

Quality, Reliability, Excellence
OSWAL SOLAR
OSWAL
RENEWABLE ENERGY
Greener | Cleaner | Smarter
True Partner!

INDIA'S PREMIER SOLAR MANUFACTURER

India's Most Trusted 360° Solar Solutions Partner

Empowering a cleaner, smarter, and greener tomorrow with high-efficiency automatic robotic manufacturing.

Oswal Solar

www.oswalsolar.com

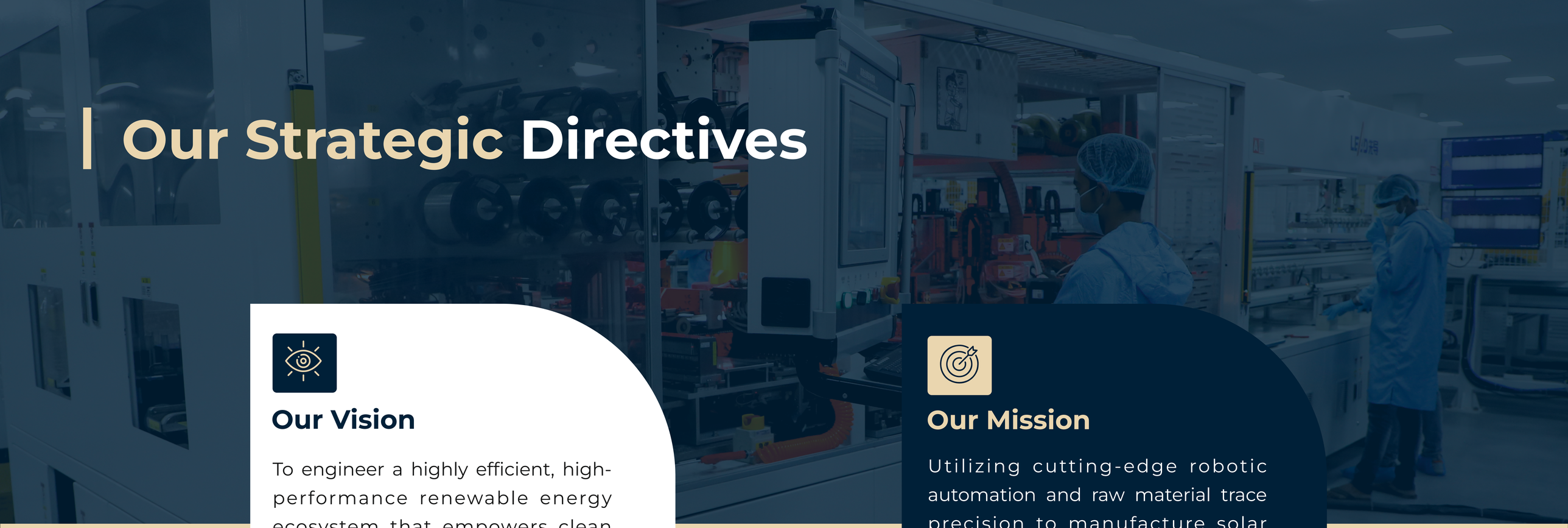
About Oswal Solar

A rapidly growing Multi-Gigawatt enterprise dedicated to top-tier solar manufacturing and green energy transition.

- **Established in 2023 -** Rapidly scaled to support India's mission of achieving 500GW of non-fossil energy by 2030.
- **Strong Group Heritage -** Promoted by Oswal Pumps Ltd, India's leading vertically integrated pump manufacturer with 4 Lakh+ annual capacity.
- **Advanced Certifications -** Proudly BIS certified and ALMM enlisted, meeting the most stringent Indian and global quality compliance.

BIS ALMM ENLISTED IEC CERTIFIED ISO 9001:2015 COMPANY





Our Strategic Directives

Our Vision

To engineer a highly efficient, high-performance renewable energy ecosystem that empowers clean power adoption across the country, securing a cleaner and greener environment for future generations.

Our Mission

Utilizing cutting-edge robotic automation and raw material trace precision to manufacture solar solutions of unmatched quality, performance, and transparency for our customers.

