

High Efficiency
PERC Module

GSM- MP3/132- M670

650W | 655W | 660W
665W | 670W



.670W
Maximum Power Output

.21.57%
Maximum Efficiency

.25Years
Linear Power Warranty

Product Features



MBB Half Cell

Multi-busbar half cell design, together with many other technologies to increase module power and efficiency



High Energy Yield

High density interconnection technology optimizes module efficiency up to 21.57%



G12 Cell/Module

G12 big size wafer, low BOS cost, best for utility scale projects



High Reliability

Certified mechanical performance up to 5400 Pa positive load and 2400 Pa negative load, with better protection against harsh weather



Higher Performance

Low temperature coefficient, low operating temperature, more energy yield



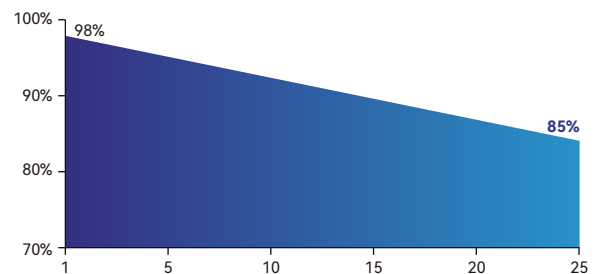
Better Warranty

Low LID/PID in longer service life, less than 15% power degradation in 25 years

Quality Assurance

12 Years Product Warranty

25 Years Linear Power Warranty



Certificates



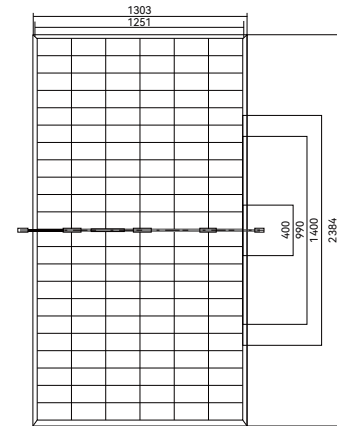
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Mechanical Data

Cell(mm)	210×105
Weight(kg)	33.5±0.5kg
Dimension(L×W×H)(mm)	2384×1303×35mm
Cable(mm)	4mm ² , 300mm(customized length based on needs)
Frame	anodized aluminum
Junction Box	IP68, 1500VDC, 3 Diodes
Packaging Configuration (40' Container; 17.5'Trailer)	31pcs/pallet, 17pallets/container, 527pcs/container 31pcs/pallet, 26pallet / Trailer, 806pcs / Trailer



Electrical Data (STC)

Model	GSM-MP3/132-M650	GSM-MP3/132-M655	GSM-MP3/132-M660	GSM-MP3/132-M665	GSM-MP3/132-M670
Pmax(Wp)	650	655	660	665	670
Voc(V)	45.5	45.7	45.9	46.1	46.3
Isc(A)	18.35	18.40	18.45	18.50	18.55
Vmpp(V)	37.7	37.9	38.1	38.3	38.47
Impp(A)	17.27	17.31	17.35	17.39	17.42
Efficiency	20.92%	21.09%	21.25%	21.41%	21.57%

STC: AM1.5 Irradiance: 1000W/m² Temperature=25°C

Electrical Characteristics (NOCT)

Model	GSM-MP3/132-M650	GSM-MP3/132-M655	GSM-MP3/132-M660	GSM-MP3/132-M665	GSM-MP3/132-M670
Pmax(Wp)	483	485	490	494	497
Voc(V)	41.31	41.51	41.71	41.91	42.07
Isc(A)	14.88	14.93	15.00	15.04	15.09
Vmpp(V)	35.42	35.53	35.72	35.92	36.10
Impp(A)	13.66	13.69	13.72	13.76	13.78

α_{Isc} (%/K) : 0.05; β_{Voc} (%/K) : -0.265; γ_{Pmp} (%/K) : -0.34

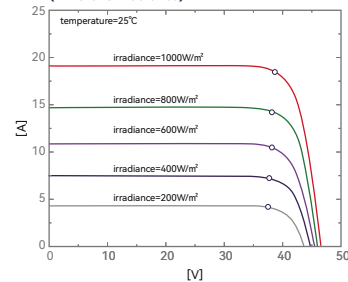
NMOT standard: AM1.5 Front irradiance: 800W/m² Temperature=20°C Wind speed=1m/s

Working Condition

Maximum System Voltage	1500VDC
Operating Temperature	-40°C ~ +85°C
Maximum Fuse Rating	30A
Rear Side Mechanical Load	2400Pa
Front Side Mechanical Load	5400Pa
NOCT	44±2°C
Safety Class	Class II
Grounding Electric Conductivity	< 0.1Ω

I-V Diagram

(Different Irradiance)



I-V Diagram

(Different Temperature)

