CUSTOM SOLAR PANELS
DATASHEET

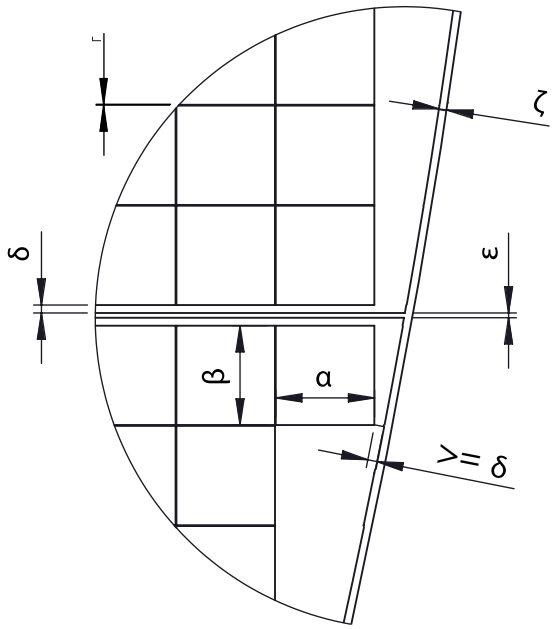
Mito Solar produces customizable PV modules optimised for mobile applications including marine, automotive, aerospace systems, and other high-end applications. The manufacturing capabilities support arbitrary shapes, curved surfaces, and application-specific power requirements.

DESIGN

The following values apply to configurations using Maxeon SunPower monocrystalline cells. For projects requiring alternative cell technologies (perovskite on silicon, GaAs, CIGS, HJT...), contact our team for specific values, as specifications will vary.

Cell type	Mono-Si IBC Maxeon SunPower
Cell dimensions [mm]	125 x 125
Thickness [mm]	1 - 6
Bend radius [mm]	≥300
Weight [kg/m2]	0,8 - 4,5
Safety Class (IEC 61730-1:2018)	Protective Class II

General Module Dimensions [mm]



α	125	Cell width
β	125	Cell height
Γ	2	Cell to cell
δ	8	Cell to module
ε	8	Module to module
ζ	8	Module to contour

Specifications per module size

	Single Cell Module**	Typical Module**	Max Sized Module**
Module Parameters			
Module Dimensions [mm]	141 x 141	522 mm × 776	800 x 1300
Number of cells	1	24 (4 x 6)	60 (6 x 10)
Electrical Specifications at STC*			
Max Power (Pmax) [Wp]	3,5	84	210
Max power Voltage Vmpp [V]	0,63	15,1	37,8
Max power Current Impp [A]	6,1	6,1	6,1
Open circuit voltage Voc [V]	0,73	17,5	43,8
Short circuit current Isc [A]	6,4	6,4	6,4
Insulation Rating [V]	1000V	1000V	1000V
Maximum reverse current [A]	6	6	6
Temperature Specifications			
Operating temperature [°C]	-40/+85	-40/+85	-40/+85
Temp. coeff. Pmax [%/°C]	-0,27	-0,27	-0,27
Temp. coeff. Voc [%/°C]	-0,236	-0,236	-0,236
Temp. coeff. Isc [%/°C]	0,058	0,058	0,058

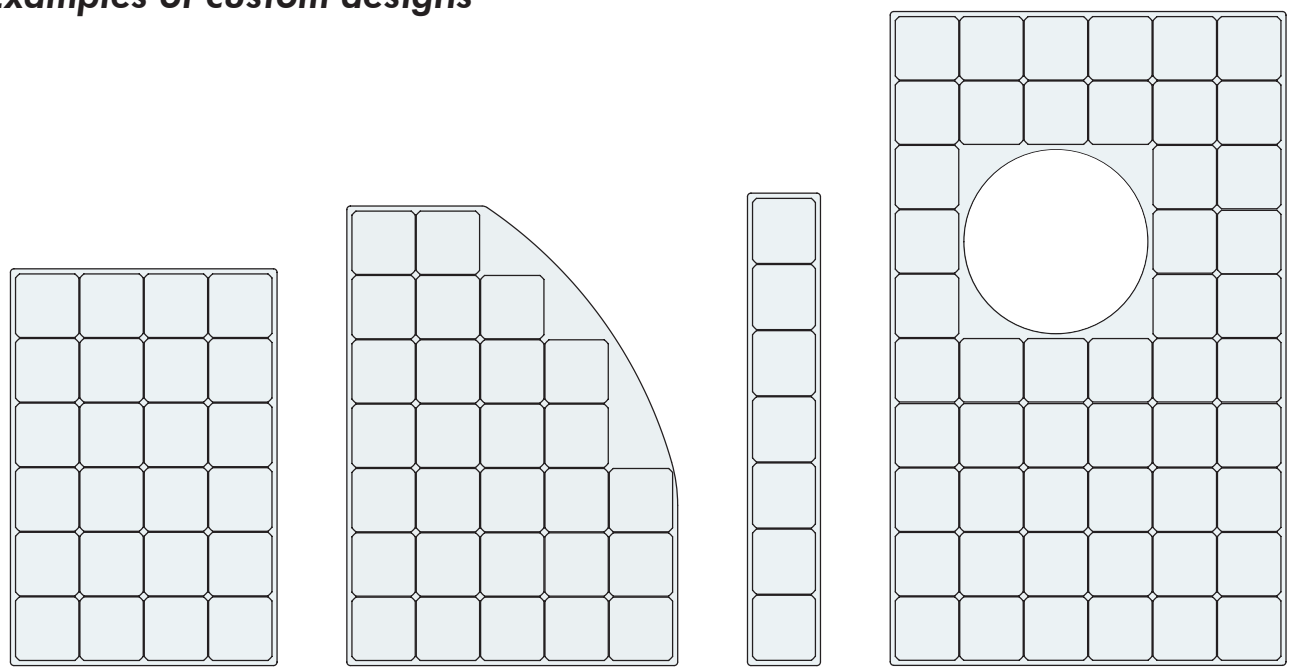
*STC = Standard Test Conditions: (a) light Spectrum for an Air Mass of 1.5; (b) irradiance of 1000 W/m2 with perpendicular incidence and (c) cell temperature of 25 °C. Measurements carried out according to the Standard IEC 61215 requirements.