AI - Driven Robtics

OSEPL operates a State-of-the-Art cutting edge technology solar module manufacturing facility in Karnal, Haryana, India, with an annual production capacity of 1.8 GW. Equipped with advanced robotics, automatic bussing, tapping systems and AI-driven automation; our facility is designed to manufacture high-efficiency PV modules with superior quality and reliability.

Our experienced engineering team operates fully automated, climate-controlled production lines, ensuring precision, consistency and excellence throughout the manufacturing process.

600 MW

P-Type Mono PERC

1.2 GW

N-Type TOPCon



AI-Powered Quality Assurance for Solar Modules

Enhancing Solar Module Reliability, Performance & Compliance through Intelligent Automation



Inspection & Detection

- AI-based EL & AOI image analysis for micro-crack detection
- Automated visual inspection for cell defects and soldering issues
- String and module alignment verification using machine vision
- Real-time defect classification andtraceability

Analytics & Performance Optimization

- Predictive analytics for module degradation and failure trends
- Correlation of process data with field performance
- AI-driven yield improvement and defect reduction
- Process optimization in cell interconnection & lamination
- Data-driven decision making for quality andreliability

Delivering High-Efficiency, Durable & Bankable Solar Modules

Advanced Reliability Testing Laboratory

Comprehensive In-House Testing as per IEC & IS Standards for Ensuring Product Durability & Reliability

In-house state-of-the-art reliability lab
Testing aligned with IEC & IS standards
Environmental & climatic testing
Mechanical endurance and load testing
Electrical performance validation
End-to-end validation from component level to finished product

Accelerated life testing (ALT) for long term durability
Thermal cycling, humidity testing & UV Exposure
Performance & Degradation Rate Evaluation tests Ingress protection (IP) testing
Mechanical Testing: Load testing (Module & JB)Continuous quality monitoring systems

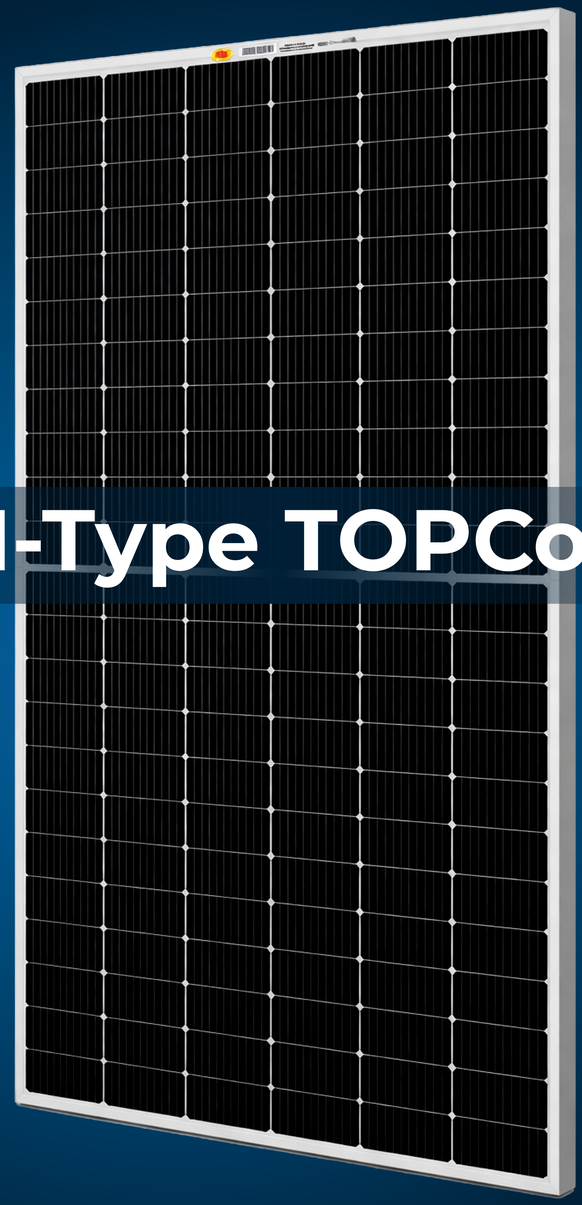
Ensuring High Reliability, Regulatory Compliance & Long-Term Product Performance





