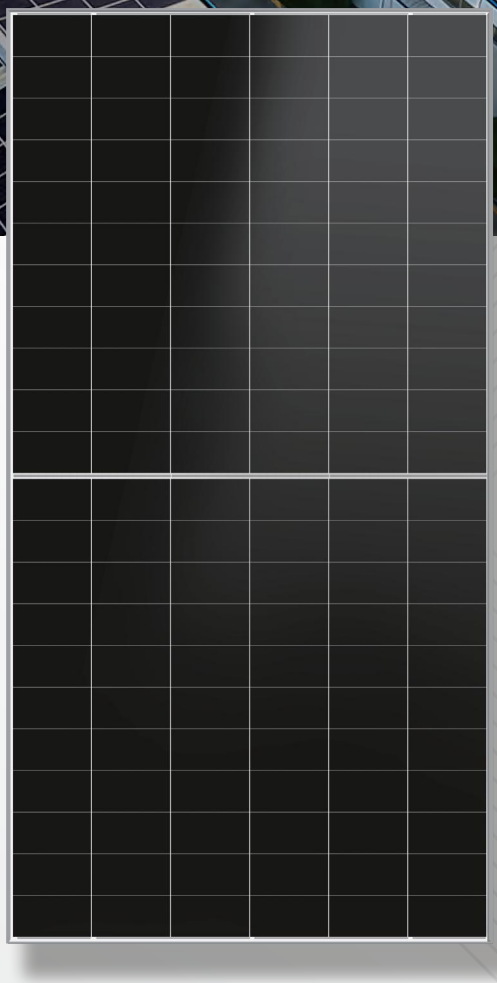
640~670 Watt

HS 210R-132 BN-DF *Anti-dust* BC Bifacial Modules

HORAY | TIER1 Bloomberg NEF

Adopts a structural anti-dust frame design, utilizing rainwater to wash away dust

Ideal for high-dust environments and low-tilt installation scenarios



BC Technology

Relocate all electrical contacts to the rear side, eliminating front-side shading to maximize light absorption and power generation.

Anti-Shading Technology

With anti-shading technology, complex environments are no obstacle to generating more power.

Better Weather Adaptability

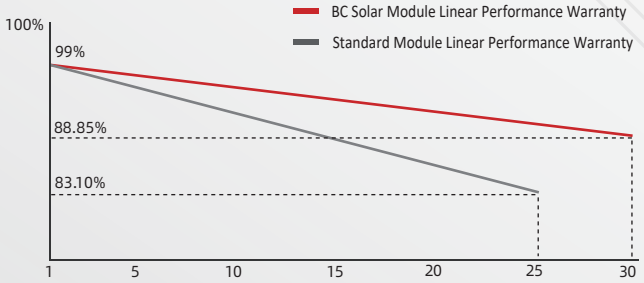
Excellent low light performance, lower temperature coefficients and power loss under high temperature.

Lower Power Attenuation

Anti-PID and negligible LID/LeTID, which reduces power loss.

Ideal Choice For Utility Project

Lower BOS cost, lower LCOE, and improved ROI.



IEC 61215:2021

IEC 61730:2023

ISO 9001:2015 Quality Management System

ISO 14001:2015 Environmental Management System

ISO 45001:2018 Occupational Health and Safety Management System

CE Marking: European Conformity

15 15-year product warranty

30 30-year linear power output warranty

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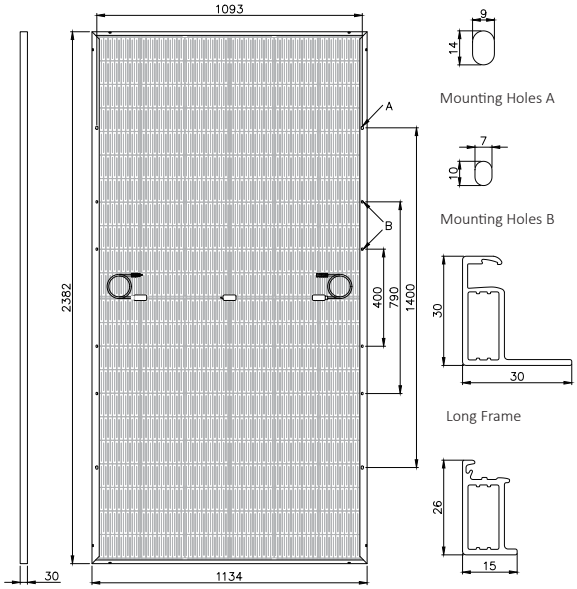
HS 210R-132 BN-DF *Anti-dust*

