



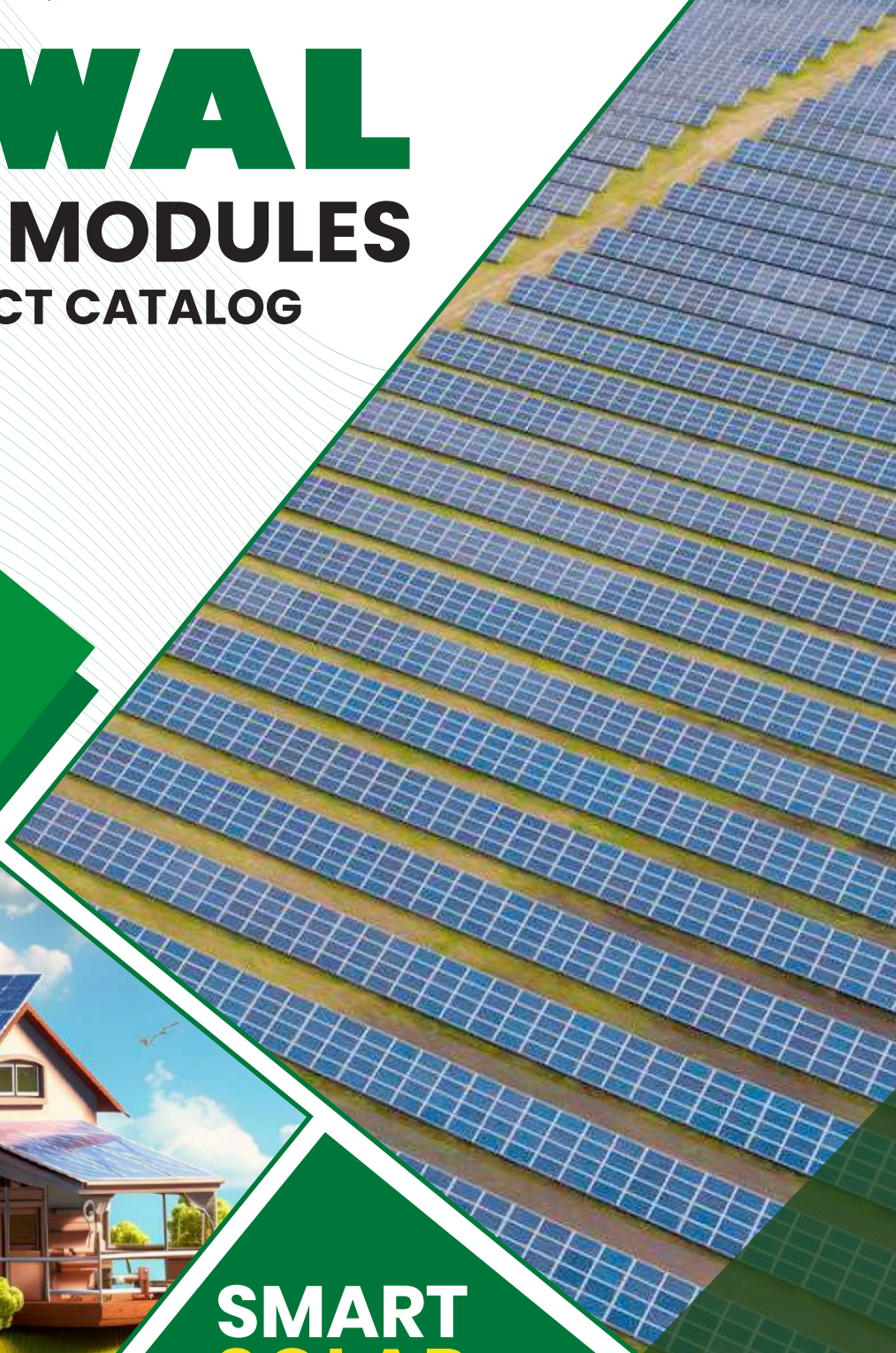
RENEWABLE ENERGY  
Greener | Cleaner | Smarter  
*True Partner !*



