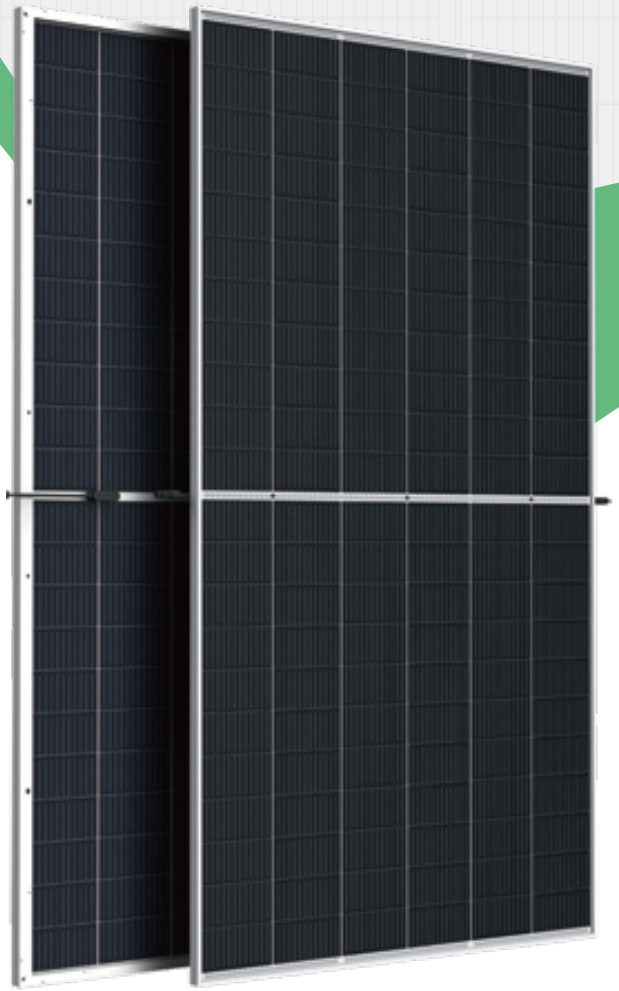
power+®

www.powerplus.solar



BIFACIAL MODULE

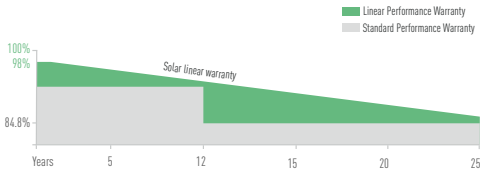
M670/12-66HBD

650~670W

HALF CELL PERC

PERFORMANCE WARRANTY

- 12 — Enhanced Product Warranty on Materials and Workmanship.
- 25 — Linear Power Performance Warranty*
- ≥55% — Annual Degradation Over 25 years no more than 0.55%



*According to the applicable PowerPlus Solar Limited Warranty Statement.

MANAGEMENT SYSTEM CERTIFICATES

ISO 9001:2015 / Quality management system

ISO 14001:2015 / Standards for environmental

ISO 45001: 2018 / International standards for occupational health & safety

PRODUCT CERTIFICATES

IEC 61215 / IEC 61730 / CE

THE IDEAL SOLUTION FOR:

Ground-mounted solar power plants

High module conversion efficiency

MBB Half Cell Technology, Module efficiency up to 21.5%

Withstanding harsh environment

Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline

PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control

Excellent weak light performance

More power output in weak light condition, such as cloudy, morning and sunset

Extended wind and snow load tests

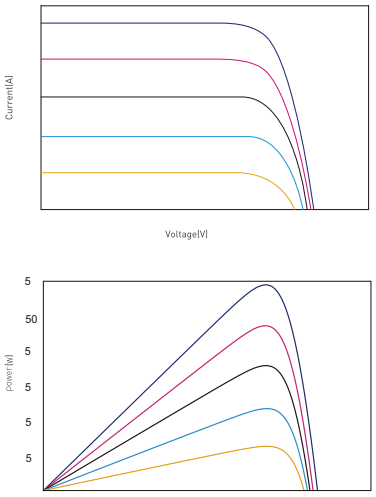
Module certified to withstand extreme wind (2400 Pa) and snow loads (5400 Pa)

