

# TWIN CELL SOLAR MODULES SERIES WITH

# 21% EFFICIENCY.

Now Available

## 450w

Latest Technologies

**TWIN CELL | PERC | MBB**





# DESIGNED TO MAXIMIZE POWER AND PERFORMANCE OVER GENERATIONS.

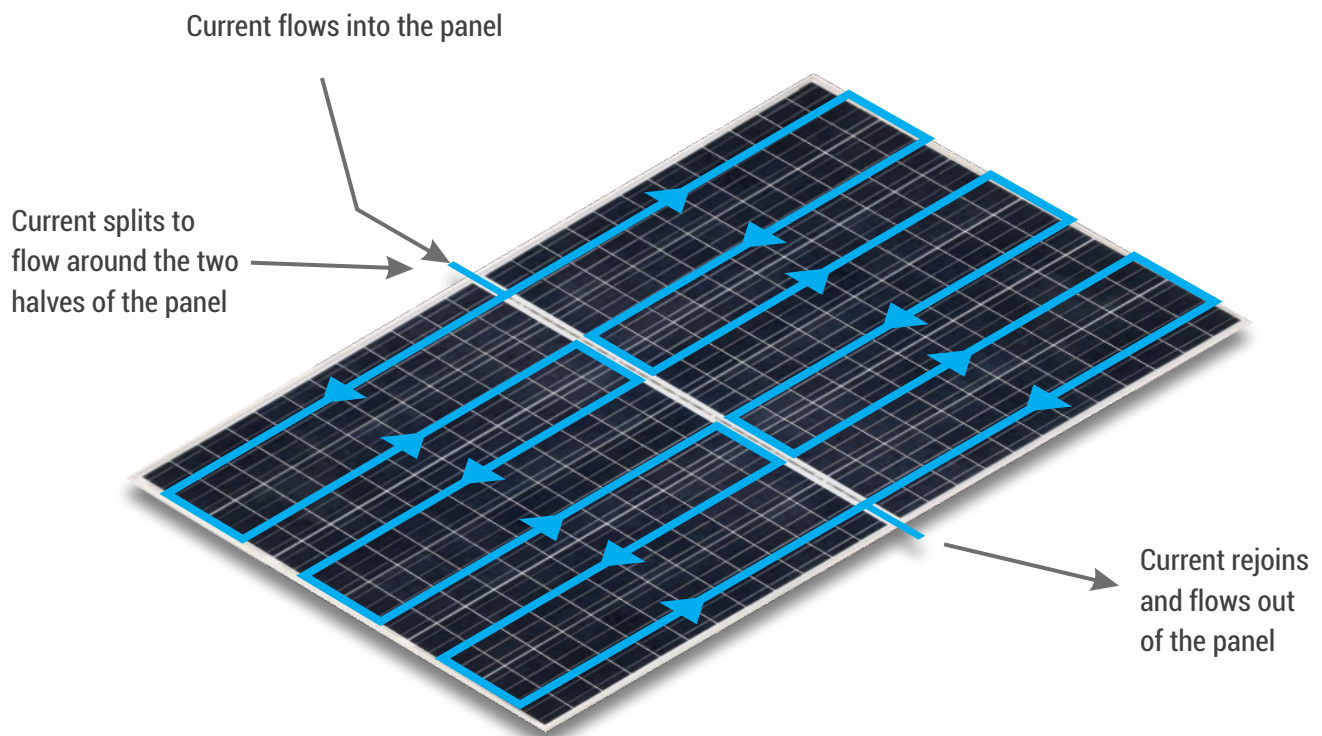
With this technology customer can boost their energy yield by generating the same power with fewer modules, or through generating higher system yield from the same surface area.

Twin cell series module are most effective and ideal choice where the space is limited and where the temperature are higher.



