

# TOPCon PV Module

## Bifacial Glass-Glass Configuration

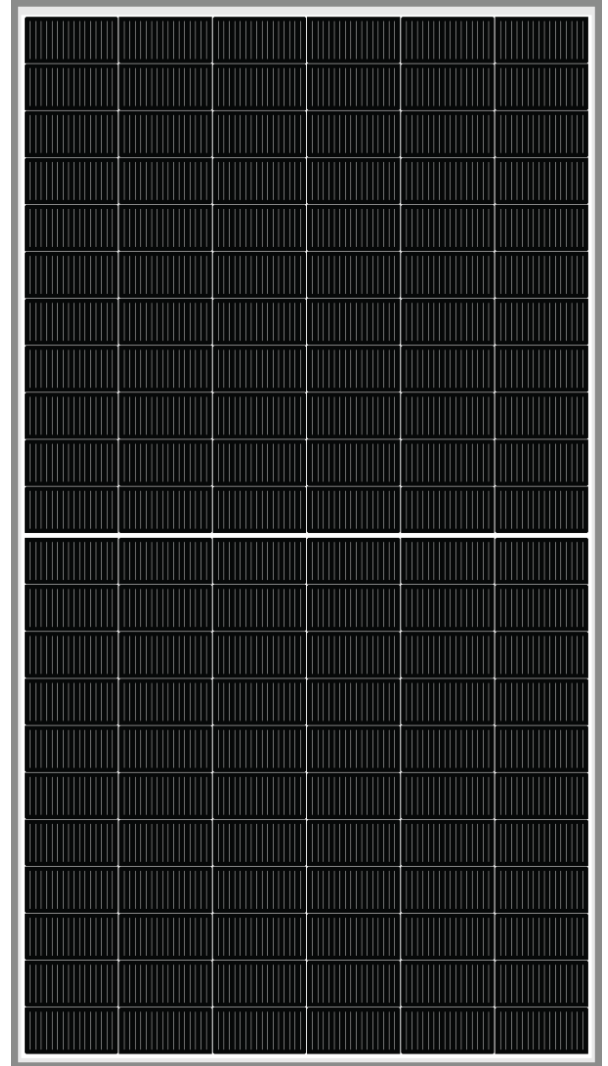
### G12R 132 Cut Cell 16BB

#### Key Features

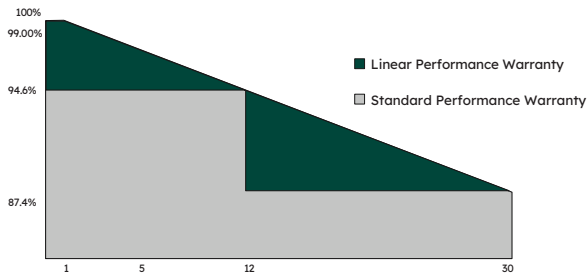
-  HIGHEST RELIABILITY & ENHANCED CRACK TOLERANCE MBB MODULE
-  SUSTAIN HEAVY SNOW & WIND LOADS (5400 PA & 2400 PA)
-  BEST IN CLASS THERMAL COEFCIENTS
-  HIGHEST COMMERCIAL GAINS, LOWER LCOE
-  BETTER WEAK LIGHT PERFORMANCE
-  EXCELLENT PID RESISTANCE

**30 Years** Performance Warranty

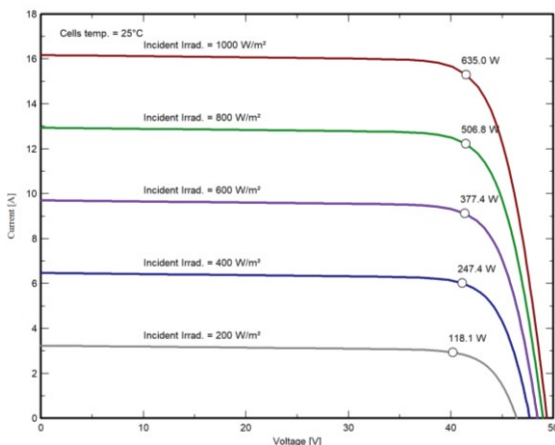
Product Warranty **12 Years**



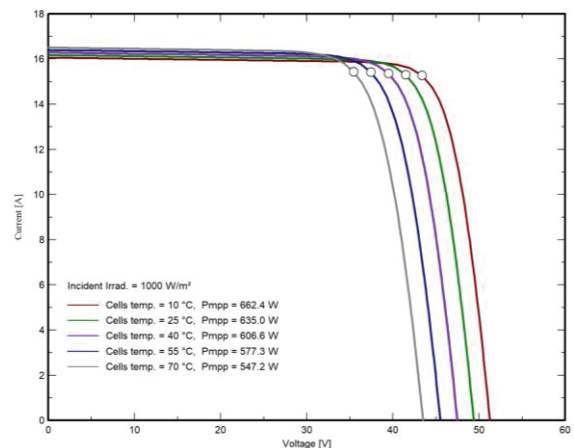
Model No: ISTD2M16BN2630



#### I-V Variation with Temperature



#### I-V Variation with Irradiance



The Graphs are for reference purpose only. Please consult Indosol solar technical team for further clarifications.

