

# 585~605 Watt

# HORAY

**TIER1**  
BloombergNEF

## HS **182-144** TC-D Ocean N-type Bifacial Modules



### SMBB Half-Cell Technology

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



### Higher Output Power

The output power of 144 half-cells monocrystalline modules is up to 605W.



### Low Light Features

Higher performance under low light environment.



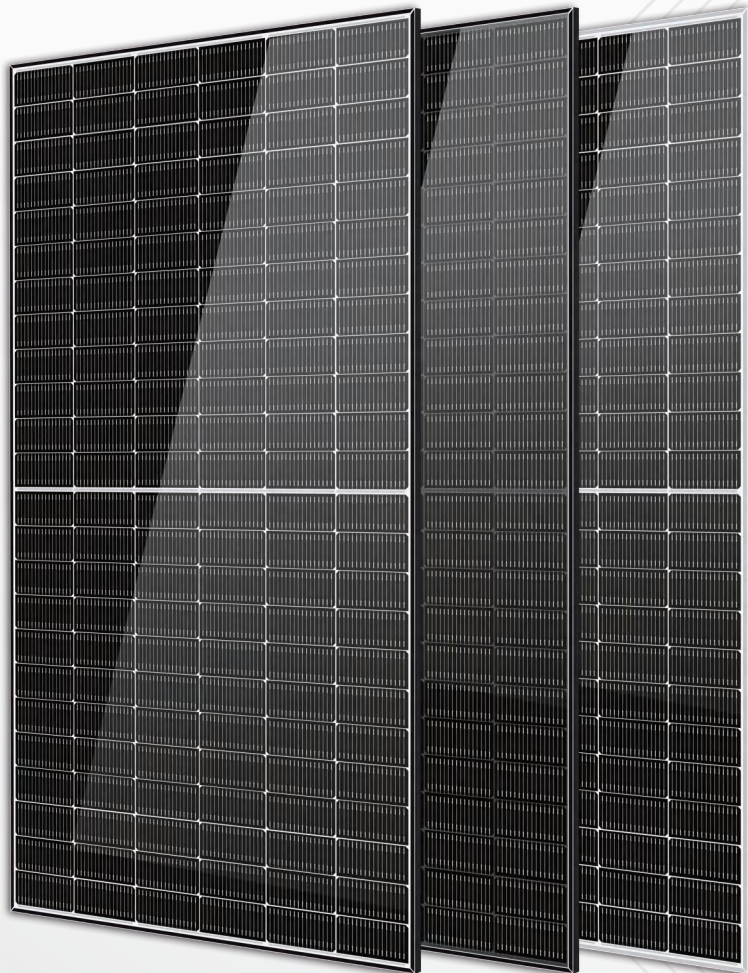
### Harsh Environmental Adaptability

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



### N-type With Very Low LID

N-type solar cell has very low LID naturally which can reduce power degradation.



IEC61215:2021

IEC61730:2023

ISO9001:2015 Quality Management System

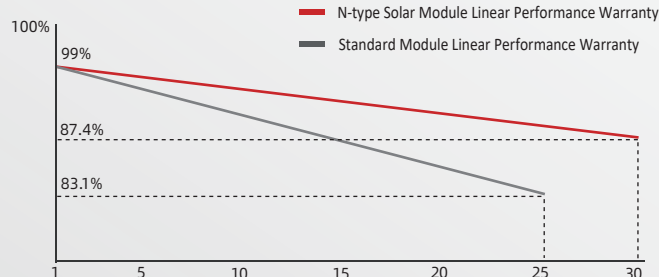
ISO14001:2015 Environmental Management System

ISO45001:2018 Occupational Health and Safety Management System

CE: Europe Standard

China Quality Certification Centre

Solar Product Certification



30-year product warranty



30-year linear power output warranty

HEADQUARTER: HORAY SOLAR CO., LTD.