SPECIFICATIONS

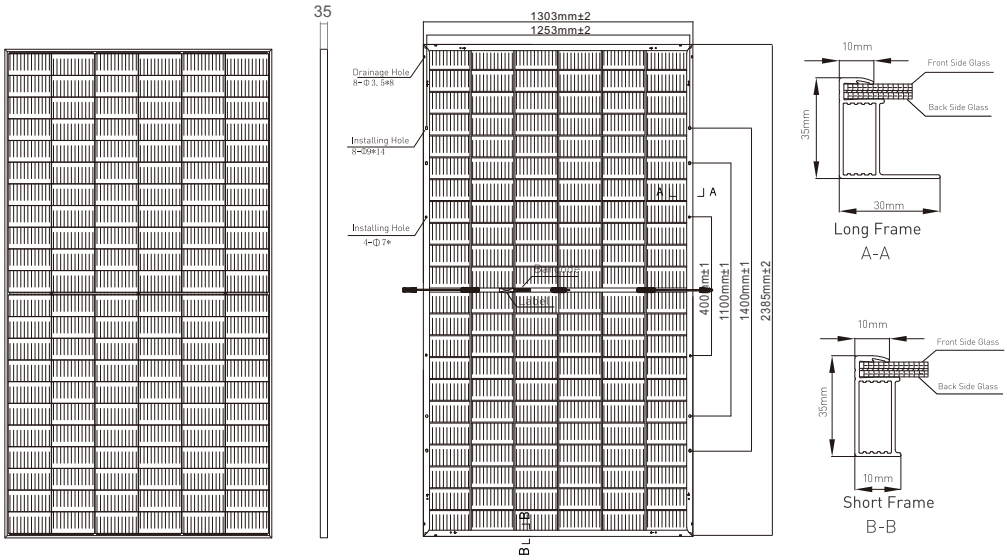
Module Type		M650/12-66HBD		M655/12-66HBD		M660/12-66HBD		M665/12-66HBD		M670/12-66HBD	
		STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power	(Pmax/W)	650	492	655	496	660	500	665	504	670	509
Operating Voltage	(Vmp/V)	37.4	34.9	37.6	35.1	37.8	35.3	38.0	35.5	38.2	35.7
Operating Current	(Imp/A)	17.38	14.09	17.42	14.13	17.46	14.18	17.50	14.22	17.54	14.27
Open-Circuit Voltage	(Voc/V)	45.2	42.6	45.4	42.8	45.6	43.0	45.8	43.2	46.0	43.4
Short-Circuit Current	(Isc/A)	18.46	14.85	18.50	14.88	18.55	14.92	18.60	14.96	18.65	15.00
Module Efficiency	ηm(%)	20.9		21.0		21.2		21.4		21.5	

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5 NMOT: Irradiance at 800W/m², Ambient Temperatue 20°C, Air Mass AM1.5, Wind Speed 1m/s

I-V CURVE



ENGINEERING DRAWINGS



MECHANICAL SPECIFICATION

Cell Type	Monocrystalline
Cell Dimensions	210*210mm
Cell Arrangement	132 (6*22)
Weight	38.7kg
Module Dimensions	2385*1303*35mm
Cable Length	4.0mm²(0.006inches²), 300mm(11.8inches)
Cable Cross Section Size	TUV: 4mm²(0.006inches²)/UL: 12AWG
Front Side Glass	High transparency solar glass 2.0mm(0.08 inches)
Back Side Glass	High transparency solar glass 2.0mm(0.08 inches)
No. of Bypass Diodes	3
Packing Configuration	31pcs/carton, 558pcs/40hq
Frame	Silver Anodized Aluminium Alloy
Junction Box	IP68

OPERATING CONDITIONS

Maximun System Voltage	1500V/DC(IEC)
Operating Temperature	-40°C~ +85°C
Maximun Series Fuse	30A
Static Loading	Snow Loading: 5400Pa/ Wind Loading: 2400Pa
Conductivity at Ground	≤0.1Ω
Safety Class	II
Resistance	≥100MΩ
Connector	MC Compatible

TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.34%/°C
Temperature Coefficient Voc	-0.25%/°C
Temperature Coefficient Isc	+0.040%/°C
NMOT	43±2°C

*Data contained in these specifications is subject to change without notice. Power Plus reserves the right to final interpretation of content.