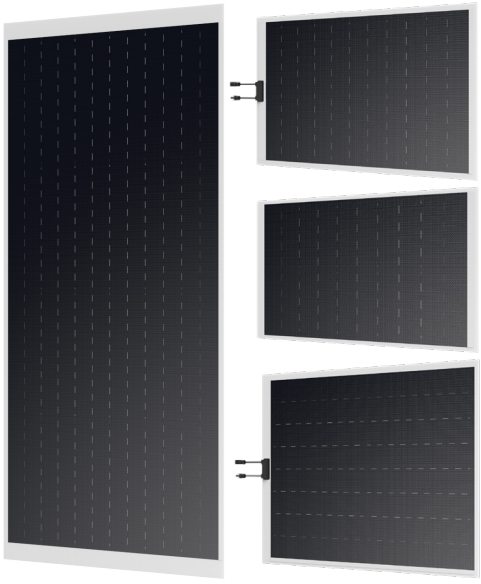
OPES
SOLAR MOBILITY

O.Motion Series

Made for the road



The O.Motion series is developed with a unique vehicle-first philosophy, ensuring reliability and top-tier performance both on and off the road. Solar panels on trucks, semi-trailers, camper vans and buses face specific challenges, such as vibrations or compliance with strict vehicle standards.
O.Motion is equally feasable for semi or full integration into the vehicle body.

We understand the distinct requirements of the automotive sector. With renowned industry and research partners and in-house testing facilities, we not only meet industry standards, we define them.

KEY FEATURES

- Best performance during partial shading
- Highest watt per square meter
- Lead-free connections
- Embossed and scratch-resistant
- Vibration-proof and long-lasting

PRELIMINARY DATASHEET

	OMO 95 R	OMO 125 F	OMO 165 F	OMO 460 R	OMO 500 R
Electrical Specifications					
Power Output-Pmax	95W	125W	165W	460W	500W
Voltage at Pmax-Vmp	8.61V	10.47V	18.71V	35.33V	37.79V
Current at Pmax-Imp	11.03A	11.94A	8.82A	13.02A	13.23A
Open Circuit Voltage-Voc	11.2V	13.3V	24.5V	45.5V	50.25V
Short Circuit Current-Isc	11.43A	12.56A	9.15A	13.71A	13.72A
Cell Type	Monocrystalline, Matrix Technology				
Cell Efficiency	>=23%				
Electrical Tolerance	-5~+10%				
STC	Irradiance 1000 W/m2, Cell Temperature 25 °C, Air Mass AM 1.5 *Measuring tolerance: ±3 %				
Mechanical Data					
Module Weight	1.6Kg	2.0Kg	2.5Kg	7.8Kg	8.5Kg
Module Dimensions	1000 x 515 x 3mm	1105 x 617 x 3mm	1100 x 790 x 3mm	1940 x 1230 x 3mm	2235 x1160 x 3mm
Junction box	Rear	Front	Front	Rear	Rear
Cable	1.1m; 2x4mm²	1.1m; 2x4mm²	1.1m; 2x4mm²	No cable	1.1m; 2x4mm²
Connector	MC4	MC4	MC4	No connector	MC4
Bending Radius	25°				
Operational Temperature	-40 to +85 °C				
Quality					
Product Warranty	2 Years				
Power Tolerance	10 Years / 80%				
Specific Tests	Vibration, salt spary, hail, high pressure cleaning, UV aging, thermal cycle, damp heat, humidity freeze and other specific tests				
Certificates	ISO 9001, ISO 14001, ISO 45001, IMDS listing on request				
System Data					
OSM HV 800 (1.5 KW) (No. of Strings x No. of serial connected Modules)*	3x5 or 4x5	3x4	3x2 or 4x2 or 5x2	3x1	3x1
Max PV Power 3 Ports	1,425W	1,500W	990W	1,380W	1,500W
Max PV Power 3 Ports + 1 Y Connector	1,900W	NA	1,320W	1,840W	NA
Max PV Power 3 Ports + 2 Y Connector	NA	NA	1,650W	NA	NA

SOLAR PANELS MADE FOR VEHICLES

Material Compatibility

The bond between the module and the vehicle surface is crucial for performance. To ensure optimal impact resistance, ventilation, and response to temperature, we conducted extensive testing of our panels in combination with different materials.

Cell Connections

Resistance to vibrations is a key factor in the extended lifespan of our flexible solar panels compared to conventional flexible solar panels. In the O.Motion series, the cells are connected with with a matrix and a significant larger bonding area .

Performance during shading

With our cell-connection, only the cells exposed to partial shading work less. The current flows around obstructed areas. Up to 90% more energy yield compared to regular solar modules in partial shading conditions of the module area.

Lightweight & Thickness

Our thin and lightweight panels comply with automotive regulations and offer excellent performance. In comparison to thin-film technology, our modules deliver up to 70% more power per m² while still benefitting from minimal drag. The vehicle height is barely affected.

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