GLOBAL MARKETING AND SERVICE: HORAY SOLAR GMBH

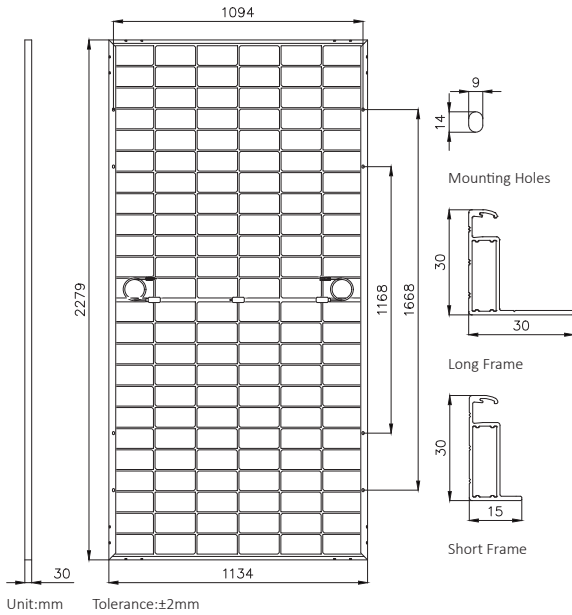
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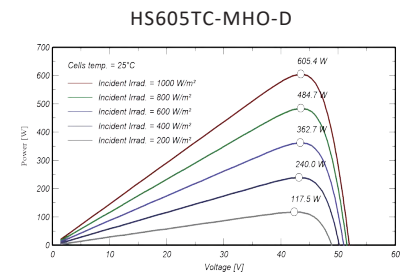
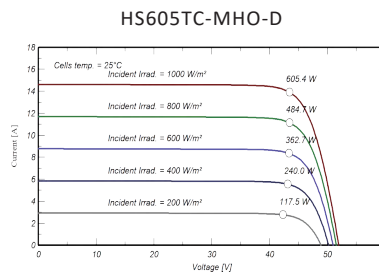
## MECHANICAL DIAGRAMS



## MECHANICAL PARAMETERS

Weight	31.5kg
Dimension	2279×1134×30mm
Cell Orientation	144 (6×24)
Junction Box	IP68, three diodes
Output Cable	4mm <sup>2</sup> ,±1300mm (length can be customized)
Connector	MC4 compatible
Glass	2.0+2.0mm AR coated heat strengthened glass
Frame	Anodized aluminum alloy frame
Packaging	37pcs per pallet/740pcs per 40'HC

## CURVES OF PV MODULE



## ELECTRICAL CHARACTERISTICS

Module Type	HS585TC-MHO-D		HS590TC-MHO-D		HS595TC-MHO-D		HS600TC-MHO-D		HS605TC-MHO-D	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power(Pmax/W)	585	444	590	448	595	451	600	455	605	459
Open Circuit Voltage(Voc/V)	51.52	48.70	51.63	48.90	51.74	49.00	51.85	49.10	51.95	49.20
Short Circuit Current(Isc/A)	14.30	11.55	14.38	11.62	14.46	11.68	14.54	11.74	14.62	11.81
Maximum Power Voltage(Vmp/V)	43.33	40.50	43.44	40.70	43.55	40.80	43.66	40.90	43.76	41.00
Maximum Power Current(Imp/A)	13.51	10.94	13.59	11.00	13.66	11.05	13.74	11.12	13.83	11.20
Module Efficiency(%)	22.6		22.8		23.0		23.2		23.4	

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

\* 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.

## ELECTRICAL CHARACTERISTICS WITH 10% SOLAR IRRADIATION RATIO (BNPI)

Maximum Power(Pmax/W)	638	644	649	654	660
Open Circuit Voltage(Voc/V)	51.60	51.70	51.80	51.90	52.00
Short Circuit Current(Isc/A)	15.64	15.73	15.82	15.91	16.00
Maximum Power Voltage(Vmp/V)	43.33	43.44	43.55	43.66	43.76
Maximum Power Current(Imp/A)	14.72	14.83	14.90	14.98	15.08

\*Rear side power gain:The additional gain from the rear side compared to the power of the front side at the standard test condition.It depends on mounting (structure,height,tilt angle etc.)and albedo of the ground.

## OPERATING PARAMETERS

Operational Temperature	-40°C~+85°C
Power Output Tolerance	0~3%
Maximum System Voltage	1500V
Maximum Series Fuse Rating	25A
Nominal Operating Cell Temperature	45±2°C
Protection Class	Class II
Bifaciality	80±5%
Fire Rating	IEC Class A

\*The actual test value may be slightly deviated from the technical parameters due to the difference in test methods.

## MECHANICAL LOADING

Front Side Maximum Static Loading	5400Pa
Rear Side Maximum Static Loading	2400Pa
Hailstone Test	25mm Hailstone at the speed of 23m/s

## TEMPERATURE RATINGS (STC)

Temperature Coefficient of Isc	+0.04%/°C
Temperature Coefficient of Voc	-0.23%/°C
Temperature Coefficient of Pmax	-0.28%/°C