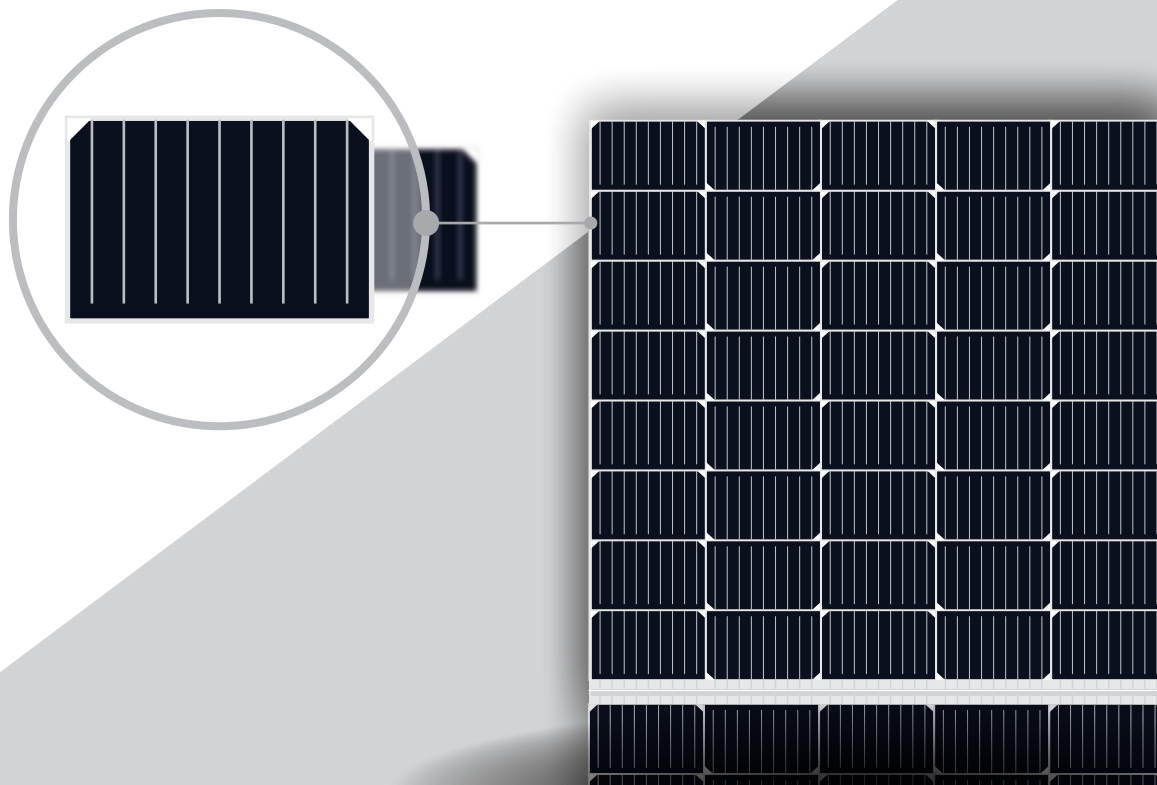
## FLOW OF ELECTRICITY IN TWIN CELL SERIES SOLAR MODULES.

The twin sections reduce internal resistance and ensure continued production of energy when partially shaded.

