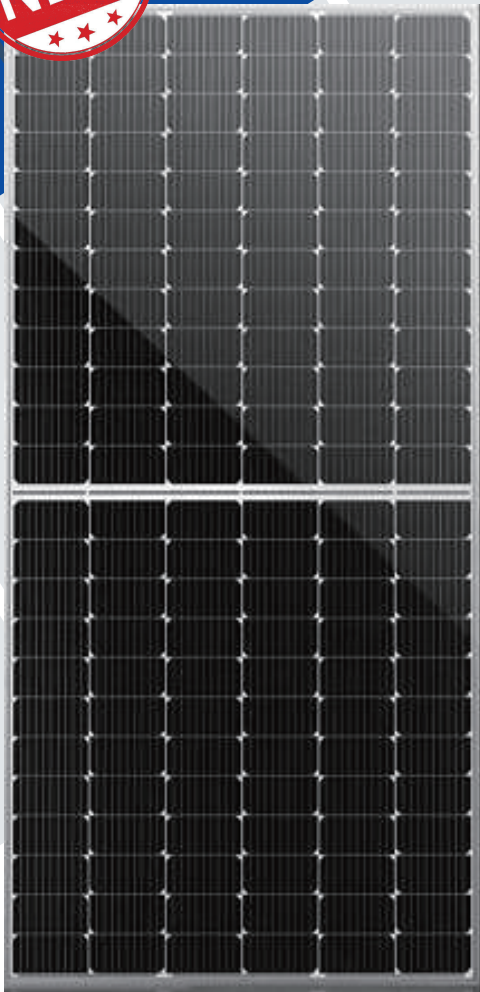


OPTONICA

HIGH PERFORMANCE MONOCRYSTALLINE PV MODULE



SKU: 9403

144 CELL
Mono PERC Module

450W
Power Output Range

1500VDC
Maximum System Voltage

21.2%
Maximum Efficiency

Cell Type



9BB(166.00mm)

KEY SALIENT FEATURES



Industry leading lowest thermal co-efficient of power



Industry leading 12 years product warranty



Excellent low irradiance performance



Excellent PID resistance



Positive tight power tolerance



Dual stage 100% EL Inspection warranting defect-free product



Module Imp binning radically reduces string mismatch losses



Excellent wind load 2400Pa & snow load 5400Pa under certain installation method



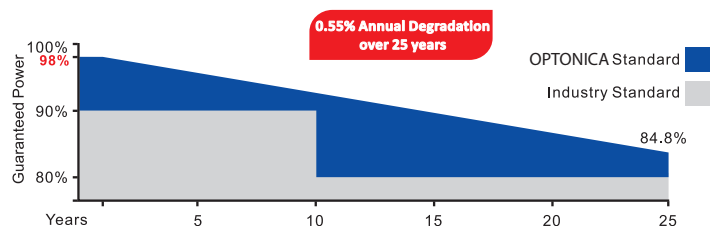
Comprehensive product and system certification

- Rigorous quality control to meet the highest standard: ISO9001:2015, ISO14001: 2015 and OHSAS: 18001 2007
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing test: IEC 61701, IEC 62716, DIN EN 60068-2- 68)



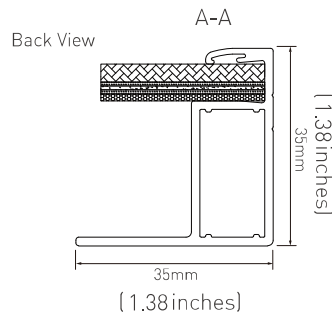
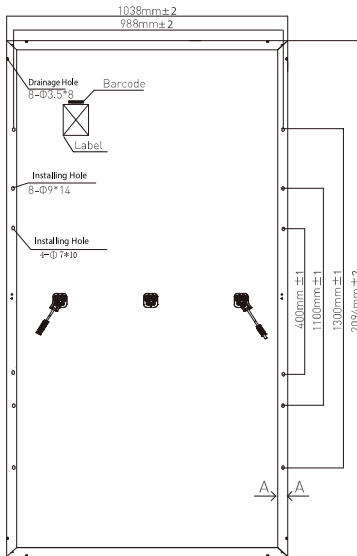
LINEAR PERFORMANCE WARRANTY

12 year Product Warranty / 25 year Linear Power Warranty

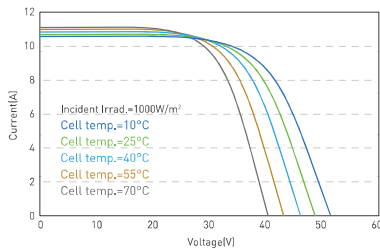


* As there are different certification requirements in different markets, please contact your local sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

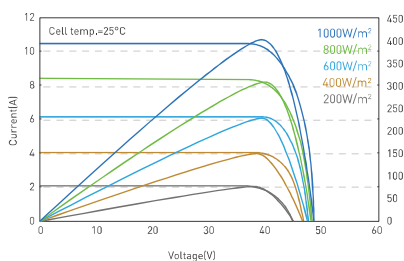
Module Dimension



I-V Curve at Different Temperature (440W)



I-V/P-V Curve at Different Irradiation (440W)



Electrical Specification (STC*)

9403

Maximum Power	Pmax(W)	450
Maximum Power Voltage	Vmp(V)	42.10
Maximum Power Current	Imp(A)	10.69
Open Circuit Voltage	Voc(V)	49.84
Short Circuit Current	Isc(A)	11.20
Module Efficiency	(%)	20.7
Power Output Tolerance	(W)	0~+5

* Irradiance 1000W/m², Module Temperature 25°C, Air Mass 1.5

Electrical Specification (NOCT*)

Maximum Power	Pmax (W)	333.48
Maximum Power Voltage	Vmp (V)	38.30
Maximum Power Current	Imp (A)	8.71
Open Circuit Voltage	Voc(V)	46.70
Short Circuit Current	Isc (A)	9.26

* Irradiance 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s

Mechanical Data

Number of Cells	144 Cells (6×24)
Dimensions of Module L*W*H (mm)	2094×1038×35mm (82.44×40.86×1.38 inches)
Weight (kg)	24.3 kg
Glass	High transparency solar glass 3.2mm (0.13 inches)
Backsheet	White
Frame	Silver, anodized aluminium alloy
J-Box	IP68 Rated
Cable	4.0mm² (0.006 inches²), 300mm (11.8 inches)
Number of diodes	3
Wind/ Snow Load	2400Pa/ 5400Pa*
Connector	MC Compatible

* For more details please check the installation manual

Temperature Ratings

Nominal Operating Cell Temperature (NOCT)	44±2°C
Temperature Coefficient of Isc	+0.06%/°C
Temperature Coefficient of Voc	-0.30%/°C
Temperature Coefficient of P _{MAX}	-0.39%/°C

Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC -(H)
Max Series Fuse Rating	15 A

Packaging Configuration

Module per box	31 pieces
Module per 40' container	682 pieces

Optional

Connector	<input checked="" type="checkbox"/> MC Original
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