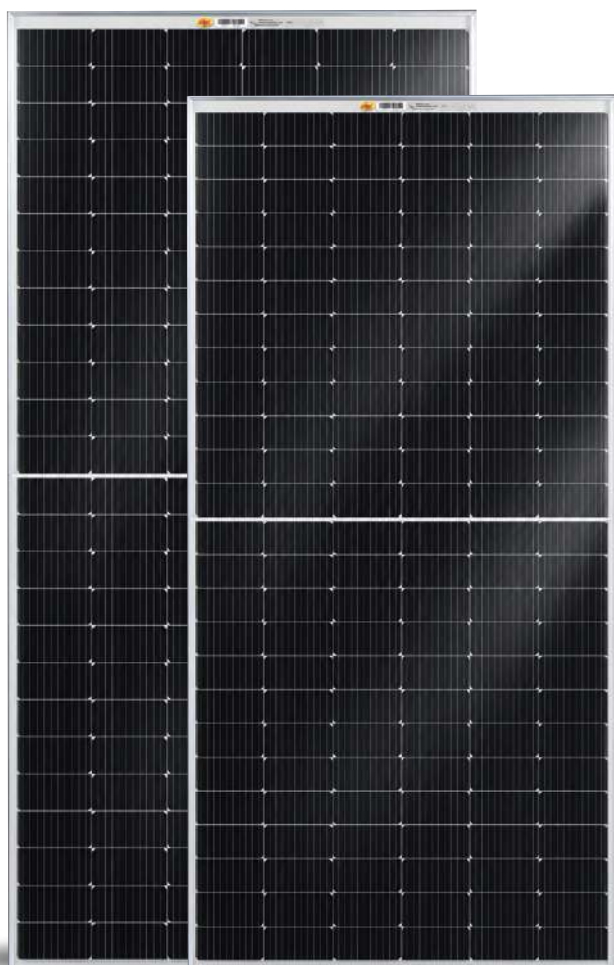




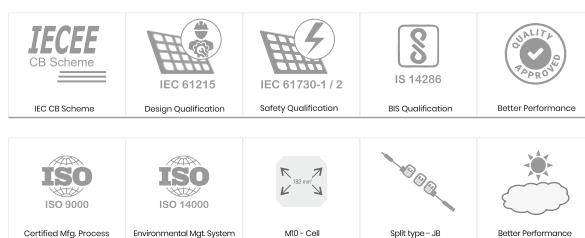
600 Wp - 640 Wp

**N-type TOPCon Dual Glass
Module Technology
G12R 16BB TOPCon
Bifacial Module**

30 Years Warranty for
Linear Performance*



15 Years Product Warranty on
Materials and Workmanship*



MADE IN INDIA

PRODUCT | KEY FEATURES

- Advanced N-type TOPCon Technology
- Bifacial Dual Glass Design (Up to 30% Gain)
- Better Output in Low Irradiance
- Excellent anti-LID, anti-LeTID & anti-PID Performance
- Low Temperature Coefficient
- Bifaciality Factor $80 \pm 10 \%$
- Robust Performance ($<1\%$ first year degradation)

Comprehensive System Certifications

ISO 9001:2015: Quality Management system

ISO 14001:2015: Environment Management system

ISO 45001:2018: Occupational health and safety

OSWAL SOLAR

TECHNICAL DATA

ELECTRICAL CHARACTERISTICS*	STC	STC	STC	STC	STC	STC	STC	STC	STC
Maximum Power (Pmax) (W)	600	605	610	615	620	625	630	635	640
Optimum Operating Voltage (Vmp) (V)	39.964	40.104	40.244	40.384	40.524	40.664	40.804	40.944	41.084
Optimum Operating Current (Imp) (A)	15.025	15.095	15.165	15.235	15.305	15.375	15.445	15.515	15.585
Open Circuit Voltage (Voc) (V)	47.337	47.537	47.737	47.937	48.137	48.337	48.537	48.737	48.937
Short Circuit Current (Isc) (A)	15.920	15.980	16.040	16.100	16.160	16.220	16.280	16.340	16.400
Module Efficiency	22.19%	22.38%	22.56%	22.75%	22.93%	23.12%	23.30%	23.49%	23.67%

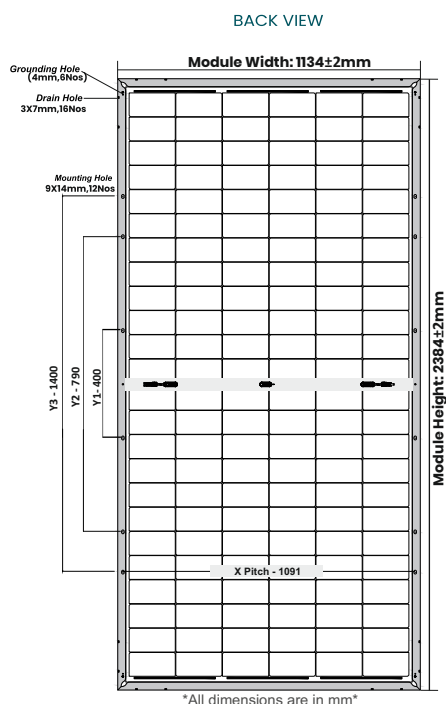
Note: STC: Irradiance 1000W/m², Cell Temperature 25°C, AM 1.5 according to EN/IEC 60904. Power tolerance 0 ~ +4.99W. Measurement uncertainty ≤3%. Except Pmax, all other above parameters have tolerance ±3%.

