



**Philadelphia Solar**  
Delivering Clean Energy Solutions

# BLACK Iris

Mono

Module : PS-M108(HC)-xxxW

**400-410W**

Half-Cell Mono-Crystalline 10BB Black modules with power up to **410 Wp** are produced using the state-of-the-art (automated) robotic production lines. These modules are suitable to be used for most electrical power applications and have excellent durability to prevailing weather conditions

## CERTIFICATIONS

IEC 62782:2016 Dynamic load  
IEC TS 62804 PID Resistance  
IEC 60068 Dust and Sand Resistance  
IEC 62716 Ammonia Resistance  
IEC 61701 Salt Mist Resistance  
UL 61215 / UL 61730  
IEC 61215 / IEC 61730  
EN ISO 9001: 2015  
Quality Management System  
EN ISO 14001: 2015  
Environmental Management System  
EN ISO 45001: 2018  
Occupational health and safety management systems



## APPLICATIONS



On-Grid Residential Roof-Tops



On-Grid Commercial/Industrial Roof-Tops



Off-Grid Systems (Including Lighting Systems)



Solar Power Plants

## FEATURES



Light weight , Perfect for Residential Roof-top



P Type/M10/PERC/10BB/Half-Cell



Lower microcrack problem loss comparing with 5-busbar module

**TIER-1**  
MANUFACTURER



Made In Jordan



Strong Mechanical Load Capacity

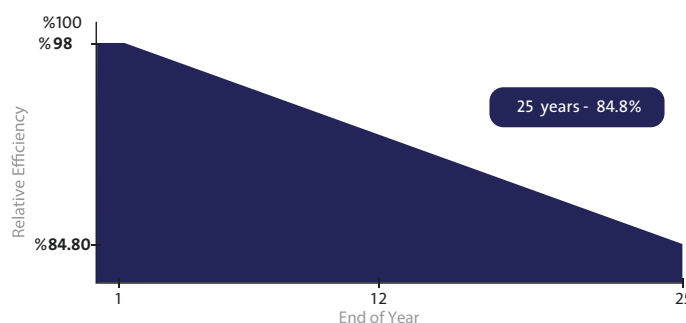


Better temperature coefficients come from half-cell design.



Excellent anti-PID performance to ensure module's stable power output

## LINEAR PERFORMANCE WARRANTY



Extendable Product Warranty Reaches to **25 Years**

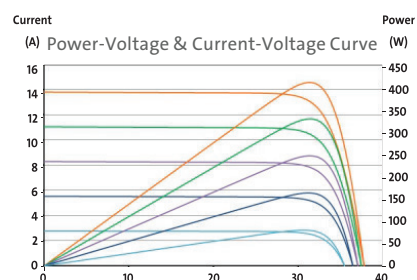
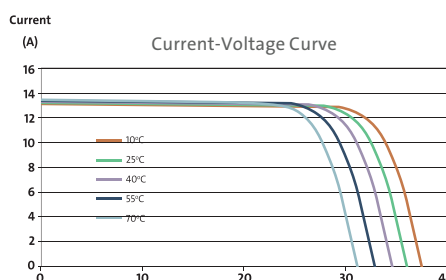


**25 Year Linear Power Warranty**



Only **-0.55%** Annual Degradation

## I-V CURVES



ELECTRICAL CHARACTERISTICS			
POWER AT STC	400 W	405 W	410 W
Short Circuit Current - Isc (A)	13.68	13.72	13.76
Maximum Power Current - Imp (A)	12.94	13.00	13.06
Open Circuit Voltage - Voc (V)	37.00	37.29	37.60
Maximum Power Voltage - Vmpp (V)	30.92	31.16	31.40
Module Efficiency - η' (%)	20.5%	20.8%	21.0%

Values at Standard Test Conditions STC (Air Mass AM 1.5 , Irradiance 1000 W/m² , Cell Temperature 25° C).

MATERIAL CHARACTERISTICS	
Characteristics	Value
Cells per Module	108 (54 x 2)
Cell Type	Grade A - Mono PERC Crystalline Silicon/10 BB 182x91mm
Front Surface	3.2mm Tempered AR Coated Glass
Encapsulant	PID Free EVA
Back Cover	Backsheet
Frame	Anodized Aluminum (Black)
Junction Box	IP68 , 3 Bypass Diodes
Cable Length	300mm Cables Length (Can be Customized)
Fire Classification	Type I

THERMAL CHARACTERISTICS		PHYSICAL CHARACTERISTICS	
Characteristics	Value	Characteristics	Value
Open Voltage Temperature Coefficient VOC (%/C°)	-0.26	Module Dimensions (mm)	1721±1 x 1133±1 x 30
Short Circuit Current Temperature Coefficient ISC (%/C°)	+0.04	Module Weight (kg)	20.5 ± 1kg
Power Temperature Coefficient PMP (%/C°)	-0.30	Packaging	
NOCT (°C)	45±2	Modules per Pallet	37
OPERATING CONDITIONS		40 Feet High-Cube Container	962 Modules
Maximum Sytem Voltage - Vmax (V)	1500	Mechanical Load**	
Maximum Series Fuse (A)	25	Max Static load (Front)	5400 Pa
Operating Temperature Range (°C)	IEC: -40 to +85 UL: -40 to +90	Max Static load (Back)	5400 Pa
		Dynamic load	1000 Pa

- ◆ Power measuring tolerance: ± 3%, other measurements tolerances: ± 5%.
- ◆ Datasheet is subjected to change without prior notice, always obtain the most recent version of the datasheet.
- ◆ \*\* Caution: For professional use only, the installation and handling of PV modules and cleaning modules require professional skills and should only be performed by qualified professionals, please read the Installation and Operation Manual before using the modules, also Cleaning Guidelines

MODULE DRAWINGS

The technical drawings include:

- Front View:** Shows a rectangular module with a width of 1133.0±1.0 mm and a height of 1721.0±1.0 mm. The thickness is 30.0 mm.
- Back View:** Shows the rear of the module with a width of 1133.0±1.0 mm and a height of 860.0 mm. It features three MC4 connectors and a junction box.
- Cross Section A-A:** A detailed view of the module's internal structure, showing a total height of 30 mm. The internal layers have thicknesses of 4.7 mm (top), 18.9 mm (middle), and 30 mm (bottom).