

ABS-I44GBB-M10

585W – 610W

Topcon Half Cut PV Module

Glass/Black Back Sheet-Black Frame

610W MAXIMUM POWER OUTPUT

+10W OUTPUT POSITIVE TOLERANCE
Guaranteed 0~+10W positive tolerance ensures power output reliability.

23.6% MAXIMUM EFFICIENCY



KEY FEATURES



LOW SYSTEM COST

Higher yield per surface area, lower BOS costs, higher power classes, and an efficiency rate of up to 23.61%.



EXTREME WEATHER RATING

High-tech aluminum alloy frame, certified for high snow (5400 Pa) and wind loads (2400 Pa).



ADVANCED MODULE TECHNOLOGY

Highest reliability & enhanced crack tolerance MBB module



ALL-WEATHER TECHNOLOGY Optimal

Yields, whatever the weather, with low-light and temperature behaviour.



BETTER TEMPERATURE COEFFICIENT

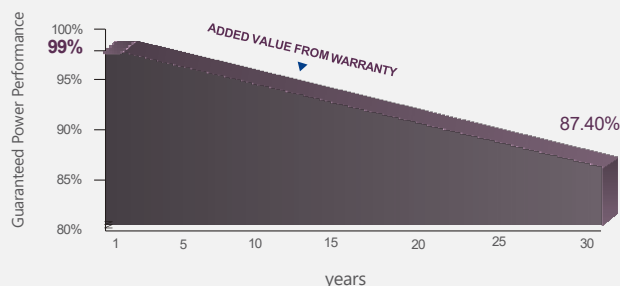
Lower temperature coefficient (Pmax):
-0.30%/°C, increases energy yield in hot climate



ENDURING HIGH PERFORMANCE

Anti LID and Anti PID Technology. Under long-term production safety conditions, the limited power degradation caused by the PID effect is guaranteed.

LINEAR PERFORMANCE WARRANTY



Product warranty
30
Years

30-year Warranty for Extra Linear Power Output

Product warranty
12
Years

12-year Warranty for Materials and Processing
(1st year ≤ 1.0%, 2nd~30th years ≤ 0.40% / year)

THE IDEAL SOLUTION FOR



Residential



Commercial



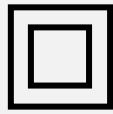
Off-Grid



Utility

COMPREHENSIVE CERTIFICATES

IEC 61215 | IEC 61730 | IEC 61701 | IEC 62716 | IEC 60068-2-68



UL 61730 | MCS | CEC | ISO 9001 | ISO 14001 | ISO 45001

ADVANTAGES



MADE IN UAE
Premium products are 100% made in the Emirates.



A RELIABLE INVESTMENT
Products up to 725Wp, 30 years of performance warranty.



ENCOURAGING INNOVATION
Innovative, prestigious, European production technology

ABS-144GBB-M10-585-610W

ENGINEERING DRAWINGS & TECHNICAL PARAMETERS

ELECTRICAL CHARACTERISTICS (STC/NOCT)



Models	Maximum Rating Power (Pmax) (W)		Open Circuit Voltage (Voc) (V)		Maximum Power Voltage (Vmp) (V)		Short Circuit Current (Isc) (A)		Maximum Power Current (Imp) (A)		Module Efficiency (EFF)(%)
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	
ABS-144GBB-M10-585	585	437.3	51.62	48.53	44.50	41.52	14.04	11.33	13.22	10.59	22.65%
ABS-144GBB-M10-590	590	441.0	51.73	48.64	44.60	41.61	14.08	11.36	13.29	10.64	22.84%
ABS-144GBB-M10-595	595	444.8	51.87	48.77	44.70	41.71	14.11	11.39	13.37	10.71	23.03%
ABS-144GBB-M10-600	600	448.5	51.97	48.86	44.80	41.80	14.13	11.40	13.45	10.77	23.23%
ABS-144GBB-M10-605	605	452.2	52.11	48.99	44.92	41.91	14.14	11.41	13.52	10.83	23.42%
ABS-144GBB-M10-610	610	456.0	52.24	49.12	45.03	42.01	14.17	11.43	13.59	10.88	23.61%

*Standard Test Condition (STC): Cell Temperature 25 °C, Irradiance 1000 W/m², AM 1.5, Nominal module operating temperature (NMOT): Air mass AM 1.5, Irradiance 800W/m², temperature 20°C, windspeed 1 m/s. Reduction in efficiency from 1000W/m² to 200W/m² at 25°C: 3.5 ± 2%
*Values without tolerance are typical numbers. Measurement tolerance: ± 3%

MECHANICAL DATA

Solar Cell	Topcon 182.2 x 91.88 mm M10 ,I6BB
No.of cells	144 (6×24)
Dimensions	2278 mm x 1134 mm x 30 mm (89.69" x 44.65" x 1.18" inch)
Weight	28 kg / 61.73 lbs.(±3%)
Front Glass	3.20 mm, High Transmission, Low Iron, Tempered ARC Glass
Cell Encapsulation	EPE(Expanded polyethylene) & EVA (Ethylene-Vinyl-Acetate)
Back sheet	Black Back sheet
Frame	Black Anodized Aluminum Alloy Type 6005T6 , Black Color
Junction Box	IP68, 1500VDC, 3 Bypass Diodes
Connectors Type	IP68 MC4 Compatible
Cable	400mm or 1300 mm, 4mm²
Package Configuration	36 pcs Per Pallet, 720 pcs per 40' FT container (Two pallets=One stack)