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#### Electrical Characteristics

Models	Pmax (W)		Vmp (V)		Imp (A)		Isc (A)		Voc (V)		Module Eff. (%)
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
BiN-21-600	600	453	40.54	37.78	14.80	11.93	15.82	12.75	48.30	45.89	22.21
BiN-21-605	605	457	40.74	37.97	14.85	11.97	15.87	12.79	48.50	46.08	22.40
BiN-21-610	610	461	40.94	38.16	14.90	12.01	15.92	12.83	48.70	46.27	22.58
BiN-21-615	615	464	41.14	38.34	14.95	12.05	15.97	12.87	48.90	46.46	22.77
BiN-21-620	620	468	41.33	38.52	15.00	12.09	16.02	12.91	49.10	46.65	22.95
BiN-21-625	625	472	41.53	38.70	15.05	12.13	16.07	12.95	49.30	46.84	23.14
BiN-21-630	630	476	41.72	38.88	15.10	12.17	16.12	12.99	49.50	47.03	23.32

\*Standard Test Conditions (STC) - 1000 W/m<sup>2</sup> irradiance, Air Mass 1.5 and 25°C cell temperature. Nominal Operating Cell Temperature (NOCT) - 800 W/m<sup>2</sup> irradiance, Air Mass 1.5, Ambient temperature 20°C and Wind speed 1 m/s. Average power reduction of 4.5% at 200 W/m<sup>2</sup> as per IEC 60904-1. Measuring Uncertainty ± 3%.

System Voltage

**1500 V**

Series Fuse Rating

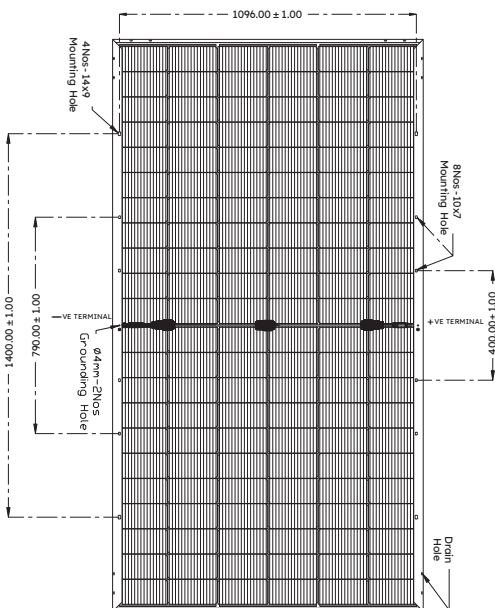
**30 A**

#### BI-Facial Output - Backside Power Gain\*

		600	605	610	615	620	625	630
10%	Power Output (W)	660	666	671	677	682	688	693
	Module Efficiency (%)	24.43	24.64	24.84	25.05	25.25	25.45	25.65
15%	Power Output (W)	690	696	702	707	713	719	725
	Module Efficiency (%)	25.54	25.76	25.97	26.19	26.39	26.61	26.82
20%	Power Output (W)	720	726	732	738	744	750	756
	Module Efficiency (%)	26.65	26.88	27.10	27.32	27.54	27.77	27.98
25%	Power Output (W)	750	756	763	769	775	781	788
	Module Efficiency (%)	27.76	28.00	28.23	28.46	28.69	28.93	29.15
30%	Power Output (W)	780	787	793	800	806	813	819
	Module Efficiency (%)	28.87	29.12	29.35	29.60	29.84	30.08	30.32

\*The bifacial gains are dependant on the power plant design and location

#### Design Specifications



#### Thermal Characteristics

Temperature coefficient of Current (Isc), $\alpha$ (%/°C)	0.046
Temperature coefficient of Voltage (Voc), $\beta$ (%/°C)	-0.26
Temperature coefficient of Power (Pm), $\gamma$ (%/°C)	-0.30
NOCT (°C)	43 ± 2
Operating temperature range (°C)	-40 to 85
Bifaciality	80 ± 10

#### Thermal Characteristics

Length x Width x Thickness (L x W x T)	2382 mm (L) x 1134 mm (W) x 35 mm (T)
Weight	33.8 kgs
Solar Cells per Module (Units) / Arrangement	132 cells / (11x6    11x6)
Solar Cell Type & Size	G12R N-type TOPCon Bifacial
Front Glass (Material / Thickness)	2 mm Low Iron HTAR semi-tempered glass
Back Glass (Material / Thickness)	2 mm Low Iron Printed semi-tempered glass
Encapsulate	PID Free & UV Resistant
Junction Box (Protection degree / Material)	IP68 / Weatherproof PPO
Cable & Connector (Protection degree / Type)	IP68 rated / MC4 compatible
Cable cross - section & Length	4 mm <sup>2</sup> & 500mm
Frame	Anodized Aluminium Alloy

Indosol Solar Private Limited (ISPL), a subsidiary of Shirdi Sai Electricals Limited (SSEL), was established in 2022 with a vision to strengthen India's renewable energy ecosystem. The company is developing a vertically integrated, giga-scale solar PV manufacturing facility that spans the entire value chain right from quartz to photovoltaic (PV) modules.

\* The electrical data given here is for reference purpose only. Please confirm your exact requirements with the sales representative while placing your order. Refer installation Manual instructions & Indosol Solar warranty statement for terms & conditions. Indosol Solar Reserves the right to change the specifications without prior notice.