



OMEGA SERIES

N-TOPCon 144

550Wp-600Wp

Warranty



Product Warranty: 12 Years: Materials & Workmanship
Linear Performance Warranty: 30 Years
First Year Degradation: Up to 1.0%
Annual Degradation (Years 2-30): 0.40%

KEY FEATURES



Higher power output with N-Type cells.



Guaranteed consistent performance.



Better energy in low-light conditions.



Improved high-temp energy yield ($-0.30\%/^{\circ}\text{C}$).



Up to 23.12% efficiency, 10-30% higher than P-type.



Enhanced performance with MBB (16BB) N-TOPCon design.



Durable under 2400 Pa wind and 5400 Pa snow load.



100% defect-free through rigorous testing.



Increased energy with $80\pm 5\%$ bifaciality.

CERTIFICATIONS



IEC 61215 || IEC 61730 || IEC 61701 || IS 14286 ||
IEC 62716 || IEC 62804 || IEC 61853



Bifacial Dual Glass

Performance under standard test conditions (1000w/m², AM 1.5, 25 °C)

OMEGA SERIES 144 N-TOPCon Bi-Facial Gain @Different Albedo (%)

	Pm (Wp)	Voc (V)	Vm (V)	Isc (A)	Im (A)	Efficiency (%)	Pm (Wp)	Voc (V)	Vm (V)	Isc (A)	Im (A)	Efficiency (%)	Pm (Wp)	Voc (V)	Vm (V)	Isc (A)	Im (A)	Efficiency (%)	Pm (Wp)	Voc (V)	Vm (V)	Isc (A)	Im (A)	Efficiency (%)
Front @STC	550	50.28	41.63	13.99	13.21	21.29	555	50.49	41.78	14.06	13.28	21.48	560	50.67	41.95	14.13	13.35	21.67	565	50.87	42.14	14.19	13.41	21.86
5%	577.43	50.28	41.63	14.69	13.87	22.35	582.58	50.49	41.78	14.76	13.94	22.55	588.03	50.67	41.95	14.84	14.02	22.76	593.35	50.87	42.14	14.90	14.08	22.97
10%	604.93	50.28	41.63	15.39	14.53	23.42	610.32	50.49	41.78	15.47	14.61	23.63	614.04	50.67	41.95	15.54	14.69	23.85	621.61	50.87	42.14	15.61	14.75	24.06
20%	659.92	50.28	41.63	16.79	15.85	25.55	665.81	50.49	41.78	16.87	15.94	25.77	672.04	50.67	41.95	16.96	16.02	26.02	678.12	50.87	42.14	17.03	16.09	26.25
Front @STC	570	51.07	42.29	14.25	13.48	22.06	575	51.27	42.44	14.31	13.55	22.25	580	51.47	42.59	14.37	13.62	22.44	585	51.50	43.27	14.36	13.52	22.6
5%	598.57	51.07	42.29	14.96	14.15	23.17	603.82	51.27	42.44	15.03	14.23	23.37	609.08	51.47	42.59	15.09	14.30	23.58	614.26	51.50	43.27	15.08	14.20	23.78
10%	627.08	51.07	42.29	15.68	14.83	24.27	632.57	51.27	42.44	15.74	14.91	24.49	638.08	51.47	42.59	15.81	14.98	24.70	643.51	51.50	43.27	15.80	14.87	24.91
20%	684.08	51.07	42.29	17.10	16.18	26.48	690.07	51.27	42.44	17.17	16.26	26.71	696.09	51.47	42.59	17.24	16.34	26.95	702.01	51.50	43.27	17.23	16.22	27.18
Front @STC	590	51.70	43.45	14.45	13.58	22.8	595	51.90	43.61	14.53	13.64	23.02	600	52.10	43.78	14.61	13.71	23.22						
5%	619.55	51.70	43.48	15.17	14.26	23.98	624.58	51.90	43.61	15.26	14.32	24.18	630.23	52.10	43.78	15.34	14.40	24.40						
10%	649.06	51.70	43.45	15.90	14.94	25.13	654.32	51.90	43.61	15.98	15.00	25.33	660.25	52.10	43.78	16.07	15.08	25.56						
20%	708.06	51.70	43.45	17.34	16.30	27.41	713.81	51.90	43.61	17.44	16.37	27.63	720.27	52.10	43.78	17.53	16.45	27.88						

ELECTRICAL DATA PERFORMANCE

NOCT (Wp) at 45 ± 2 °C @800 W/m ²	IBMPH-550	IBMPH-555	IBMPH-560	IBMPH-565	IBMPH-570	IBMPH-575	IBMPH-580	IBMPH-585	IBMPH-590	IBMPH-595	IBMPH-600
Nominal Maximum Power (Pmax)	409.72	413.37	417.24	421.02	424.72	428.44	432.18	435.85	439.61	443.18	447.19
Optimum Operating Voltage (Vmp)	38.08	38.22	38.38	38.55	38.69	38.82	38.96	39.58	39.75	39.89	40.05
Optimum Operating Current (Imp)	10.75	10.81	10.87	10.92	10.97	11.03	11.09	11.00	11.05	11.10	11.16
Open Circuit Voltage (Voc)	46.77	46.96	47.13	47.32	47.50	47.69	47.87	47.90	48.09	48.27	48.46
Short Circuit Current (Isc)	11.43	11.49	11.55	11.60	11.65	11.70	11.74	11.74	11.81	11.88	11.94

Cell Temperature Coefficient

Short Circuit Current(α)	0.0442 %/°C
Open Circuit Voltage(β)	-0.2370 %/°C
Peak Power(δ)	-0.3090 %/°C

Operating Conditions

Maximum System Voltage	1500V DC (IEC)
Power Tolerance	0~+5w
Operating Temperature	-40°C~+85°C
Maximum Series Fuse Rating	30A
Mechanical Load Front Rear	5400Pa
Mechanical Load Back Rear	2400Pa
Bifaciality	80+5%
Rh Value	≤85%

- Test uncertainty for Pmax ± 3%
- Bi-facial gain subject to mounting structure specifications and albedo % of ground

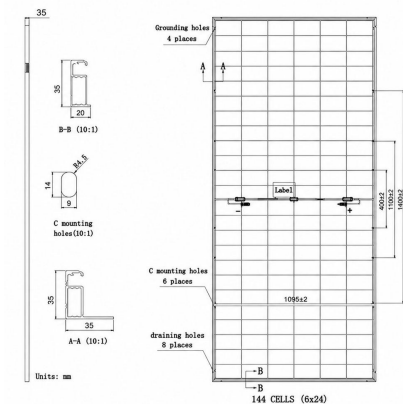
MODULE MECHANICAL DATA

SPECIFICATION DATA

Cell Type	N-TOPCon, 144 Cells
Dimensions	2278x1134x35 mm
Weight	31.5 Kgs
Front Cover	2.00 mmArc Glass
Rear Cover	2.00 mmGrid Glass
Frame Material	"Silver Anodized AluminumProfile, 35*33 long /35*18 short 15micron anodized
J-Box	IP68, 3 diodes
Cable	1200 mm, 4 mm ²
Connectors	Mc4 Compatible Connector

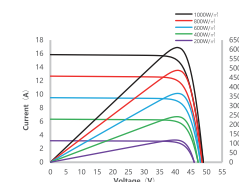
- Please confirm your exact requirements with the sales representative while placing your order
- Refer installation Manual instructions & IB Solar warranty statement for terms & conditions

Engineering Design



Characteristics

I-V Curve of PV module
600Wp



I-V Curve
Cell temperature sensitivity chart
are for 600WP

