



ECOSHIELD
TO A BETTER FUTURE

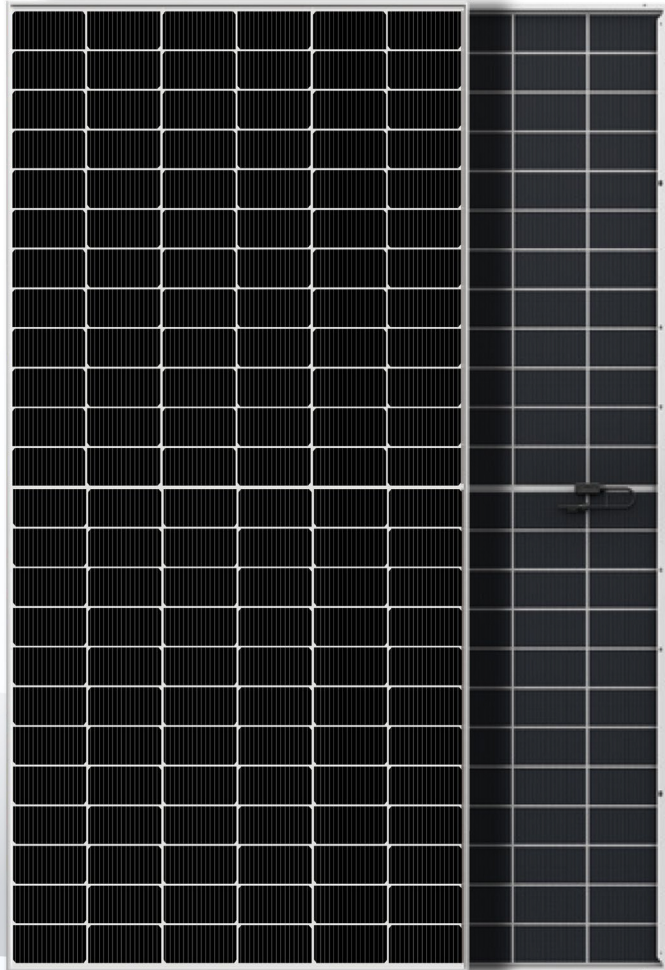
Ecoshield Solar Panel

TOPCon Mono-crystalline PV Module

182R Cell-16BB | Non-destructive Cut | Bifacial

Module Type: Mono Solar Panel 600W

590W-610W



High Power High Compatibility

Outstanding performance in weak-light conditions, lower operating temperature

Different types of modules are suitable for various application scenarios



Product
Warranty



Performance Warranty
(Monofacial)



Performance Warranty
(Bifacial)

www.ecoshieldfi.com

Mono-crystalline Solar PV Modules

**M182R
TOPCon**
590-610W
24.8%

Module efficiency

Mono Solar Panel 600W

TOPCon Mono Bifacial Module

Electrical Specifications

Module Type		Mono Solar Panel 600W		
STC: AM1.5 Temperature 25°C Irradiance 1000 W/m ²	Peak Power(P _{max})±3%	(W)	590-610	
	Power Tolerance	(W)	0~+5	
	Max.Power Voltage(V _{mp})	(V)	44.56	
	Max.Power Current(I _{mp})	(A)	13.69	
	Open-circuit Voltage(V _{oc})±3%	(V)	52.18	
NMOT: AM1.5 Temperature 20°C Wind speed 1m/s Irradiance 800 W/m ²	Short-circuit Current(I _{sc})±3%	(A)	14.48	
	Peak Power(P _{max})±3%	(W)	468	
	Max.Power Voltage(V _{mp})	(V)	40.68	
	Max.Power Current(I _{mp})	(A)	11.51	
	Open-circuit Voltage(V _{oc})	(V)	47.36	
Short-circuit Current(I _{sc})		(A)	12.18	
Operating Temperature		(°C)	-40~+85	
Max. Series Fuse Rating		(A)	30	
Max. System Voltage(DC)		(V)	1500 (IEC)	

