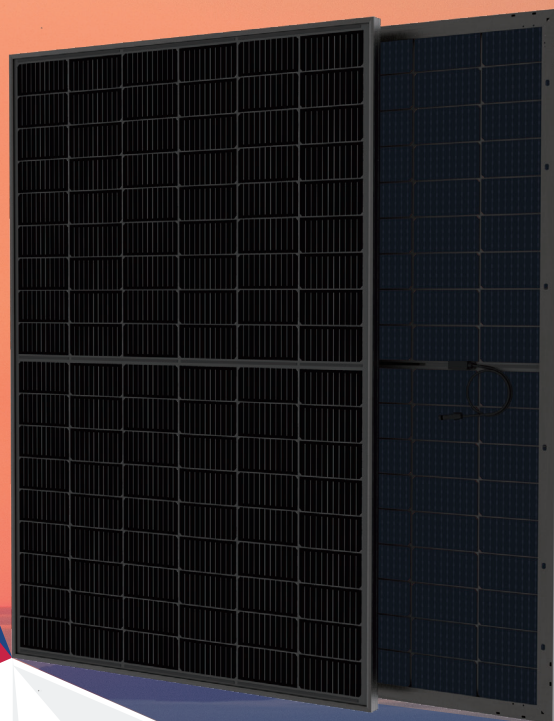


BIPRO

TP7G54M **108-cell**

390 - 410W

Bifacial Module With Transparent Backsheet
10BB Half-cut Mono Perc



SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

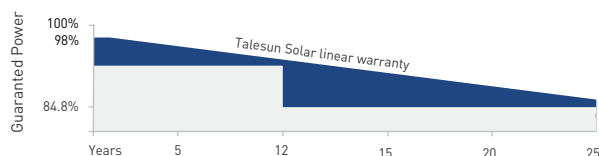


PERFORMANCE WARRANTY

25 Years
Quality Assurance

25 Years
Power Output Guarantee

Linear Performance Warranty



KEY FEATURES



10BB Half-cut Cell Technology

New circuit design, lower internal current, lower R_s loss
Ga doped wafer, attenuation $\leq 2\%$ (1st year) / $\leq 0.55\%$ (Linear)



Industry Leading High Yield

Bifacial PERC cell technology,
5%-25% more yield depends on different conditions



Excellent Anti-PID Performance

2 times of industry standard Anti-PID test



Lower LCOE

2% more power generation, lower LCOE



IP68 Junction Box

High waterproof level

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	390	291	395	294	400	298	405	302	410	306
Operating Voltage (Vmpp/V)	30.65	28.6	30.85	28.8	31.05	29.0	31.24	29.2	31.43	29.3
Operating Current (Impp/A)	12.73	10.18	12.81	10.23	12.89	10.30	12.97	10.36	13.05	10.42
Open-Circuit Voltage (Voc/V)	36.50	34.4	36.75	34.6	37.00	34.8	37.25	35.1	37.50	35.3
Short-Circuit Current (Isc/A)	13.61	10.97	13.69	11.04	13.78	11.11	13.86	11.17	13.94	11.24
Module Efficiency (%)	20.00		20.20		20.50		20.70		21.00	

NMOT: Irradiance 800W/m², Spectra at AM1.5, Ambient Temperature 20 °C, Wind speed 1m/s

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	431	451	472	492	513
Vmpp/V	31.43	31.43	31.43	31.43	31.43
Impp/A	13.70	14.36	15.01	15.66	16.31
Voc/V	37.50	37.50	37.50	37.50	37.50
Isc/A	14.65	15.35	16.04	16.74	17.44

Solar Cell	Monocrystalline 182*182mm
No. of Cells	108 (6*18)
Module Dimensions	1722*1134*30mm (67.80*44.65*1.18inches)
Weight	21.5kg (47.4lbs.)
Front Glass	3.2mm AR Coating Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm² (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	MC4/MC4-EVO2A/Others

Maximun System Voltage	1000V/1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class II
Mechanical Load	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	70%+5%/-10%

Temperature Coefficient of Pmax	-0.35%/°C
Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Isc	+0.048%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

Pieces Per Pallet	36(USA)
Pieces Per 53' Container	828

TP7G54M/410W

Top Graph: Current (A) vs. Voltage (V) for different power levels

The top graph shows the operating limits of the TP7G54M/410W LED module for different power levels. The x-axis represents Voltage (V) from 0 to 40, and the y-axis represents Current (A) from 0 to 14. The legend indicates the power levels: 1000W/m² (green), 800W/m² (blue), 600W/m² (orange), 400W/m² (pink), and 200W/m² (purple). The curves show that the maximum current decreases as the power level decreases. The 1000W/m² curve is the highest, reaching approximately 14A at 35V. The 200W/m² curve is the lowest, reaching approximately 2A at 35V.

Bottom Graph: Current (A) vs. Voltage (V) for different temperatures

The bottom graph shows the operating limits of the TP7G54M/410W LED module for different temperatures. The x-axis represents Voltage (V) from 0 to 40, and the y-axis represents Current (A) from 0 to 14. The legend indicates the temperatures: 75°C (blue), 50°C (red), and 25°C (green). The curves show that the maximum current decreases as the temperature increases. The 25°C curve is the highest, reaching approximately 14A at 35V. The 75°C curve is the lowest, reaching approximately 14A at 30V.