# OSWAL

## SOLAR MODULES

### PRODUCT CATALOG



SMART  
**SOLAR**  
SOLUTION



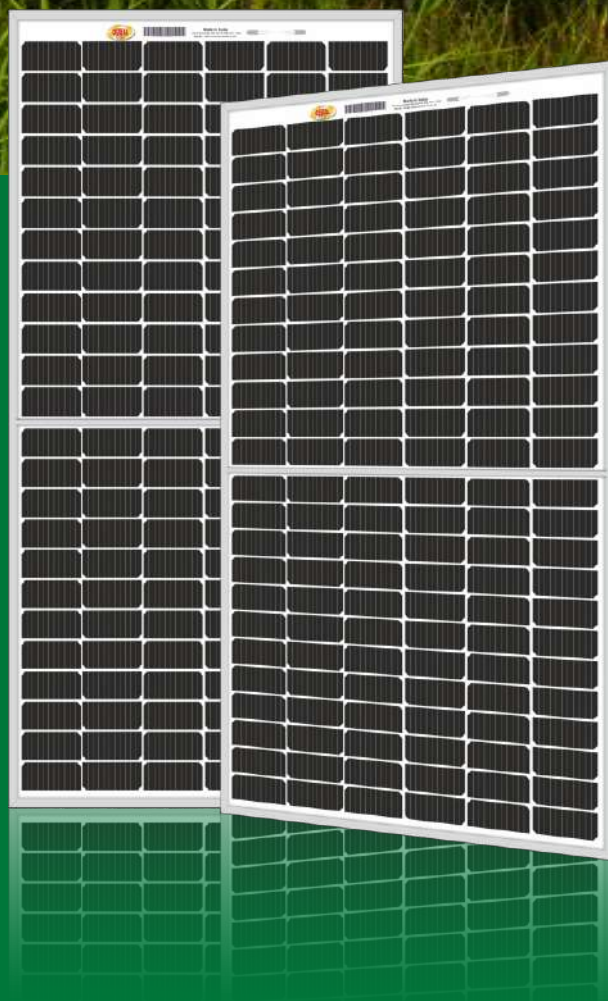


# INTRO

Oswal Solar Structure is a pioneer in the field of manufacturing company, which encompasses in Solar PV modules. Entrenched in December 2023, Oswal Solar Structure dedicated to revolutionizing the renewable energy sector through the production of high-quality, durable, and efficient solar panels. At Oswal Solar Structure, we understand the need of the hour for transforming into a clean energy source and reduce dependency on the fossil fuels. Our Solar PV modules adopts the power of the sun to generate clean, renewable energy, which offers not only environmentally friendly but also cost-effective solutions for residential, commercial, and industrial applications as well.

We aim to collaborate in smart & intelligent ways bringing together the talents that yield the best possible results which are effective harness in the energy sector. Our Solar systems are suitable for a wide range of uses, including large-scale of commercial projects and residential rooftops. Oswal focuses on 100% quality and developing new heights with stable performance. Our dedicated team is committed to deliver the top quality power solutions that ensure uninterrupted power supply, offering peace of mind during outages.

*Changing the face of India.*





# Certifications







### One-stop for all your solar power needs.

Residential and Commercial Solar Rooftop Solutions.  
 Complete turnkey services for solar systems.  
 Grid-tied (On-Grid) System.

### Our Service

Rooftop Solar System Installation Grid-tied Solar System with net metering, gross metering, or zero export options.  
 PV modules, inverters, and other solar equipment.





*Save More. Power More. Go Solar with Oswal.*



## WE PROVIDE...

- On-grid large-scale utility systems
- On-grid rooftop systems for residential, industrial, and commercial use
- Floating solar power applications



**CALL NOW: 1800 120 1882**



## Our Solar Modules

**MONO PERC HALF-CUT**  
**OSWAL 500 Wp - 555 Wp**  
Mono-Facial M10

**MONO PERC HALF-CUT**  
**OSWAL 500 Wp - 555 Wp**  
Bi-facial M10

## Our Services



9\*6 Customer  
care access  
support  
operation



Single point of  
support for  
customer



Technical  
support



Always  
ready to  
support



Onsite Service  
Solutions

# OSWAL SOLAR MODULES

## MONO PERC HALF-CUT











### 500 Wp - 555 Wp

**Mono-Facial M10**

#### THE INDUSTRY'S BENCHMARK

Oswal Solar is an internationally renowned leading solar energy cost effective befitting solutions provider having core competency in high efficiency PV module manufacturing and providing wide range EPC solutions. PV modules are the best in class in terms of power output and long-term reliability.

