

# 425~445 Watt

# HORAY

**TIER1**  
BloombergNEF

## HS **182-108** HJ-D Ocean HJT Bifacial Modules



### HJT Technology

Hydrogenated amorphous silicon thin films and  $\mu\text{-Si}$  technology to ensure higher cell efficiency.



### Higher Output Power

The output power is as high as 445W, and bifaciality is up to 85% , provide more power from rear side.



### Better Weather Adaptability

Excellent low light performance, lower temperature coefficients and power loss under high temperature.



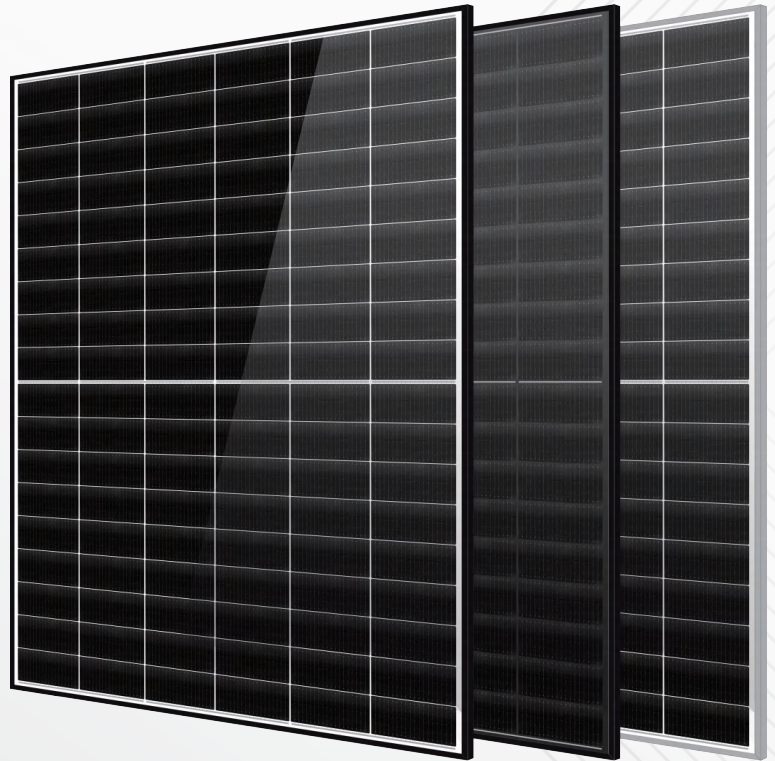
### Lower Power Attenuation

Anti PID and negligible LID/LeTID attenuation, witch can reduce power loss.



### Ideal Choice For Utility Project

Lower BOS cost, lower LCOE, and improved ROI.



IEC61215:2021

IEC61730:2023

ISO9001:2015 Quality Management System

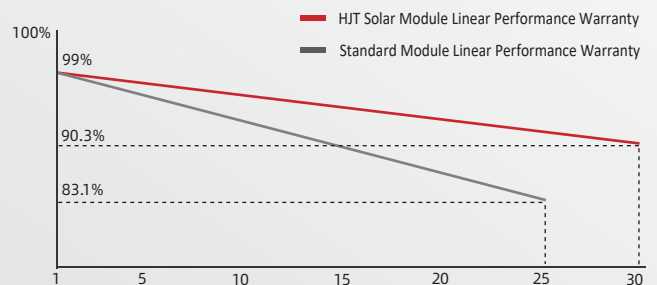
ISO14001:2015 Environmental Management System

ISO45001:2018 Occupational Health and Safety Management System

CE: Europe Standard

China Quality Certification Centre

Solar Product Certification



15

15-year product warranty

30

30-year linear power output warranty

HEADQUARTER: HORAY SOLAR CO., LTD.