NEXT-GEN

OSWAL ZENITH SERIES



N-Type TOPCon

Next Generation Oswal Zenith TOPCon Series – G12R & M10R powering the future with advanced N-Type TOPCon technology, the Oswal Zenith Series is designed to deliver higher efficiency, superior energy yield, and long-term reliability for modern solar installations.Key Highlights

Advanced N-Type TOPCon Cells

- Higher Module Efficiency & Power Output
- Excellent Low-Light Performance
- Lower Degradation for Enhanced Lifetime Generation
- Superior Temperature Coefficient
- Reduced LCOE (Levelized Cost of Energy)
- Built for Residential, Commercial & Utility-Scale Projects

Our Unique Selling points

Advanced Facility

Equipped with state-of-art robotic production modules capable of extreme wind/snow load tolerance (up to 5400 Pa) and optimized string-lay precision.

Qualified Experts

Managed by highly motivated design, engineering and support teams executing projects meticulously from conceptualization to plant commissioning

Innovative R&D

Continuous investment in cutting-edge photovoltaic technologies such as G12R & M10R TOPCon cells, maximizing real-world energy generation and ROI.

Expansion & Milestones

2023

Establishment

Inception of OSEPL with a highly focused 200 MW pilot production line.

2024

Growth Surge

Augmented manufacturing facility capacity to 600 MW automatic lines.

2025

Consolidation

Augmented operational lines, introducing high-efficiency TOPCon G12R & M10R cell size.

2026

Gigawatt Scale

Commissioned multi-busbar lines, reaching 1.8 GW operational capacity.

2027

Future Outlook

Strategic setup of 2.4 GW cell production lines and BESS capacity enhancement to 2.5 GW.

Home Solar Power Benefit

Financial Protection

Produce your own power to hedge against rising utility tariffs. Most Indian families recover their initial investment within a few years, enjoying decades of near-zero cost electricity.

Reliable Independence

Coupled with smart storage solutions, modern homes enjoy seamless, uninterrupted electricity during grid failures. Ensures uninterrupted function of vital domestic appliances.

Low maintenance

Zero Hassle: Solar panels require virtually no upkeep. Built with premium components and a robust design, they effortlessly withstand heat, rain and severe storms to deliver reliable power for decades.

Future ready technology

Future-Proof: With rapid advancements in efficiency, storage and low-light performance, solar is the ultimate long-term investment. Ready your home for next-generation needs like EV charging, smart monitoring and automated energy management.

High-Performance Products Suite

G12R TOPCon Series

600Wp – 740Wp Range

State-of-the-art TOPCon G12 & G12R technology delivering up to 23.80% efficiency. Optimized extensively for utility-scale assets and high-demand commercial setups.

M10R TOPCon Series

500Wp – 600Wp Range

Captures reflected sunlight from the rear glass layer, enabling a massive 10–20% additional energy gain. Excellent for floating solar and ground arrays.

Mono-PERC Twin Series

505Wp – 560Wp Range

144 Half-cut cell design with Zero PID and LID. Advanced anti-micro cracking cell formulation engineered to withstand extreme climates and temperature swings.