#### PRODUCT CERTIFICATES

 IEC CB Scheme	 IEC 61215 Design Qualification	 IEC 61730-1 / 2 Safety Qualification	 IS 14286 BIS Qualification	 Better Performance
 ISO 9000 Certified Mfg. Process	 ISO 14000 Environmental Mgt. System	 M10 - Cell	 Split type - JB	 Better Performance

MADE IN INDIA



27 Years Warranty for linear performance



Product warranty on materials and workmanship

#### PRODUCT | KEY FEATURES



Anti-Reflective (AR) coated glass to enhance solar energy



Excellent module efficiency with Passivated Emitter Rear Cell (PERC) to achieve higher energy conversion efficiency



Positive power tolerance with current binning to prevent mismatch losses



Pre-&Post electroluminescence (EL) High-Resolution Camera to detect hidden defects in the structure of PV Panels such as cell cracks and diode failures



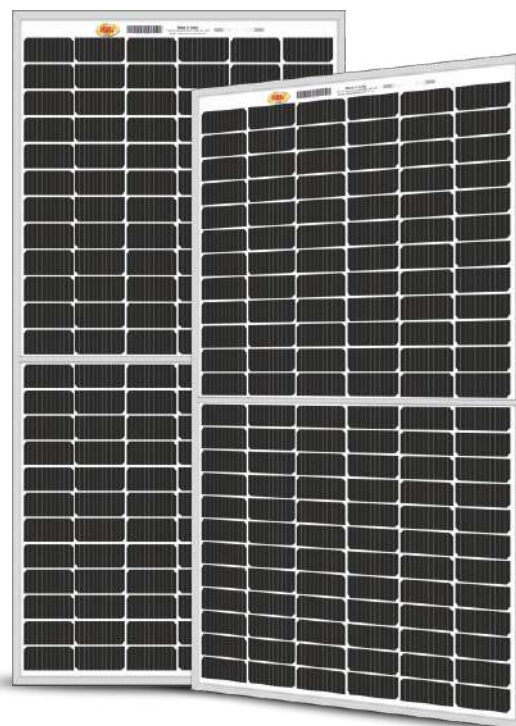
IP68 Junction Box ensures long-term endurance, even in harsh environmental conditions



Hi-Pot test requires to assess the stress on electrical equipment for safety and quality considerations



Multi-Busbar (MBB) half-cut cell technology brings stronger resistance to shade and lower risk of hot spot





# TECHNICAL DATA

PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC) (Irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5, and cell temperature of 25°C)

Nominal Maximum Power (P <sub>max</sub> )	540W	545W	550W
Power Tolerance	+ 4.99 W, - 0W	+ 4.99 W, - 0W	+ 4.99 W, - 0W
Optimum Operating Voltage (V <sub>mp</sub> )	41.86 V	42.01 V	42.14 V
Optimum Operating Current (I <sub>mp</sub> )	12.91 A	12.98 A	13.07 A
Open Circuit Voltage (V <sub>oc</sub> )	49.78 V	49.91 V	50.06 V
Short Circuit Current (I <sub>sc</sub> )	13.53 A	13.59 A	13.65 A
Module Efficiency	20.94 %	21.10 %	21.32 %
Fill Factor	80.17 %	80.35 %	80.48 %

