

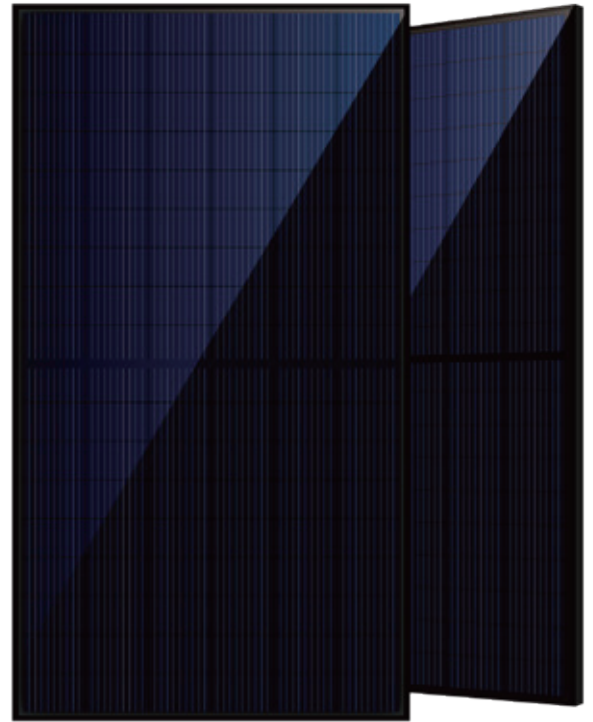
BLACK PEARL Series

182mm monofacial full black half cut cell technology

390-410W

21.0% MODULE EFFICIENCY **0~+5w** POSITIVE POWER TOLERANCE

Type: HGT-S108|M10Hb-xxx



410w

Max. Power Output



HIGH CUSTOMER VALUE

Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance Of System) cost, shorter payback time
Lower guaranteed first year and annual degradation
Designed for compatibility with existing mainstream system components
Higher return on Investment



HIGH RELIABILITY

Minimized micro-cracks with innovation non-destructive cutting technology ensured stability through cell process and module material control. Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load.



HIGH ENERGY YIELD

Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
The unique design provides optimized energy production under inter-row shading conditions



HIGH POWER UP TO 410W

Large area cells based on 182mm silicon wafers and half-cut cell technology
Up to 21.0% module efficiency with high density interconnect technology
Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection

Materials and workmanship warranty

12
Years

-2.00%

First Year Power Degradation

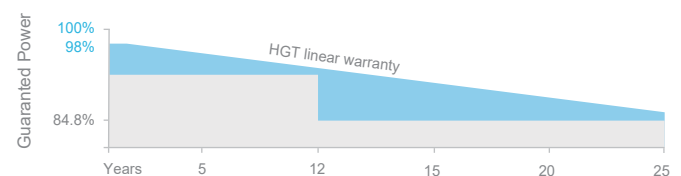
Linear power warranty

25
Years

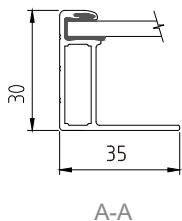
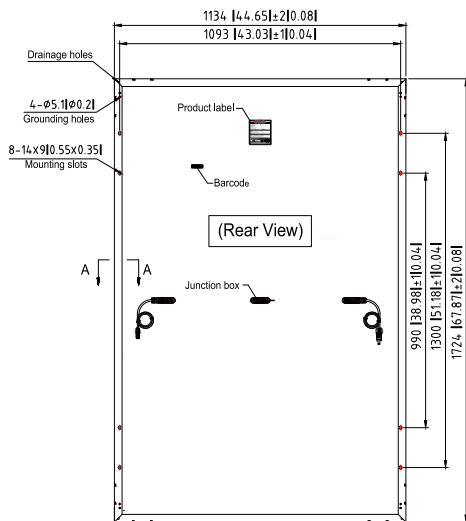
- 0.55%

Annual Degradation

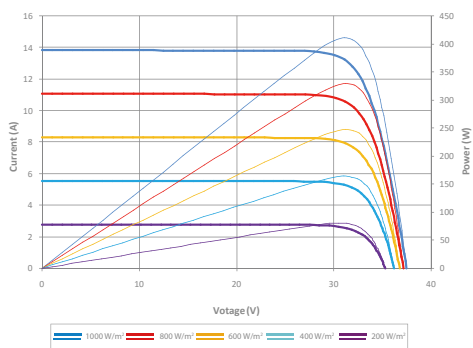
PERFORMANCE WARRANTY



DIMENSIONS OF PV MODULE(mm)



Current-Voltage & Power-Voltage Curve(410W)



ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}(Wp)^*$	390	395	400	405	410
Power Tolerance- $P_{MAX}(W)$	0 ~ +5				
Maximum Power Voltage- $V_{MPP}(V)$	30.76V	30.98V	31.18V	31.38V	31.59V
Maximum Power Current- $I_{MPP}(A)$	12.69A	12.76A	12.83A	12.91A	12.98A
Open Circuit Voltage- $V_{OC}(V)$	36.62V	36.84V	37.04V	37.24V	37.45V
Short Circuit Current- $I_{SC}(A)$	13.59A	13.66A	13.73A	13.81A	13.88A
Module Efficiency $\eta_{M}(\%)$	19.9%	20.2%	20.5%	20.7%	21.0%

STC: Irradiance 1000W/m², Cell Temperature 25 °C , AM=1.5.
*Tolerance of Pmax is within ±3%.

ELECTRICAL DATA (NMOT)

Maximum Power- $P_{MAX}(Wp)$	309.6W	306.0W	302.3W	298.6W	294.9W
Maximum Power Voltage- $V_{MPP}(V)$	29.2V	29.0V	28.8V	28.6V	28.4V
Maximum Power Current- $I_{MPP}(A)$	10.62A	10.56A	10.50A	10.44A	10.38A
Open Circuit Voltage- $V_{OC}(V)$	35.2V	35.0V	34.8V	34.6V	34.4V
Short Circuit Current- $I_{SC}(A)$	11.16A	11.10A	11.04A	10.98A	10.93A

NMOT: Irradiance at 800W/m², Ambient Temperature 20 °C , AM=1.5, Wind Speed 1m/s.

MECHANICAL DATA

Solar Cells	Monocrystalline silicon 182 mm
No. of cells	108 cells (6x18)
Module Dimensions	1724 × 1134 × 30 mm
Weight	21.5 kgs
Glass	3.2 mm, High Transmission, AR Coated fully tempered glass
Encapsulant Material	EVA
Backsheet	Black
Frame	30mm Anodized Aluminium Alloy(full black)
J-Box	IP 68 rated (3 bypass diodes)
Cables	4.0mm ² cable length +350mm/-350mm or customized length
Connector	PV-GZX1500
Fire Safety Rate:	Class C

TEMPERATURE RATINGS

NMOT(Nominal Module Operating Temperature)	42 °C (±2 °C)
Temperature Coefficient of P_{MAX}	- 0.36%/ °C
Temperature Coefficient of V_{OC}	- 0.304%/ °C
Temperature Coefficient of I_{SC}	0.05%/ °C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

MAXIMUM RATINGS

Operational Temperature	-40~+85 °C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	25A

WARRANTY

12 year Product Workmanship Warranty
25 year Liner Warranty
2% first year degradation
0.55% Annual Power Attenuation
(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Pieces per pallet	36
Pallets per container	26
Pieces per container 40'HC	936
Packaging box dimensions	1770x1140x1270mm
Packaging box weight	812kg