

M10R 144 SERIES

570Wp-620Wp

(Framed Dual Glass Bifacial Module)

N-TYPE TOPCon



FEATURES:

-  Highest Reliability & Enhanced Crack Tolerance MBB Module
-  Sustain Heavy Snow & Wind Loads (5400 Pa & 2400 Pa)
-  Best in Class Thermal Coefficients
-  Highest Commercial Gains, Lower LCOE
-  Better Weak Light Performance
-  Excellent PID Resistance
-  Zero LID
-  Excellent Bifacial Gain 10% - 30%

*We have applied for below certification.



ALMM UNDER PROCESS, BIS UNDER PROCESS, IS 14286,
IEC: 61215, IEC: 61730, IEC TS: 62804-1, IEC: 61853, IEC: 61701,
IEC: 62716, Quality Management System: ISO 9001:2015,
Environment Management System: ISO 14001: 2015,
Occupational Health and Safety Management System: ISO 45001:2018



ELECTRICAL CHARACTERISTICS: (ATAL-T-144G-570 TO ATAL-T-144G-620)

Models	Pmax(W)		Vmp (V)		Imp (A)		Isc (A)		Voc (V)		Module Eff. (%)
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
ATAL-T-144G-620	620	462	48.17	44.09	12.91	10.51	13.73	11.21	52.78	49.09	24.00%
ATAL-T-144G-615	615	459	47.81	43.76	12.90	10.51	13.68	11.17	52.63	48.95	23.81%
ATAL-T-144G-610	610	455	47.45	43.43	12.90	10.51	13.64	11.14	52.56	48.88	23.61%
ATAL-T-144G-605	605	451	46.94	42.96	12.89	10.50	13.59	11.10	52.34	48.68	23.42%
ATAL-T-144G-600	600	448	46.66	42.71	12.86	10.47	13.52	11.04	52.27	48.61	23.23%
ATAL-T-144G-595	595	444	46.37	42.44	12.84	10.46	13.50	11.03	52.13	48.48	23.03%
ATAL-T-144G-590	590	440	46.08	42.17	12.81	10.43	13.47	11.00	51.98	48.34	22.84%
ATAL-T-144G-585	585	436	45.79	41.91	12.79	10.42	13.46	10.99	51.84	48.21	22.65%
ATAL-T-144G-580	580	433	45.50	41.64	12.76	10.39	13.41	10.95	51.70	48.08	22.45%
ATAL-T-144G-575	575	429	45.22	41.39	12.73	10.37	13.36	10.91	51.56	47.95	22.26%
ATAL-T-144G-570	570	425	44.93	41.12	12.70	10.34	13.31	10.87	51.42	47.82	22.07%

*Standard Test Conditions (STC) - 1000W/m2 irradiance, Air Mass 1.5 and 25°C cell temperature. Nominal Operating Cell Temperature(NOCT)-800W/m2 irradiance, Air Mass 1.5, Ambient temperature 20°C and Wind speed 1m/s. Average power reduction of 4.5% at 200W/m2 as per IEC 60904-1. Measurement Uncertainty ±3%.

System Voltage 1500 V | Series Fuse Rating 30A

BI-FACIAL OUTPUT - BACKSIDE POWER GAIN:

		ATAL-T-144G-620	ATAL-T-144G-615	ATAL-T-144G-610	ATAL-T-144G-605	ATAL-T-144G-600	ATAL-T-144G-595	ATAL-T-144G-590	ATAL-T-144G-585	ATAL-T-144G-580	ATAL-T-144G-575	ATAL-T-144G-570
10%	Power Output (W)	682	676.50	671	665.50	660	654.50	649	634.50	638	632.5	627
	Module Efficiency (%)	26.40	26.19	25.98	25.76	25.55	25.34	25.12	24.91	24.70	24.48	24.27
15%	Power Output (W)	713	707.25	701.50	695.75	690	684.25	678.50	672.75	667	661.25	655.50
	Module Efficiency (%)	27.60	27.38	27.16	26.93	26.71	26.49	26.27	26.04	25.82	25.60	25.37
20%	Power Output (W)	744	738	732	726	720	714	708	702	696	690	684
	Module Efficiency (%)	28.80	28.57	28.34	28.10	27.87	27.64	27.41	27.18	26.94	26.71	26.48
25%	Power Output (W)	775	768.75	762.5	756.25	750	743.75	737.50	731.25	725	718.75	712.50
	Module Efficiency (%)	30.00	29.76	29.52	29.28	29.03	28.79	28.55	28.31	28.07	27.82	27.58
30%	Power Output (W)	806	799.50	793	786.50	780	773.50	767	760.50	754	747.50	741
	Module Efficiency (%)	31.20	30.95	30.70	30.45	30.19	29.94	29.69	29.44	29.19	28.94	28.68

*The bifacial gains are dependent on the power plant design and location.