MECHANICAL DIAGRAMS



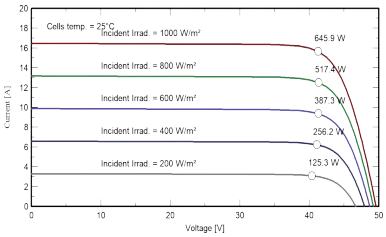
Unit:mm Tolerance:±2mm

MECHANICAL PARAMETERS

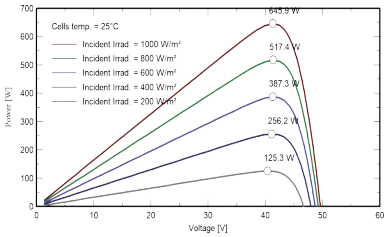
Weight	32.5kg
Dimension	2382×1134×30mm
Cell Orientation	132(6×22)
Junction Box	IP68, three diodes
Output Cable	4mm²,+400,-200mm/±1400mm (length can be customized)
Connector	MC4 compatible
Glass	2.0+2.0mm AR coated heat strengthened glass
Frame	Anodized aluminum alloy frame
Packaging	35pcs per pallet/700pcs per 40'HC

CURVES OF PV MODULE

HS645BN-MHCF-D



HS645BN-MHCF-D



ELECTRICAL CHARACTERISTICS

Module Type	HS640BN-MHCF-D	HS645BN-MHCF-D	HS650BN-MHCF-D	HS655BN-MHCF-D	HS660BN-MHCF-D	HS665BN-MHCF-D	HS670BN-MHCF-D
Testing Condition	STC	STC	STC	STC	STC	STC	STC
Maximum Power(Pmax/W)	640	645	650	655	660	665	670
Open Circuit Voltage(Voc/V)	49.52	49.62	49.72	49.82	49.93	50.03	50.13
Short Circuit Current(Isc/A)	16.36	16.46	16.54	16.62	16.71	16.79	16.87
Maximum Power Voltage(Vmp/V)	40.80	40.88	40.98	41.08	41.19	41.29	41.39
Maximum Power Current(Imp/A)	15.69	15.78	15.86	15.94	16.02	16.10	16.18
Module Efficiency(%)	23.7	23.9	24.1	24.2	24.4	24.6	24.8

* Standard Test Conditions (STC): Irradiance 1000W/m², AM 1.5, Cell temperature 25°C. Power measurement tolerance: ±3%.

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN (BASED ON 645W)

Pmax/W	Voc/V	Isc/A	Vmp/V	Imp/A	Pmax gain
677	49.64	17.27	40.90	16.55	5%
710	49.66	18.11	40.92	17.35	10%
744	49.68	18.96	40.94	18.17	15%
776	49.70	19.76	40.96	18.95	20%
808	49.72	20.57	40.98	19.72	25%

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

OPERATING PARAMETERS

Operating Temperature Range	-40°C~+85°C
Power Output Tolerance	0~3%
Maximum System Voltage	1500V DC
Maximum Series Fuse Rating	35A
Nominal Module Operating Temperature	45±2°C
[T98]max	≤70°C
Protection Class	Class II
Bifaciality coefficient of Pmax	75±5%
Fire Rating	IEC Class C

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	+0.05%/°C
Temperature Coefficient of Voc	-0.20%/°C
Temperature Coefficient of Pmax	-0.26%/°C

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
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Specifications included in this datasheet are subject to change without notice.
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