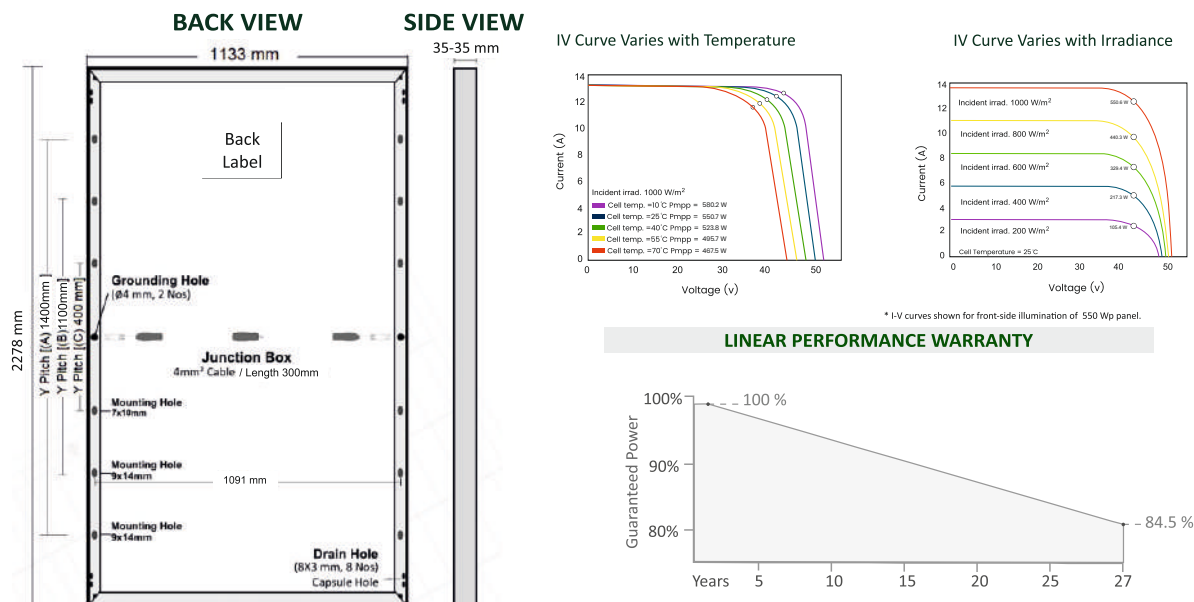
Note: Power measurement uncertainty: <±3%

PERFORMANCE UNDER NOCT (NOCT irradiances of 800 W/m<sup>2</sup>, ambient temperature of 20°C, Wind speed 1m/s, Average NOCT = 45.25°C)

Maximum Power (P <sub>max</sub> )	406.7 W	410.4W	412.2 W
Optimum Operating Voltage (V <sub>mp</sub> )	38.5 V	38.7 V	38.94 V
Optimum Operating Current (I <sub>mp</sub> )	10.56 V	10.59 V	10.62 V
Open Circuit Voltage (V <sub>oc</sub> )	46.5 V	46.7 V	46.83 V
Short Circuit Current (I <sub>sc</sub> )	11.16 A	11.22 A	11.15 A

## Mechanical Specifications

Dimensions (L x W x T in mm)	2278 x 1133 x 35
Weight (Kg)	27.2
Cell Type / No. Of cell	Mono PERC Half-Cut/144 Cell (12*6, 12*6)
Frame	Silver Anodized Aluminum Alloy (6005, Temper T6, Silver Colour)
Front Cover	ARC Coated Low-Iron Tempered Glass (3.2 mm Thick)
Encapsulate	Ethylene Vinyl Acetate (EVA) Sheet - PID free and UV Resistant
Back Sheet	Fluoro-polymer Based Composite Film / Polymer Based Composite Film
Junction Box	Split Junction Box (3 units with bypass diode) - Weatherproof (IP68), MC4 Compatible Connectors
Cable	4 sq. mm, 300 mm. / 400 mm. Length (As per Customer Requirement)
Application Class Rating	Class A
Safety Class Rating	Class II
Mechanical Load Test (as per IEC & UL)	5400 Pa-front, 2400 Pa-back
Mounting Holes Pitch (Y)-mm	[A] 1400, [B] 1100, [C] 400
Mounting Holes Pitch (X)-mm	1091



\*All dimensions are in mm with ± 2 mm tolerance

graphics shown here in above are reference purpose only

MAXIMUM OPERATING CONDITIONS	TEMPERATURE COEFFICIENTS	STACKING STANDARD	19FT	32FT
Operating Temperature: -40°C to +85°C	Current α(I <sub>sc</sub> ) : 0.0271 %/ °C	No. of Modules	224 Nos	448Nos
Maximum System Voltage: 1500V	Voltage β(V <sub>oc</sub> ) : -0.2355 %/ °C	No of Pallets	8 Pallets	16 Pallets
Maximum Series Fuse Rating: 25A	Power γ(P <sub>max</sub> ) : -0.3164 %/ °C	Modules per Pallet / Weight	28 Nos/800 Kgs.	28 Nos/800 Kgs.
		Pallet dimensions	2300*1010*1210	2300*1010*1210

