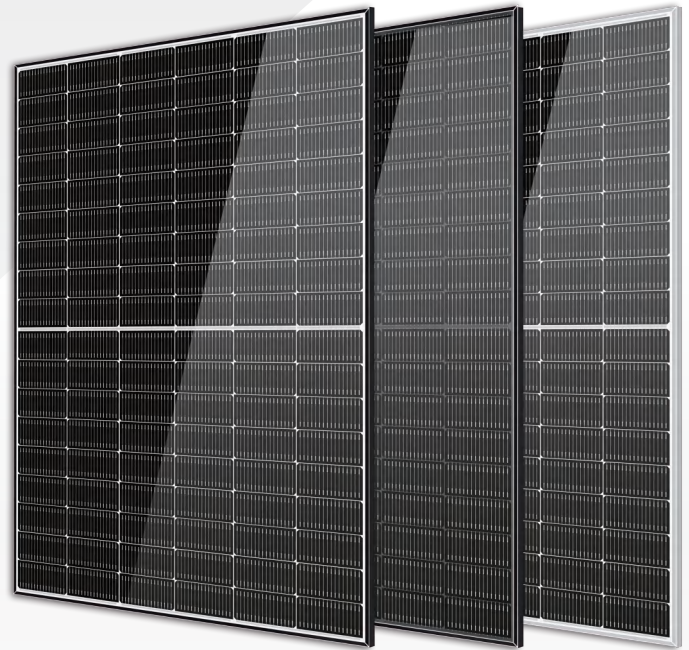


## Solar Ocean

### 420-440 Watt N-Type 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 108 half-cells Monocrystalline modules is up to 440W.



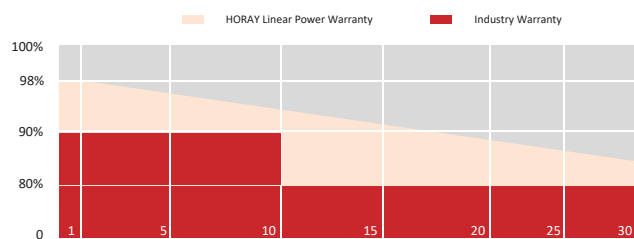
**LID Free**  
N-type solar cell has no LID naturally which can increase power generation.



**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.



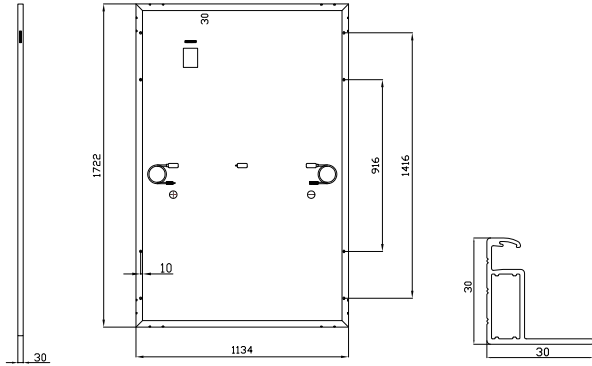
HEADQUARTER: HORAY SOLAR CO., LTD.

GLOBAL MARKETING AND SERVICE: HORAY SOLAR GMBH

✉ sales@horaysolar.com 🌐 www.horaysolar.com ☎ +86-510 83580688  
📍 NO.30-5, East Yanxin Road, Huishan District, Wuxi 214177 Jiangsu P.R China

✉ info@horaysolar.com 🌐 www.horaysolar.com  
📍 Robert-Bosch-Str. 29, Langen, Frankfurt am Main, Germany

## 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 <sup>2</sup> , +300, -300mm/±1100mm Length can be customized
Connector	MC4 compatible
Application Level	Class A

## ELECTRICAL PARAMETERS AT STC

Module Type	HS420TC-MHO	HS425TC-MHO	HS430TC-MHO	HS435TC-MHO	HS440TC-MHO
Power	420W	425W	430W	435W	440W
Open Circuit Voltage	38.73V	38.93V	39.13V	39.33V	39.53V
Short Circuit Current	14.01A	14.07A	14.15A	14.22A	14.30A
Maximum Power Voltage	32.44V	32.64V	32.84V	33.04V	33.24V
Maximum Power Current	12.95A	13.03A	13.10A	13.17A	13.24A
Module Efficiency	21.51%	21.80%	22.02%	22.28%	22.53%

\* 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	320W	324W	328W	332W	336W
Open Circuit Voltage	36.61V	36.92V	37.12V	37.32V	37.53V
Short Circuit Current	11.31A	11.37A	11.43A	11.49A	11.55A
Maximum Power Voltage	30.11V	30.32V	30.51V	30.73V	30.92V
Maximum Power Current	10.62A	10.68A	10.74A	10.8A	10.86A

\* 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.

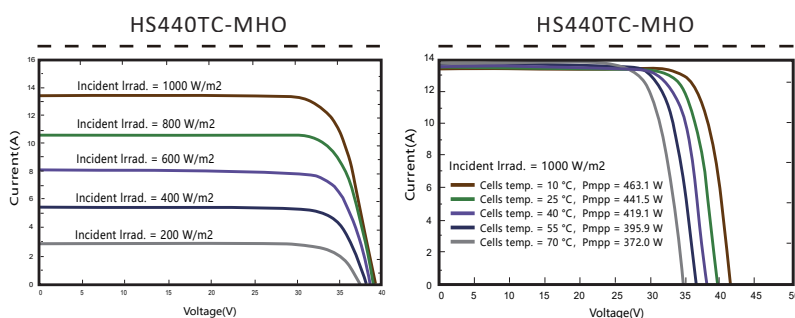
## TEMPERATURE CHARACTERISTICS

NMOT	45±2°C	Temp Coefficient of ISC	+0.04%/°C
Temp Coefficient of VOC	-0.23%/°C	Temp Coefficient of Pmax	-0.28%/°C

## PACKING CONFIGURATION

Modules/Pallet	37 Pieces	Modules/40' Container	962 Pieces
Packaging Description	26 Pallets, Total=(37+37)x13=962 Pieces		

## IV CHARACTERISTICS



## MAXIMUM RATING

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

**12**  
YEARS

Quality  
Warranty

**30**  
YEARS

Power  
Warranty

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

©2024 Horay Solar Co.,Ltd. All rights reserved. Specifications included in this datasheet are subject to change without notice.

Version number: TC\_MHO\_EN\_2024\_A