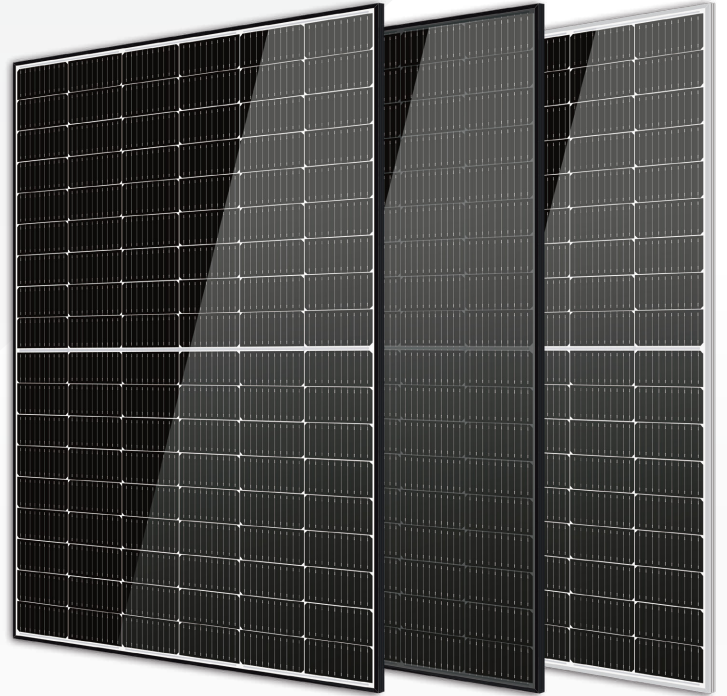
Bifacial

HORAY

Solar Ocean

405-420 Watt

MONO-FACIAL MODULE



- IEC61215: 2021
- IEC61730: 2016
- TUV Rheinland Standard
- ISO9001: 2015
- Quality Management System
- ISO14001:
- Environmental Management System
- CE: Europe Standard

KEY FEATURES



9BB/10BB/11BB 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 108 half-cells Monocrystalline modules is up to 420W.



PID Protection

Ensure the attenuation probability caused by PID phenomenon is minimized.



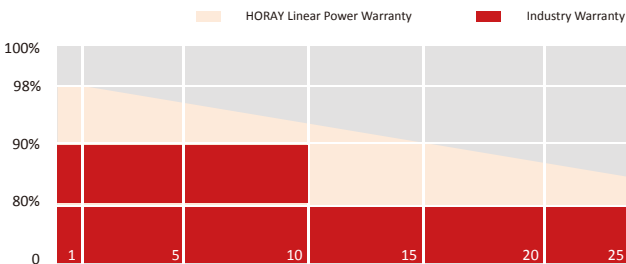
Harsh Environmental Adaptability

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 done by TUV.



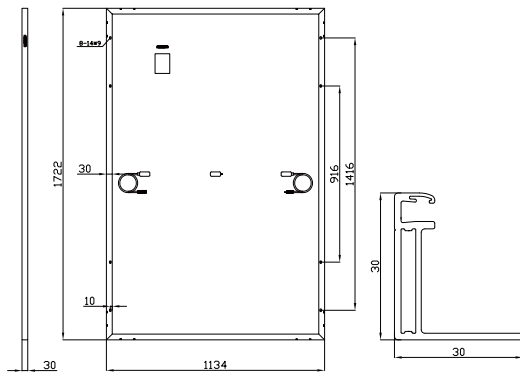
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MECHANICAL DIAGRAMS



SPECIFICATIONS

Weight	20.5kg
Dimension	1722mm*1134mm*30mm
Cell Dimension	182*91mm
Cell Amount	54*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	HS405-MHO	HS410-MHO	HS415-MHO	HS420-MHO
Power	405W	410W	415W	420W
Open Circuit Voltage	37.14V	37.34V	37.54V	37.74V
Short Circuit Current	13.65A	13.70A	13.77A	13.86A
Maximum Power Voltage	31.02V	31.22V	31.42V	31.62V
Maximum Power Current	13.06A	13.14A	13.21A	13.28A
Module Efficiency	20.74%	21.00%	21.25%	21.51%

* 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	298W	302W	306W	310W
Open Circuit Voltage	34.69V	34.89V	35.09V	35.29V
Short Circuit Current	10.75A	10.80A	10.85A	10.90A
Maximum Power Voltage	28.98V	29.18V	29.38V	29.58V
Maximum Power Current	10.28A	10.35A	10.42A	10.48A
Module Efficiency	15.26%	15.47%	15.67%	15.88%

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

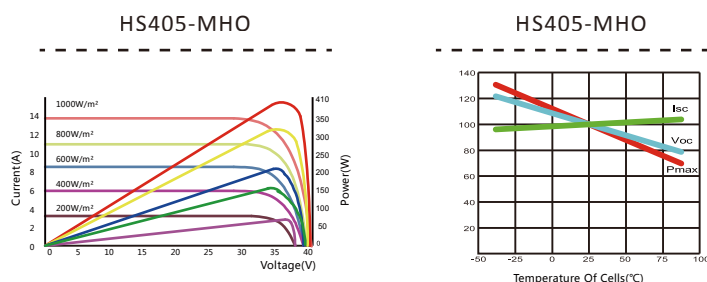
TEMPERATURE CHARACTERISTICS

NMOT	41±3°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	36 Pieces	Modules/40' Container	936Pieces
Packaging Description	26 Pallets, Total=(36*36)x13=936 Pieces		

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