



OCTOPUS SERIES

Full Black Solar Panel

60 M10 Half Cut Cells (Mono Perc)

TYPE: AS-(440-460)-60IIMB

440W-460W

21.24% efficiency

ADVANTAGES & FEATURES



HIGH SAVING

Lower LCOE, reduced BOS cost shorter payback time



HIGH EFFICIENCY

Excellent module conversion efficiency of up to 21.28%



LOW-LIGHT PERFORMANCE

Advanced glass and cell surface textured design ensure excellent performance in low-light environment.



PID RESISTANCE

Excellent Anti-PID performance guarantees Limited power degradation for mass production



IP68 JUNCTION BOX

High waterproof level



FULL BLACK DESIGN

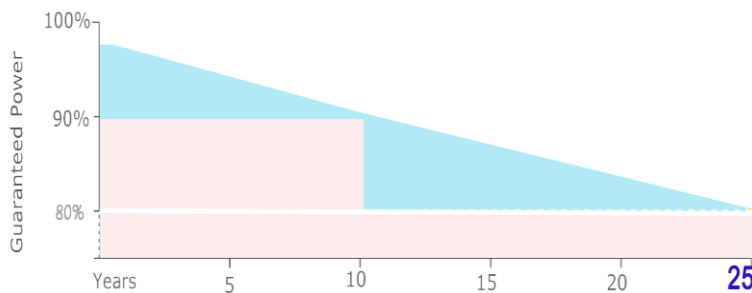
Very Beautiful Full black design, make your house and solar panels united naturally



PERC AND HALF CUT CELLS

Stable and Lower Temperature coefficient

LINEAR GRAPH



Output Warranty
25 Years

Product Guarantee
12 Years

Power Degradation: < 2% For the First Year
< 0.5% / Year in 2~25 Years

CERTIFICATES



ELECTRICAL CHARACTERISTIC @STC

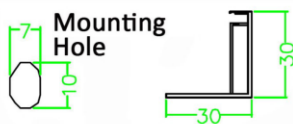
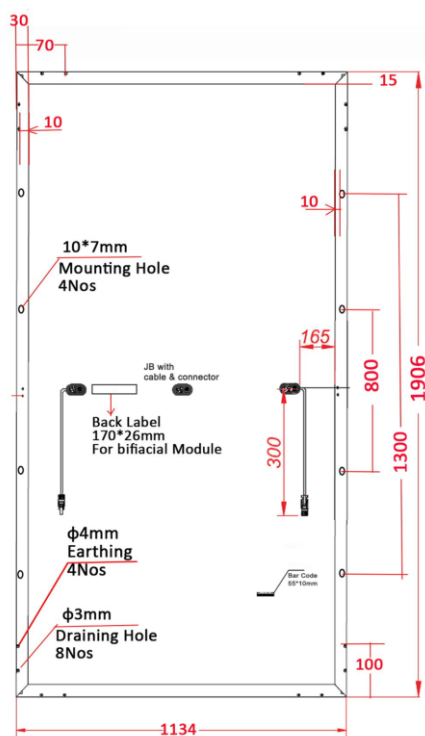
STC: 1000W/M ² , AM: 1.5, 25°C:	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax) (W)	440W	331W	445W	335W	450W	339W	455W	343W	460W	347W		
Max. Power Voltage (Vmpp) (V)	34.67	32.29	34.87	32.56	35.07	32.82	35.27	33.08	35.47	33.33		
Max. Power Current (Impp) (A)	12.69	10.25	12.76	10.29	12.83	10.33	12.90	10.37	12.97	10.41		
Open Circuit Voltage (Voc) (V)	41.94	39.56	42.12	39.83	42.31	40.09	42.49	40.35	42.68	40.62		
Short Circuit Current (Isc) (A)	13.58	10.87	13.65	10.91	13.72	10.95	13.79	10.99	13.86	11.03		
Module Efficiency (Eff%)	20.31%		20.55%		20.78%		21.01%		21.24%			

*STC (Standard Test Condition): Irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5

*Measurement Tolerance (±3.0%)

*NOCT (Nominal Module Operating Temperature): Irradiance 800W/ m2, Ambient Temperature 20°C, Wind Speed 1m/s.

DRAWING (IN MM)



TEMPERATURE COEFFICIENTS MAX. LIMITS

Temp Coefficients of Pm	-0.360%/°C	Max. System Voltage	1500VDC IEC
Temp Coefficients of Voc	-0.280%/°C	Operating Temp	-40°C to +85°C
Temp Coefficients of Isc	+0.05%/°C	Noct	45°C±2 °C

MECHANICAL CHARACTERISTICS

Cell Technology and size	Mono Perc 10BB, 182mmx91mm
Number of Cells (pcs)	120 Pcs Half Cut of M10 (60*2)
Dimensions	1906x1134x30mm
Glass / Front Cover	3.2mm, High Transmission AR coated Safe Glass
Encapsulation	0.55mm,PID free EVA film, UV CUT & UV THROUGH
Rear Cover	0.32mm Black Back Sheet
Weight	23.2kgs
Frame	Anodized Aluminum Alloy in Black
Junction Box	IP68 Certified,3 Bypass diodes, split junction box
Cables & Connectors	4mm ² 12AWG, Length 300mm, MC4 compatible Connectors
Allowable Hail Load	227g steel ball dropped from 1m height
Surface Load	Snow Load 5400pa, Wind Load 2400pa
Series Fuse Rating:	30A Application Class: A Fire Rating Class: C

PACKAGING CONFIGURATION

Modules per Pallet: 38pcs	Modules per 40HQ Container: 760pcs
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IV CURVES