Stringent Quality & Warranties

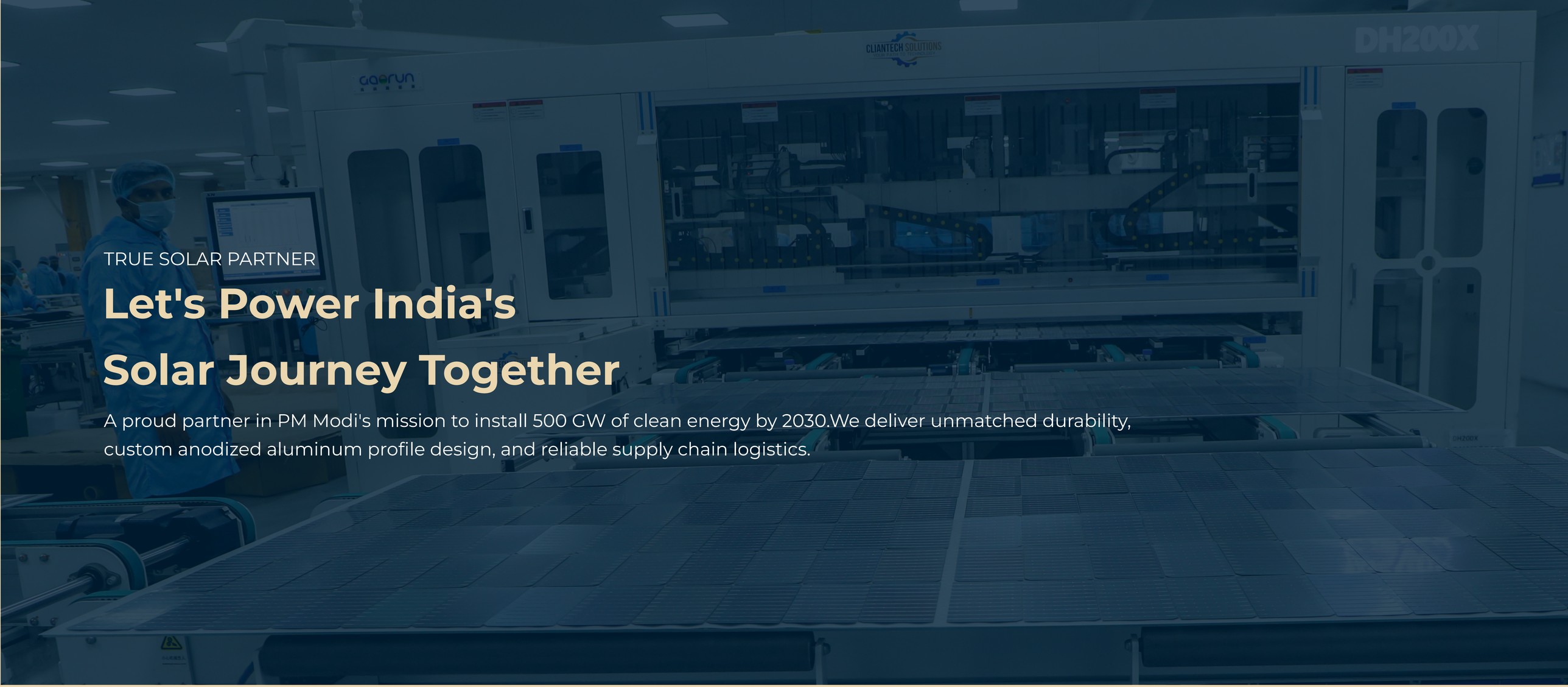
Engineered to deliver clean, maximum wattage with long-term industrial reliability:

- **Pre & Post Lamination EL Testing -** 3-stage visual & Electroluminescence checks for defect-free panels.
- **Outstanding Warranties -** 12 Years comprehensive Product & Workmanship Warranty and up to 30 Years linear power warranty for TOPCon
- **Minimized Degradation -** Less than 1% power loss in Year 1, with annual attenuation secured at <0.4%.



Technical Specifications

Module Series	Cell Technology	Power Output (Wp)	Max Efficiency (%)	Primary Applications
G12 TOPCon	N-Type Dual Glass (132 Cells)	700Wp – 740Wp	Up to 23.80%	C&I Rooftop / Utility-Scale
G12R TOPCon	N-Type Dual Glass (132 Cells)	600Wp – 640Wp	Up to 23.69%	C&I Rooftop / Utility-Scale
M10R TOPCon	N-Type Dual Glass (144 Cells)	600Wp – 610Wp	Up to 23.61%	Floating Solar / Ground Mounts
Mono PERC Half-Cut Cell Series	Mono PERC Half-Cut (144 Half-Cut)	505Wp – 560Wp	Up to 21.67%	Residential / Commercial Rooftops
B2B Complete Range	Full System (Inverters + Pumps)	Tailored Solutions	Custom Configuration	Franchise Distributors & EPC



TRUE SOLAR PARTNER

Let's Power India's Solar Journey Together

A proud partner in PM Modi's mission to install 500 GW of clean energy by 2030.We deliver unmatched durability, custom anodized aluminum profile design, and reliable supply chain logistics.

Oswal Solar

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