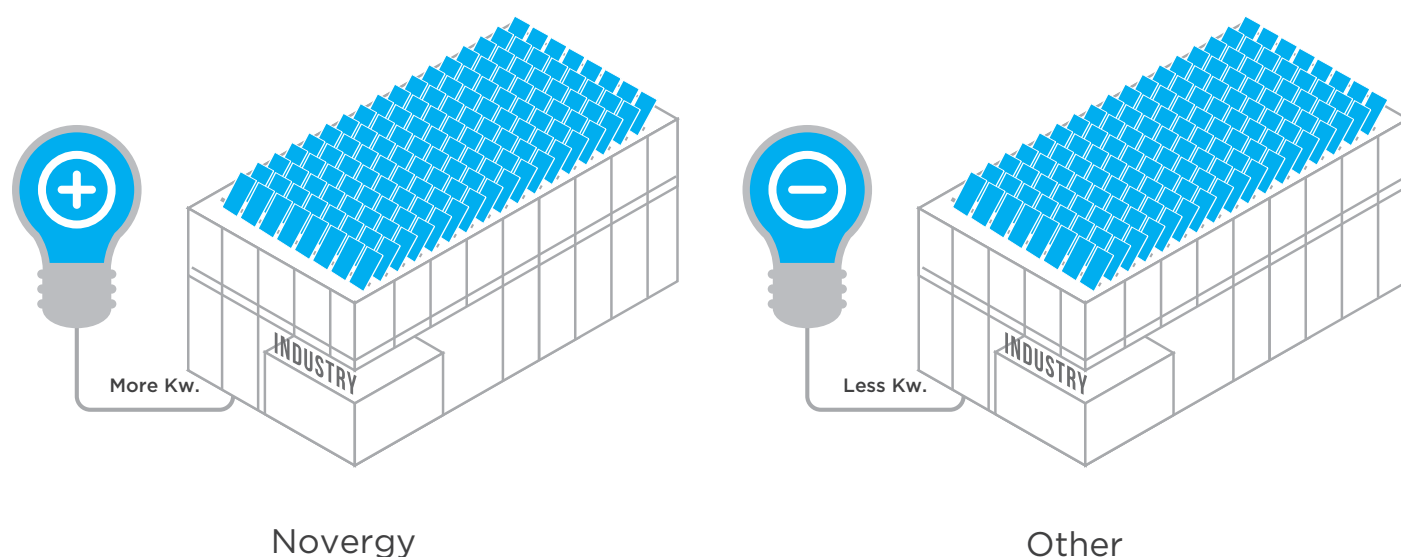


# WITH MULTI-BUSBAR TECHNOLOGY (MBB)\*

Our cell is equipped with a multi busbars.  
It means our modules provide a higher reliability  
and less internal cell resistance losses.



## GENERATES MORE SOLAR POWER IN LESSER SPACE.



## MORE POWER & MORE RELIABLE



Low power loss in cell connection



Better shading tolerance



Low NMOT:  $42 \pm 3^{\circ}\text{C}$   
Low Temperature Coefficient ( $P_{\text{max}}$ ):  $-0.35\%/^{\circ}\text{C}$