**Caution:** Please read the safety and installation instructions before using this product.

**Warranty:** Linear power warranty for 30 years, with degradation of up to 2% in the first year and 0.6% per year from year 2 to year 30. Please read the Oswal warranty documents thoroughly.  
**Disclaimer:** Specifications included in this datasheet are subject to change without prior notice due to ongoing innovation in product development and R&D activities. OSWAL SOLAR reserves the right to make any adjustments to the information described here. The data contained in this specification do not represent the performance of an individual module. T&C Apply.

# OSWAL SOLAR MODULES

## MONO PERC HALF-CUT

### 500 Wp - 555 Wp

**Bifacial M10**

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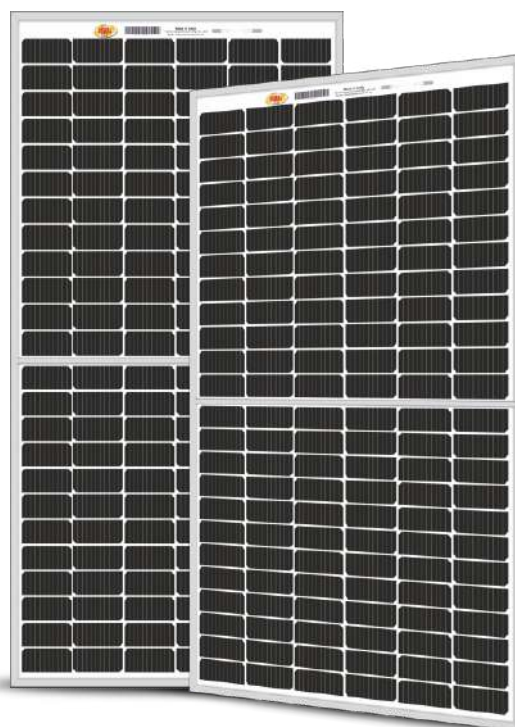
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# TECHNICAL DATA

ELECTRICAL PERFORMANCE [Note: Power tolerance: 0 ~ +4.99 W. Power measurement uncertainty:  $\pm 3\%$ . Average value of NOCT:  $44.28 \pm 2^\circ\text{C}$ ]

## ELECTRICAL CHARACTERISTICS\*

	STC	NOCT	STC	NOCT	STC	NOCT
Nominal Maximum Power (Pmax)	540 W	406.7 W	545 W	410.4 W	550 W	412.20 W
Optimum Operating Voltage (Vmp)	41.86 V	38.50 V	42.01 V	38.70 V	42.14 V	38.94 V
Optimum Operating Current (Imp)	12.91 A	10.56 A	12.98 A	10.59 A	13.07 A	10.62 A
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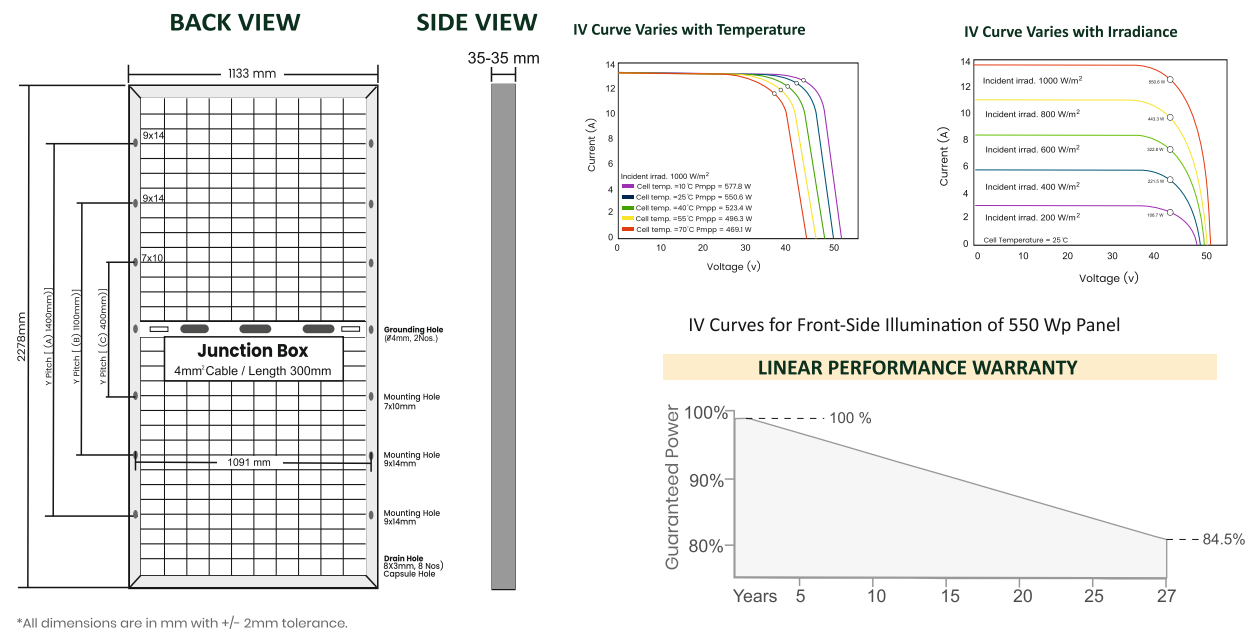
## BIFACIAL OUTPUT – BACKSIDE POWER GAIN @ STC\* [Bifaciality Factor: $75\% \pm 10\%$ ]