ELECTRICAL CHARACTERISTICS WITH BIFACIAL POWER GAIN AT STC* [Bifaciality Factor: 80% ± 10%]

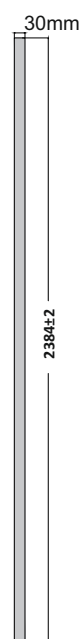
05%	Pmax (W)	630	635	641	646	651	656	662	667	672
	Efficiency	23.30%	23.50%	23.69%	23.89 %	24.08%	24.27%	24.47%	24.66%	24.86 %
10%	Pmax (W)	660	666	671	677	682	688	693	699	704
	Efficiency	24.41%	24.62%	24.82%	25.02%	25.23%	25.43%	25.63%	25.84%	26.04%
20%	Pmax (W)	720	726	732	738	744	750	756	762	768
	Efficiency	26.63%	26.85%	27.08%	27.30%	27.52%	27.74%	27.96%	28.19%	28.41%
25%	Pmax (W)	750	756	763	769	775	781	788	794	800
	Efficiency	27.74%	27.97%	28.20%	28.44%	28.67%	28.90%	29.13%	29.36%	29.59%
30%	Pmax (W)	780	787	793	800	806	813	819	826	832
	Efficiency	28.85%	29.09%	29.33%	29.57%	29.81%	30.05%	30.29%	30.53%	30.78%

Note: The bifacial gain depends on the power plant design, ground reflectance (Albedo), bifaciality factor and conditions. Electrical component ratings should be selected based on the actual bifacial gain at the site.

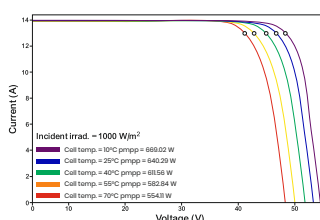
Mechanical Specifications		Operating Condition	
Dimensions	2384 ± 2 mm x 1134 ± 2 mm x 30 ± 1 mm	Maximum System Voltage	1500 VDC
Weight	33.8 Kg	Operating Temperature	-40°C to +85°C
Cell Type	132 Half-cut, G12R N-type TOPCon Bifacial Solar cells	Maximum Series Fuse Rating	30A
Frame	Anodized Aluminum Alloy (6005, Temper T6, Silver colour)	Mechanical Load	5400 Pa (Front) / 2400 Pa (Back)
Front Cover	Low Iron semi-Tempered AR coated Glass (2 mm thick)	Application Class Rating	Class A
Encapsulant	PID resistant and UV resistant Polymeric Film	Safety Class Rating	Class II
Back Cover	Low Iron semi-Tempered Glass (2 mm thick)	Temperature Characteristics	
Junction Box	IP68, 3 Bypass Diode	Tc of Current (α) Isc (%/°C)	0.0452% ± 0.01
Cable	4 sq. mm, 300 mm length (As per customer requirement)	Tc of Voltage (β) Voc (%/°C)	-0.2505% ± 0.02
Connectors	MC4 compatible (MC4 original available on request)	Tc of Power (γ) Pmax (%/°C)	-0.2991% ± 0.02
Mounting Holes Pitch (Y)-mm	400, 790, 1400	NOCT	45°C (±2°C)
Mounting Holes Pitch (X)-mm	1091 ± 2 mm		



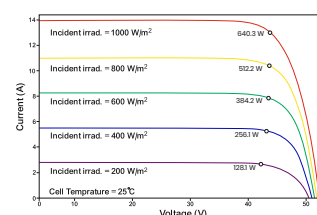
SIDE VIEW



IV Curve Variation with Temperature

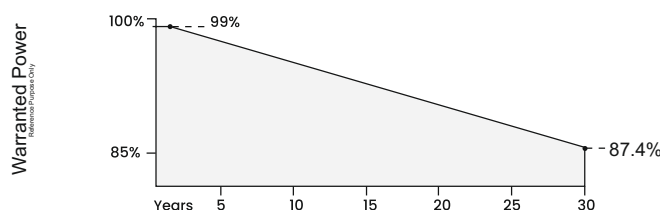


IV Curve Variation with Irradiance



IV Curves for Front-Side Illumination of 640 Wp Module

LINEAR PERFORMANCE WARRANTY



PACKING STANDARD

No. of Modules:
No of Pallets:
Modules per Pallet / Weight:
Pallet dimensions:

40FT

704 Nos
22 Pallets
32 Nos/1120 Kg.
2400*980*1275

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

Warranty: Linear power warranty for 30 years, with degradation of up to 1% in the first year and 0.4% per year from year 2 to year 30. Please refer the Oswal Solar warranty document thoroughly.

Disclaimer: Specification included in this datasheet are subject to change without prior notice due to ongoing innovation in product development and R&D. 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.