Lower hot spot temperature



Heavy snow load up to 5400 pa,  
wind load up to 3600 Pa\*

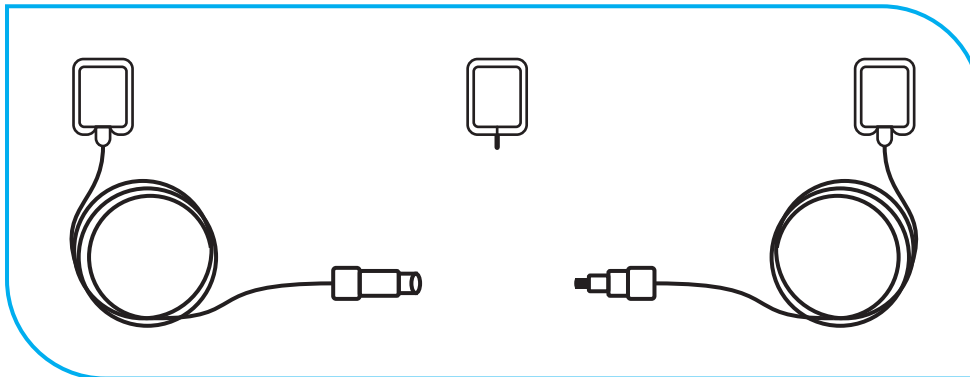


Minimizes micro-cracks



25 Year Power Output Warranty  
10 Year Product Warranty

## SPLIT JUNCTION BOX



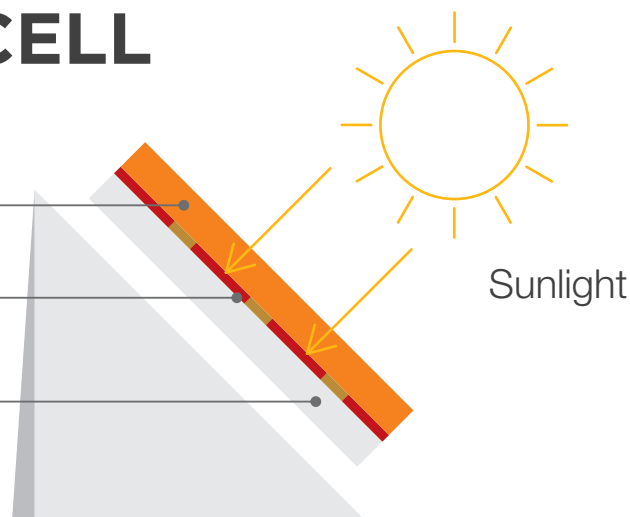
- Reduce temperature inside the junction box.
- Increase Panel Reliability and produces a power gain of 1 to 2 Wp per panel

## PERC SOLAR CELL

Silicon

Special nano coated  
power reflectorct

Alluminium  
back contact







# MONO PERC TWIN CELL SERIES

(72 Full Cells)

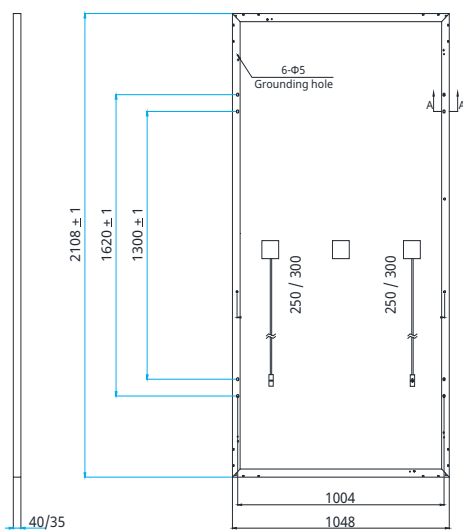
**MCAL-TC-Series**

High Power Series

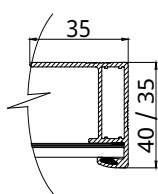
(with Multi Busbar Technology)

Model	MCAL-TC-430	MCAL-TC-435	MCAL-TC-440	MCAL-TC-445	MCAL-TC-450	MCAL-TC-455	MCAL-TC-460
Type of cells	Mono Crystalline (PERC)						
Numbers of cells	72 (Twin Cell)						
Wattage (Wp)	430	435	440	445	450	455	460
Voltage at max.power (Vmax)	42.47	42.72	42.98	43.13	43.29	43.42	43.59
Open Circuit Voltage (Voc)	51.27	51.53	51.79	52.04	52.29	52.52	52.75
Current at maximum power (Imax)	10.12	10.18	10.24	10.32	10.40	10.48	10.55
Short circuit current (Isc)	10.79	10.88	10.96	11.08	11.19	11.32	11.43
Frame	Anodized Aluminium Alloy						
Front Glass	Tempered 3.2 mm (Low iron solar glass)						
Junction Box	IP 68						
Cable	4 mm <sup>2</sup> PV cable						
Connector	MC4 Series						
Number of Diode	3 / 6						
Dimensions (mm)	2108 x 1048 x 35 / 40 mm						
Max Series fuse rating	20 A						
Weight (Kg)	22.5						
Operating temperature (Deg.C)	-40°C to + 85°C						
Application Class	Class A						
Maximum System Voltage	1500 VDC						
Temp. Coefficient's	Power = -0.35%/°C Voltage = -0.30%/°C Current = +0.05%/°C						
NOCT	45 +/- 2° C						
Maximum Load	5400 Pa						

