



TOPCON BIFACIAL SOLAR PANELS

575W-590W Non-DCR Modules

TOPCON solar cells are the innovative technology of the photovoltaic industry with high efficiency, reduced electron recombination through a tunnel oxide layer, and improved durability with less degradation over time. They often come with bifacial capabilities, capturing sunlight from both sides, and perform well in low-light conditions, making them ideal for utility-scale and rooftop installations.



30 Years
Performance Warranty



12 Years
Product Warranty



Enlisted under
ALMM Order



Premium Grade A Cells
For superior performance and durability.



Anti-reflection Coating
Reduces light reflection to increase efficiency.



PID Free
Prevents potential-induced degradation, ensuring long-term reliability.

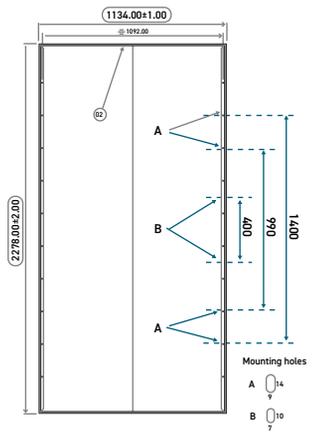


Excellent Power Generation under Low Light
Optimizes energy production in various conditions.

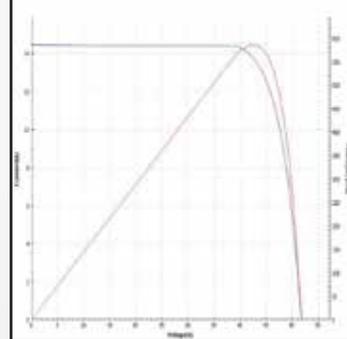


UNSW Specified Cell Qualification
Ensures best quality panel offerings

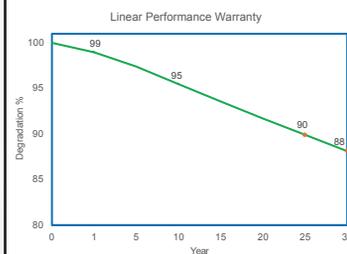
LUM24585T144



IV Curve



Linear Graph



*Approvals & Certifications

IEC 61853-1 | IEC 61853-1
 IEC EC 62759-1 | IEC 61853-2 |
 IEC 61853-2 | IEC 62716 |
 IEC 62759-1 | IEC 61701 |
 IEC TS 62804 -1 | IEC 60068-2-68 |
 IEC 60068-2-68 | IEC TS 62804-1 |
 IEC 61701 | IEC 62716

Packaging Information

Container	32 Feet
Modules per pallet	31 Nos.
Pallets per container	16 Nos.
Modules per container	496 Nos.

Electrical Data (STC)	LUM 24575T144 BI-TS	LUM 24580T144 BI-TS	LUM 24585T144 BI-TS	LUM 24590T144 BI-TS
Peak Power Pmax (Wp)	575	580	585	590
Maximum Power Voltage Vmp (V)	42.44	42.59	42.74	42.88
Maximum Power Current Imp (A)	13.55	13.62	13.69	13.76
Open Circuit Voltage Voc (V)	51.27	51.47	51.67	51.86
Short Circuit Current Isc (A)	14.31	14.37	14.43	14.49
Module Efficiency (%)	22.26	22.45	22.65	22.84

STC: Irradiance 1000W/m², Cell Temperature: 25 °C, Spectrum AM1.5 (Measurement Uncertainty ± 3%), Isc & Voc ± 5%

NOCT	LUM 24575T144 BI-TS	LUM 24580T144 BI-TS	LUM 24585T144 BI-TS	LUM 24590T144 BI-TS
Peak Power Pmax (Wp)	431	435	439	443
Maximum Power Voltage Vmp (V)	39.44	39.58	39.72	39.85
Maximum Power Current Imp (A)	10.94	11	11.05	11.11
Open Circuit Voltage Voc (V)	48.6	48.79	48.98	49.16
Short Circuit Current Isc (A)	11.55	11.6	11.65	11.7

NOCT: Irradiance 800W/m², Ambient Temperature: 20 °C, Wind Speed 1m/s

BNPI	LUM 24575T144 BI-TS	LUM 24580T144 BI-TS	LUM 24585T144 BI-TS	LUM 24590T144 BI-TS
Peak Power Pmax (Wp)	637	643	648	654
Maximum Power Voltage Vmp (V)	42.44	42.59	42.74	42.88
Maximum Power Current Imp (A)	15.01	15.09	15.17	15.25
Open Circuit Voltage Voc (V)	51.27	51.47	51.67	51.86
Short Circuit Current Isc (A)	15.86	15.92	15.99	16.05

BNPI: 1000W/m² + φ.135, BIFACILITY COEFF. (φ) AT BNPI P_{MAX}, I_{SC} IS 80±10% & FOR V_{OC} IS 99±10%, AM 1.5, 25°C

Electrical Characteristics with different rear side power gain (Reference 585 Wp Front)

Bi-Facility Gain	10%	15%	20%	25%
Peak power Pmax (Wp)	643.00	672	702	731
Maximum Power Voltage Vmp (V)	44.60	44.60	44.60	44.60
Maximum Power Current Imp (A)	14.42	15.07	15.74	16.39
Open Circuit Voltage Voc (V)	53.93	53.90	53.95	53.92
Short Circuit Current Isc (A)	15.11	15.8	16.49	17.18
Module Efficiency (%)	24.78%	25.94%	27.10%	28.26%

Mechanical Data	LUM 24575T144 BI-TS	LUM 24580T144 BI-TS	LUM 24585T144 BI-TS	LUM 24590T144 BI-TS
Cell Type	TOPCON (N-Type)			
No. of Cells	72 (144 half-cells) Bifacial solar cells			
Rated Module Voltage (V)	24			
Maximum Series Fuse Rating	25A			
Module Dimensions (mm)	2278x1134x35			
Module Weight (KG)	28.8 Kg			
IP Rating	IP 68 (With Potting)			
Cable	300mm length cables (+ve and -ve Terminal), MC4 Compatible/ MC4 Connectors			
Frame	Silver Anodized aluminium alloy			
Glass	3.2mm thick high transmission low iron tempered glass, AR coated			
Cell Encapsulant	High quality Encapsulant			
Backsheet	Transparent Backsheet			
Maximum surface load capacity	5400 Pa (Snow Load), 2400 Pa (Wind Load)			
Application Class	Class A (Safety Class II)			

Temperature Co-efficients (Tc) and permissible operating conditions	LUM 24575T144 BI-TS	LUM 24580T144 BI-TS	LUM 24585T144 BI-TS	LUM 24590T144 BI-TS
Operating Temperature	-40°C to +85°C			
Temp coefficient of Open Circuit Voltage	-0.26%/°C			
Temp coefficient of Short Circuit Current	+0.046%/°C			
Temperature coefficient of Power	-0.31%/°C			
NOCT	45°C ± 2°C			

Warranty and Certifications	LUM 24575T144 BI-TS	LUM 24580T144 BI-TS	LUM 24585T144 BI-TS	LUM 24590T144 BI-TS
Product Warranty	12Years			
Performance Warranty	Linear Performance warranty for 30 Years with 1% for 1st year degradation and 0.45% from year 2 to 30			
Approvals and Certificates*	BIS certified as per IS/IEC standards			

