

OSWAL SOLAR MODULES

MONO PERC HALF-CUT











500 Wp - 555 Wp

Mono (Non-DCR) Series

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

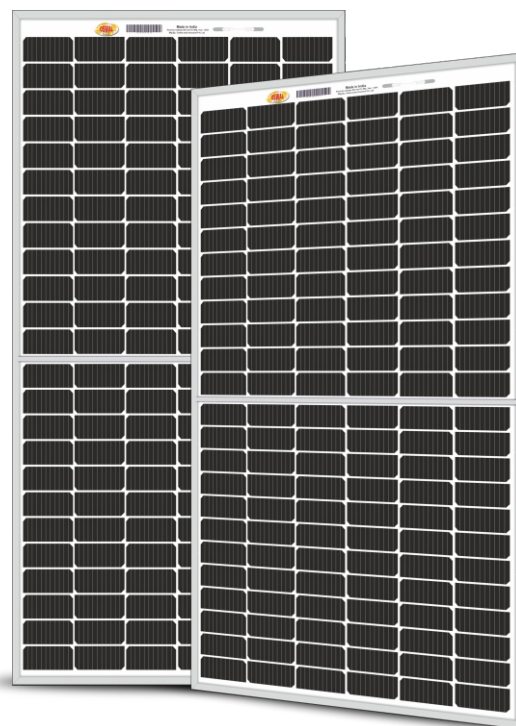
MADE IN INDIA

30 YEAR 30 Years Warranty for linear performance

12 YEAR 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/m², spectrum AM 1.5, and cell temperature of 25°C)

Model Number	OSWAL540MPN144	OSWAL545MPN144	OSWAL550MPN144
Nominal Maximum Power (Pmax)	540W	545W	550W
Power Tolerance	<-----	0 ~ +5 W	----->
Optimum Operating Voltage (Vmp)	41.86 V	42.01 V	42.14 V
Optimum Operating Current (Imp)	12.91 A	12.98 A	13.07 A
Open Circuit Voltage (Voc)	49.78 V	49.91 V	50.06 V
Short Circuit Current (Isc)	13.53 A	13.59 A	13.65 A
Module Efficiency	20.94 %	23.13 %	21.32 %
Fill Factor	80.17 %	80.35 %	80.48 %

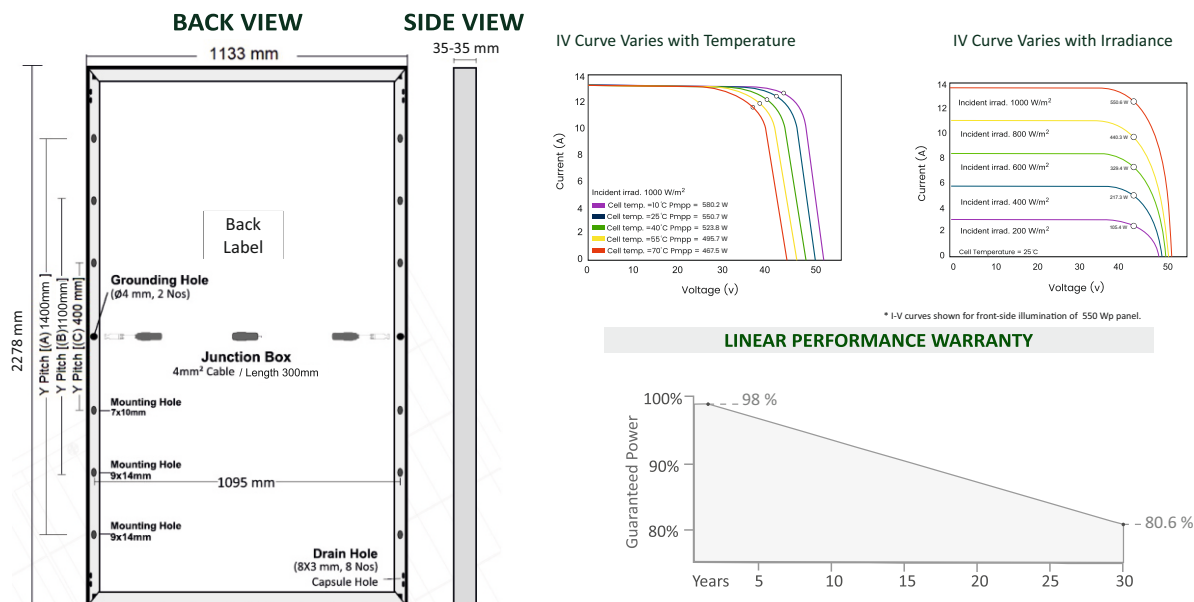
Note: Power measurement uncertainty: <±3%

PERFORMANCE UNDER NOCT (NOCT irradiances of 800 W/m², ambient temperature of 20°C, Wind speed 1m/s, Average NOCT = 45.25°C)

Maximum Power (Pmax)	406.7 W	410.4W	412.2 W
Optimum Operating Voltage (Vmp)	38.5 V	38.7 V	38.94 V
Optimum Operating Current (Imp)	10.56 V	10.59 V	10.62 V
Open Circuit Voltage (Voc)	46.5 V	46.7 V	46.83 V
Short Circuit Current (Isc)	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)	28.6
Cell Type / No. Of cell	Mono PERC Half-Cut/144 Cell (12*6, 12*6)
Frame	Silver Anodized Aluminum Alloy (6063, 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
Cable	4 sq mm, 300 mm Length
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	1095



*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(Isc) : 0.0271 %/ °C	No. of Modules	192 Nos	432Nos
Maximum System Voltage: 1500V	Voltage β(Voc) : -0.2355 %/ °C	No of Pallets	8 Pallets	16 Pallets
Maximum Series Fuse Rating: 25A	Power γ(Pmax) : -0.3164 %/ °C	Modules per Pallet / Weight	24 Nos/730 Kgs.	27 Nos/820 Kgs.
		Pallet dimensions	2320*1000*1275	2320*1130*1275

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.