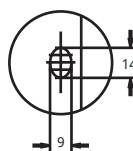
Rear View



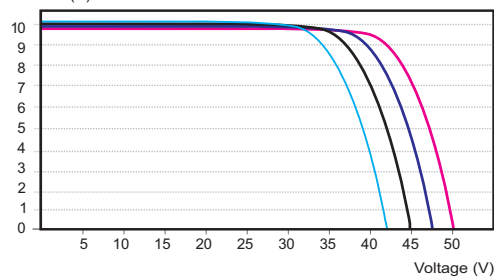
Frame Cross Section A-A



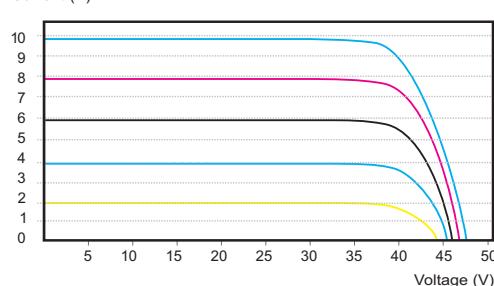
Mounting Hole



Current (A)



Current (A)



Specifications are subject to change without prior notice.



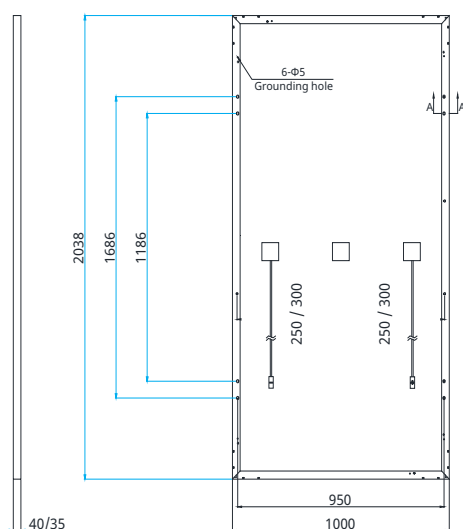
# MONO PERC TWIN CELL SERIES

(72 Full Cells)

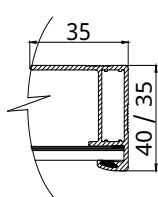
## MCAL-TC-Series

Model	MCAL-TC-390	MCAL-TC-395	MCAL-TC-400	MCAL-TC-405	MCAL-TC-410	MCAL-TC-415
Type of cells	Mono Crystalline (PERC)					
Numbers of cells	72 (Twin Cell)					
Wattage (Wp)	390	395	400	405	410	415
Voltage at max.power (Vmax)	40.4	40.6	40.8	41.0	41.2	41.4
Open Circuit Voltage (Voc)	48.2	48.4	48.6	48.8	49.0	49.2
Current at maximum power (Imax)	9.66	9.73	9.80	9.88	9.95	10.02
Short circuit current (Isc)	10.17	10.25	10.33	10.41	10.50	10.57
Frame	Anodized Aluminium Alloy					
Front Glass	Tempered 3.2 mm (Low iron solar glass)					
Junction Box	IP 68					
Cable	4 mm <sup>2</sup> PV cable					
Connector	MC4 Series					
Number of Diode	3 / 6					
Dimensions (mm)	2038 x 1000 x 35 / 40 mm					
Max Series fuse rating	20 A					
Weight (Kg)	22.5					
Operating temperature (Deg.C)	-40°C to + 85°C					
Application Class	Class A					
Maximum System Voltage	1500 VDC					
Temp. Coefficient's	Power = -0.35%/°C Voltage = - 0.29% /°C Current = +0.05% /°C					
NOCT	45 +/- 3° C					
Maximum Load	5400 Pa					

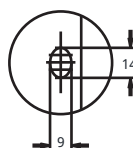
Rear View



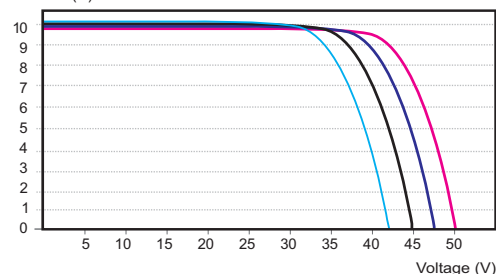
Frame Cross Section A-A



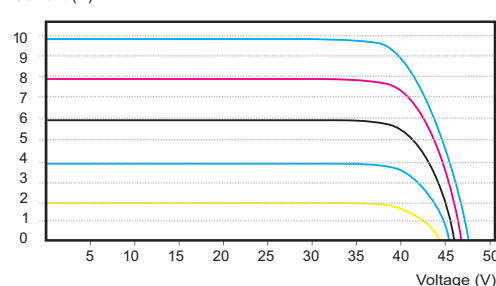
Mounting Hole



Current (A)