[Note: The bifacial gain depends on the power plant design and conditions. Electrical component ratings should be selected based on the actual bifacial gain at the site (module currents indicated below).]

15%	Nominal Maximum Power (Pmax)	621 W	627 W	632 W
	Module Short-Circuit Current / Efficiency	24.12 %	24.35 %	24.56 %
20%	Nominal Maximum Power (Pmax)	648 W	654 W	660 W
	Module Short-Circuit Current / Efficiency	25.17 %	25.41 %	25.63 %
25%	Nominal Maximum Power (Pmax)	675 W	681 W	687 W
	Module Short-Circuit Current / Efficiency	26.22 %	26.46 %	26.70 %

## Mechanical Specifications

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Mounting Holes Pitch (Y)-mm	[A] 1400, [B] 1100, [C] 400
Mounting Holes Pitch (X)-mm	1091



MAXIMUM OPERATING CONDITIONS		TEMPERATURE COEFFICIENT		STACKING STANDARD	32FT	40FT
Operating Temperature :	-40°C to +85°C	Current α(Isc) :	0.0286%/°C	No. of Modules :	448Nos	616Nos
Maximum System Voltage :	1500V	Voltage β(Voc) :	-0.2488%/°C	No of Pallets:	16 Pallets	22 Pallets
Maximum Series Fuse Rating :	25A	Power γ(Pmax) :	-0.3290%/°C	Modules per Pallet / Weight :	28 Nos/800 Kgs.	28 Nos/800 Kgs.
				Pallet dimensions:	2300*1010*1210	2300*1010*1210

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# Big Power, Bold Technology.

# Our 1.2GW TopCon

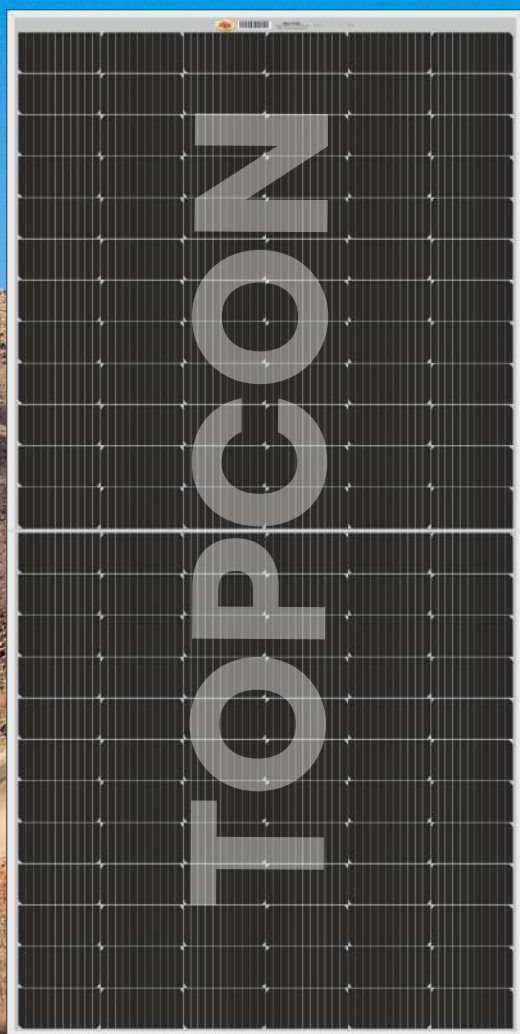
## Solar Panels are Launching Soon!