Mechanical Specifications

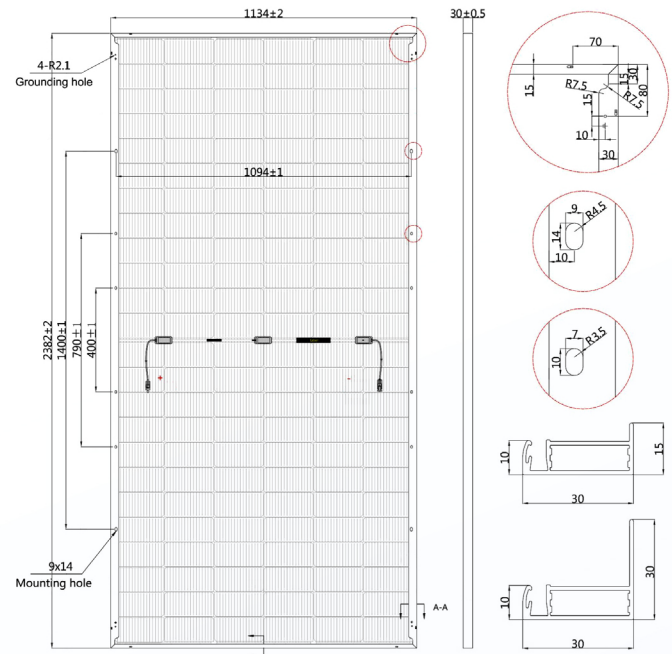
Solar Cells	N-Mono-182.2*95.8mm
Arrangement	Type-6*12*2
Front Glass	2.0mm tempered glass
Back Glass	2.0mm tempered glass with black mesh
Frame	Anodized aluminium alloy
Junction Box	IP68, 3 diodes
Cables	4.0mm ² photovoltaic cables
Connectors	MC4 compatible/IP68
Maximum Load Capacity	Snow-5400Pa/Wind-2400Pa
Safety Rate	Class II (IEC)
Fire Rate	Class C (TUV)

Packing Configuration

Package Weight & Size		1220Kg/pallet & 2400*1130*1265mm		
20'GP Container	2 pcs/carton	124 cartons/20'GP	248 pcs	
40'HQ Container	37 pcs/pallet	20pallets/40'HQ	740 pcs	
13.5m Land Truck	37 pcs/pallet	22 pallets/truck	814 pcs	

Dimensions of PV Module(mm)

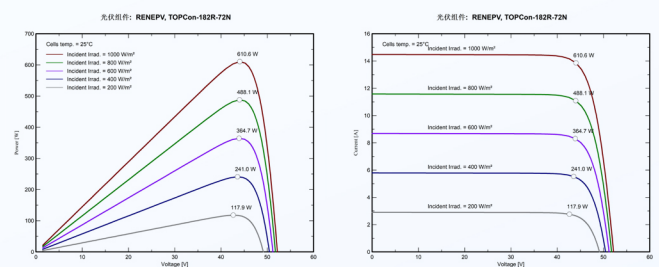
Module Dimensions	2382(±2)*1134(±2)*30mm
Module Weight	32.0 kg(±3%)



Temperature Characteristics

Temperature Coefficient (P _{max})	δ[%/°C]	-0.30
Temperature Coefficient (V _{oc})	β[%/°C]	-0.25
Temperature Coefficient (I _{sc})	α[%/°C]	+0.05
Nominal Operating Cell Temperature	NMOT	45°C±2°C

I-V & P-V Curves



Current-Voltage Characteristic

Power-Voltage Characteristic

Different Backside Power Gain

Power Gain		5%	15%	25%
Maximum Power(P _{max})	(W)	661.5	724.5	787.5
Max.Power Voltage(V _{mp})	(V)	44.76	44.76	44.76
Max.Power Current(I _{mp})	(A)	14.78	16.19	17.59
Open-circuit Voltage(V _{oc})	(V)	52.92	52.92	52.92
Short-circuit Current(I _{sc})	(A)	15.82	17.33	18.84