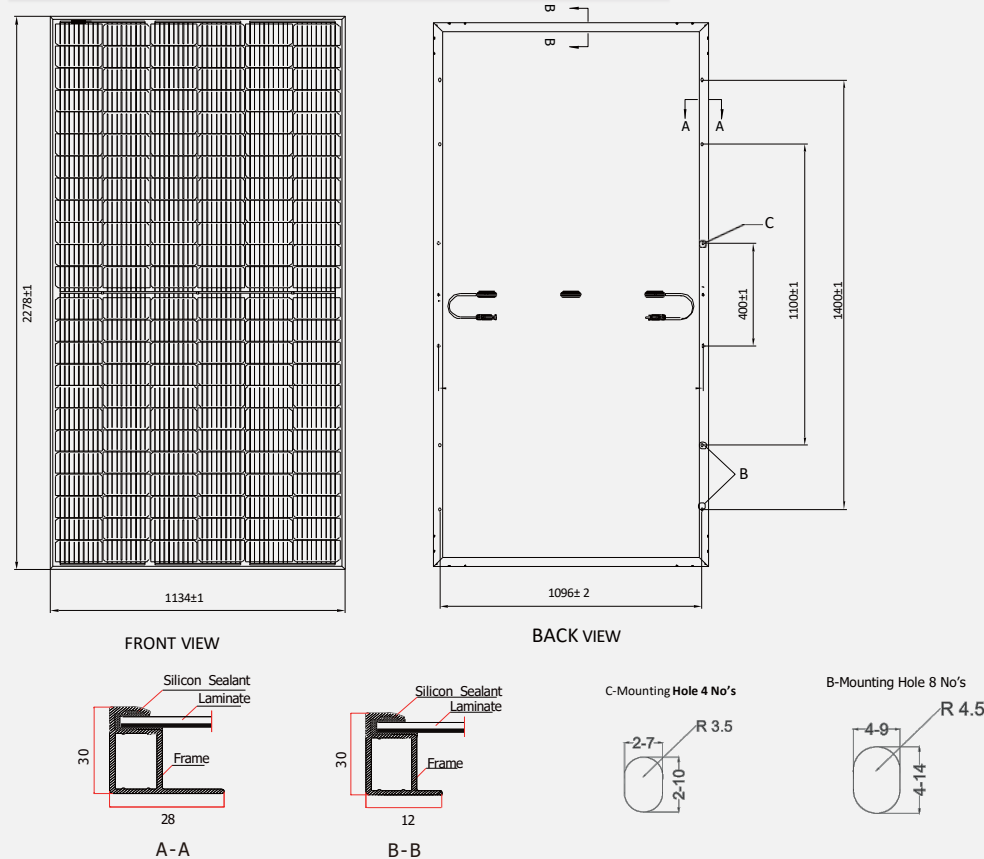
OPERATING CONDITION

Mechanical Load	5400 Pa
Maximum System Voltage	1500VDC
Series Fuse Rating	25 A
Operating Temperature	-40 to 85 °C
Safety application class	Class II
Fire Rating	Class C

TEMPERATURE CHARACTERISTICS

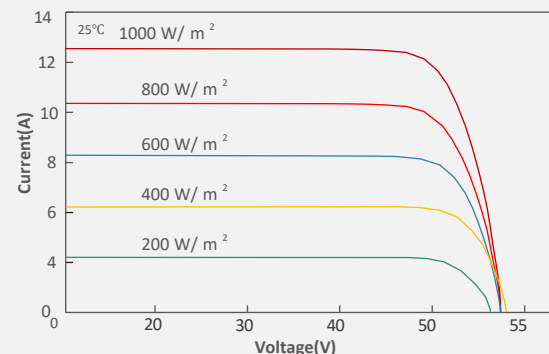
Nominal Module Operating Temperature	43°C ± 2°C
Temperature Coefficient of Isc	+0.05 % / °C
Temperature Coefficient of Voc	-0.25 % / °C
Temperature Coefficient of Pmax	-0.30 % / °C

DIMENSIONS OF PV MODULE (mm)

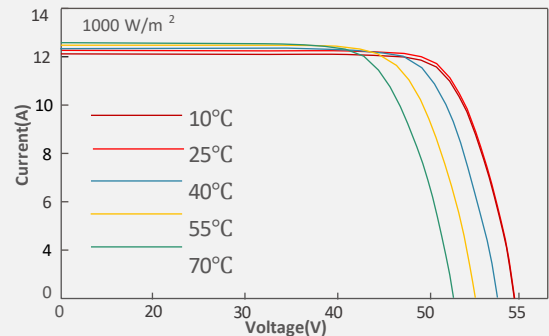


IV-CURVES

CURRENT-VOLTAGE CURVE UNDER DIFFERENT IRRADIANCE



CURRENT-VOLTAGE CURVE UNDER DIFFERENT WORKING TEMPERATURES



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