30 Years Warranty for  
linear performance



Product warranty on  
materials and workmanship



# 1.2<sup>GW</sup> TOPCON



Better Performance in Low Light  
Conditions Performance



Excellent Module Efficiency  
with Automation



Positive Power Tolerance  
With Current Binning to Prevent  
Mismatch Losses



Pre and Post EL Checking with High  
Resolution Camera



IP68 Junction Box for long  
Term Endurance



100% High Voltage Testing  
to Ensure Safety



## Solar Energy Solutions



Industrial Solar



Residential Rooftop Solar



Solar R&D Support System



Solar Business Models



AC Solar Plants



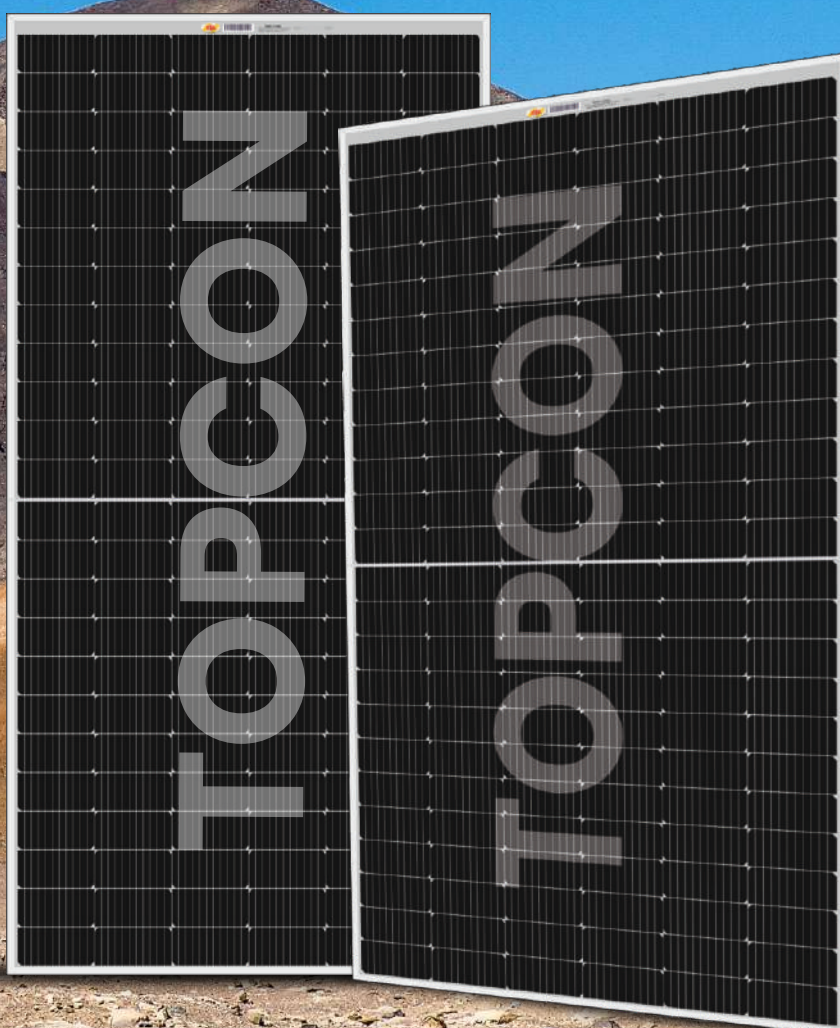
Agriculture Solar (Water Pumps)



Agricultural Solutions (VFD-based Flour Mill, Oil expellers, and Others)



Commercial Solar







# OSWAL

RENEWABLE ENERGY

Greener | Cleaner | Smarter

*True Partner !*



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