** +/- 5% deviation in numbers.

Note: Detailed technical drawings of the installation surface are required. CAD files should include:

- Outline of the surface or module (preferred DXF)
- Junction box location (if possible)

Examples of custom designs



LAMINATION

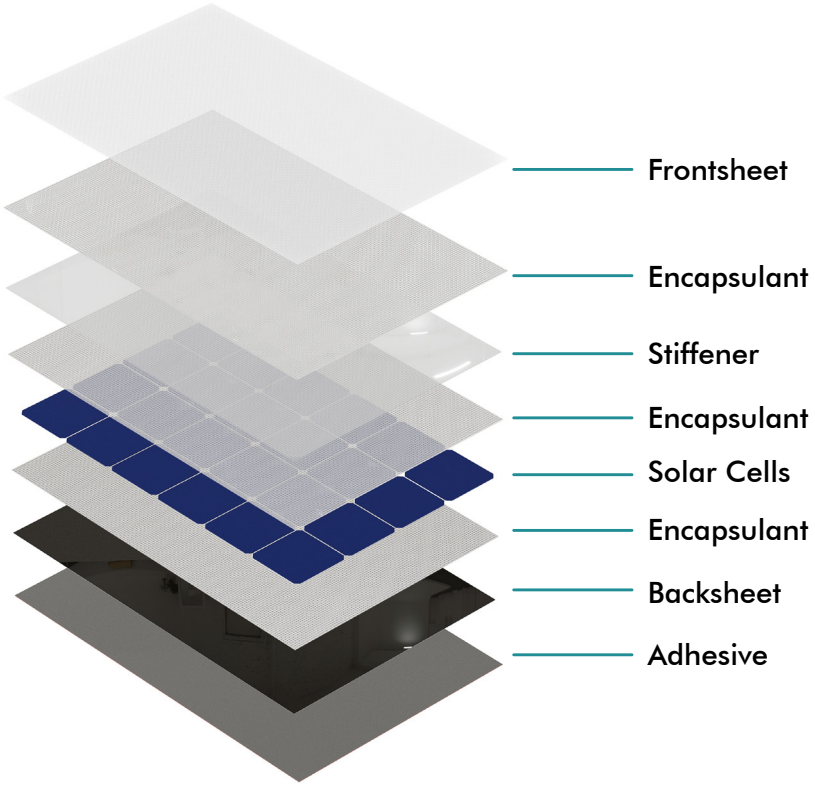


Image. Layers in a Mito Solar panel

Frontsheet	
EFTE	**PET**
Surface Finish	
Gloss or Matte	
Surface Structure	
Scratch resistant isogrid structure	Plain
Coloured Layer	
Silver, gray, black, blue, green, brown, white, gold...	
Backsheet options	
Black, white, transparent	

For high-end applications: SkylAR® frontsheet

Microstructured laminate with periodic pyramidal matrix surface pattern. Measured performance improvement under STC conditions:

- Enhanced light capture at oblique angles
- Absolute efficiency increase: 1.0%

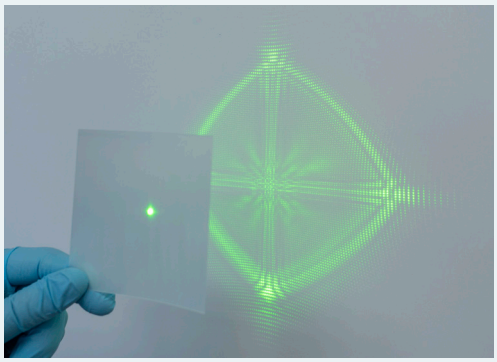


Image. Laser through the SkylAR® frontsheet

INTEGRATION

Since each integration is project-specific, our technical team provides system integration guidance to determine optimal mounting methods, electrical configuration, and connection systems for each application.

Junction box placement	Top, bottom, bare connectors (no box or cabling)
Cabling	Double insulated cables
Connectors	Amphenol MC4
Mounting	3M VHB double-sided adhesive, eyelets, polymer adhesive...
Sealent edge	Edges should have space for expansion and contraction and space is best filled with suitable sealant