Current (A)



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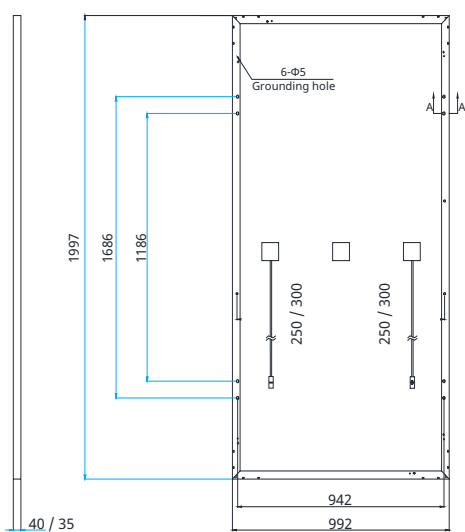
# POLY PERC TWIN CELL SERIES

(72 Full Cells)

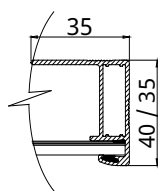
## PCAL-TC-Series

Model	PCAL-TC-335	PCAL-TC-340	PCAL-TC-345	PCAL-TC-350	PCAL-TC-355	PCAL-TC-360
Type of cells	Poly Crystalline					
Numbers of cells	72 (Twin Cell)					
Wattage (Wp)	335	340	345	350	355	360
Voltage at max.power (Vmax)	38.2	38.4	38.6	39.2	39.4	39.6
Open Circuit Voltage (Voc)	45.7	45.9	46.1	46.6	46.8	47
Current at maximum power (Imax)	8.77	8.86	8.94	8.94	9.01	9.09
Short circuit current (Isc)	9.28	9.36	9.44	9.51	9.58	9.66
Frame	Anodized Aluminium Alloy					
Front Glass	Tempered 3.2 mm (Low iron solar glass)					
Junction Box	IP 68					
Cable	4 mm <sup>2</sup> PV cable					
Connector	MC4 Series					
Number of Diode	3 / 6					
Dimensions (mm)	1997 x 992 x 35 mm					
Max Series fuse rating	20 A					
Weight (Kg)	22.5					
Operating temperature (Deg.C)	-40° C to + 85° C					
Application Class	Class A					
Maximum System Voltage	1500 VDC					
Temp. Coefficient's	Power = -0.35%/°C Voltage = - 0.31% /°C Current = +0.05% /°C					
NOCT	45 +/- 3°C					
Maximum Load	5400 Pa					

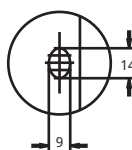
Rear View



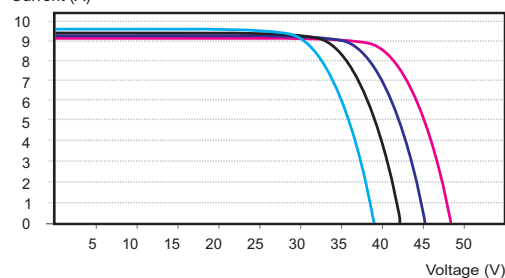
Frame Cross Section A-A



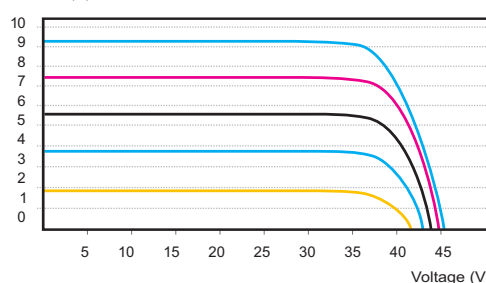
Mounting Hole



Current (A)



Current (A)



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