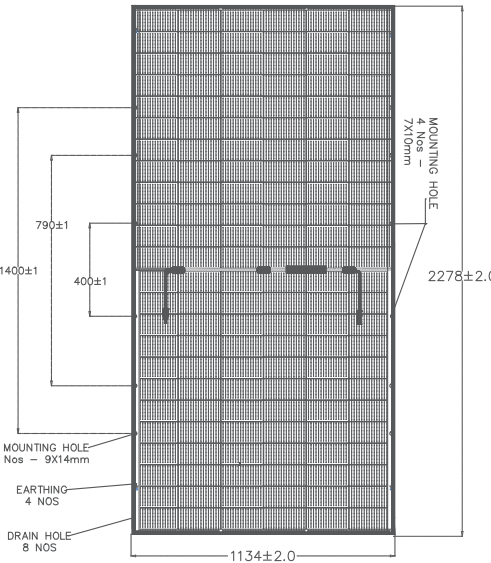
THERMAL CHARACTERISTICS

Temperature coefficient of Current (Isc), α (%/°C)	0.046
Temperature coefficient of Voltage (Voc), β (%/°C)	-0.26
Temperature coefficient of Power (Pm), γ (%/°C)	-0.30
NOCT (°C)	45 ± 2
Operating temperature range (°C)	-40 to 85
Bifaciality Factor (%)	80 ± 10

MECHANICAL CHARACTERISTICS

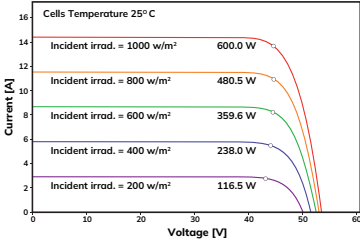
Dimensions	2278 mm (L) x 1134 mm (W) x 35 mm (T)
Weight*	33 kg (Approx)
Solar Cells per Module (Units) / Arrangement	144 Half-Cut Cells / (12x6 12x6)
Solar Cell Type & Size	M10R N-type TOPCon Bifacial & 182.2 x 183.75 mm
Front Glass (Material / Thickness)	2 mm Low Iron HTAR semi-tempered glass
Back Glass (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	4mm² & 400mm (Customised cable length available)
Frame	Anodized Aluminium Alloy
Application Class Rating	Class A
Safety Class Rating	Class II
Fire Safety	Class C (Type 1)

DESIGN SPECIFICATIONS



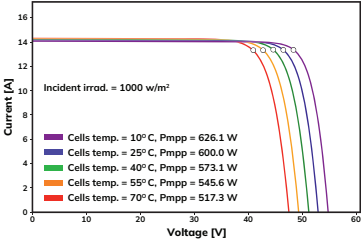
- The electrical data given here is for reference purpose only.
- Please confirm your exact requirements with the sales representative while placing your order.
- Refer installation Manual instructions & Atal warranty statement for terms & conditions.
- Due to constant product modifications, ATAL reserves the right to amend the above specifications without prior notice.

I-V VARIATION WITH IRRADIANCE (GRAPH)

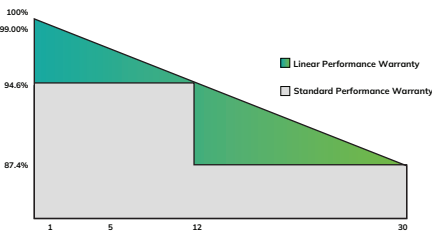


The Graphs are for reference purpose only. Please consult Atal technical team for further clarifications.

I-V VARIATION WITH TEMPERATURE (GRAPH)



LINEAR PERFORMANCE WARRANTY (GRAPH)



ATAL SOLAR PRIVATE LIMITED

Survey No. 177 P3, Mitana - Ganeshpar Road, At: Mitana, Ta: Tankara, Dist: Rajkot (Gujarat), INDIA - 363650.

+91 90990 88489

info@atalsolar.com | www.atalsolar.com