GLOBAL MARKETING AND SERVICE: HORAY SOLAR GMBH

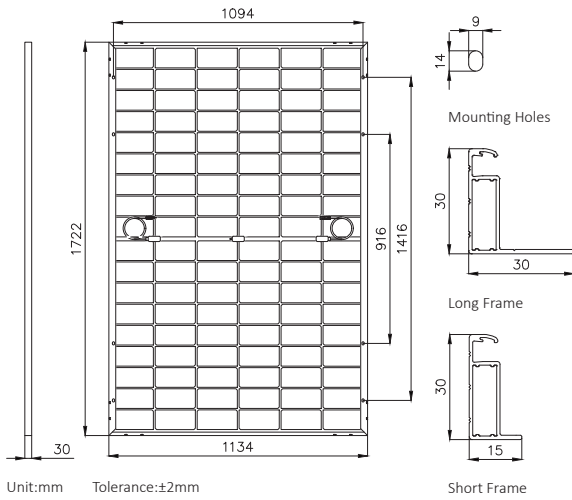
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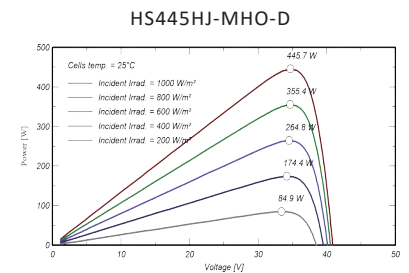
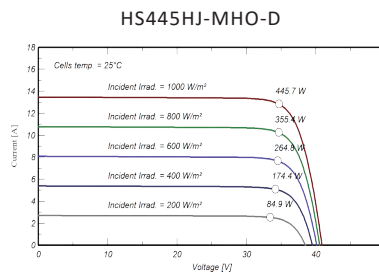
## MECHANICAL DIAGRAMS



## MECHANICAL PARAMETERS

Weight	24.0kg
Dimension	1722×1134×30mm
Cell Orientation	108(6×18)
Junction Box	IP68, three diodes
Output Cable	4mm <sup>2</sup> ,±300mm (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/962pcs per 40'HC

## CURVES OF PV MODULE



## ELECTRICAL CHARACTERISTICS

Module Type	HS425HJ-MHO-D		HS430HJ-MHO-D		HS435HJ-MHO-D		HS440HJ-MHO-D		HS445HJ-MHO-D	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power(Pmax/W)	425	324	430	328	435	332	440	336	445	340
Open Circuit Voltage(Voc/V)	40.17	38.35	40.35	38.52	40.53	38.68	40.70	38.85	40.88	39.02
Short Circuit Current(Isc/A)	13.24	10.58	13.30	10.63	13.36	10.68	13.41	10.72	13.47	10.77
Maximum Power Voltage(Vmp/V)	33.73	32.20	33.89	32.35	34.05	32.50	34.20	32.65	34.36	32.80
Maximum Power Current(Imp/A)	12.61	10.06	12.69	10.15	12.78	10.22	12.87	10.29	12.95	10.36
Module Efficiency(%)	21.8		22.0		22.3		22.5		22.8	

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

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

## ELECTRICAL CHARACTERISTICS AT BNPI

Maximum Power(Pmax/W)	485	490	496	502	507
Open Circuit Voltage(Voc/V)	41.50	41.68	41.86	42.05	42.23
Short Circuit Current(Isc/A)	14.38	14.48	14.58	14.68	14.78
Maximum Power Voltage(Vmp/V)	34.91	35.08	35.24	35.40	35.56
Maximum Power Current(Imp/A)	13.88	13.98	14.07	14.17	14.27

\* Under Bifacial Nameplate Irradiance (BNPI), front Side irradiation 1000 W/m<sup>2</sup>, rear side reflection irradiation 135 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C. Rear side power gain 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	30A
Nominal Operating Cell Temperature	44±2°C
Protection Class	Class II
Bifaciality	85±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	-0.22%/°C
Temperature Coefficient of Pmax	-0.24%/°C

