

GKA144M

370-410 Watt

HALF CELL MODULE

5BB
156.75mm
158.75mm

GAMKO
SOLAR

KEY FEATURES



5 Busbar Solar Cell:

5 busbar cell design improves module efficiency and offers better aesthetic appearance for rooftop in stallation.



High Efficiency:

Higher module conversion efficiency (up to 20.44%) benefit from half cell structure (low resistance characteristic).



PID Resistance:

Excellent Anti-PID perform ance guarantee limited power degradation for mass production.



Low-light Performance:

Advanced glass and cell surface textured design ensure excellent performance in low-light tenvironment.



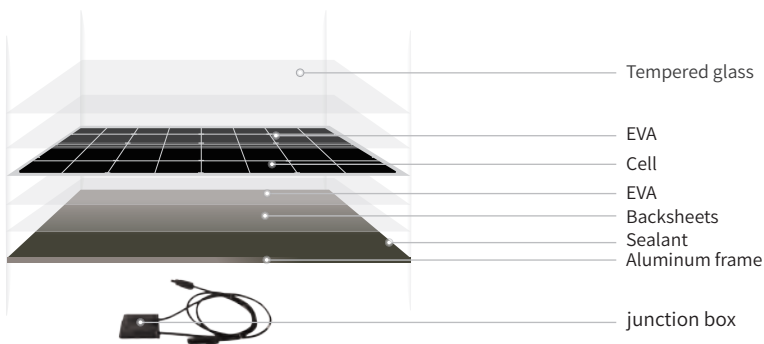
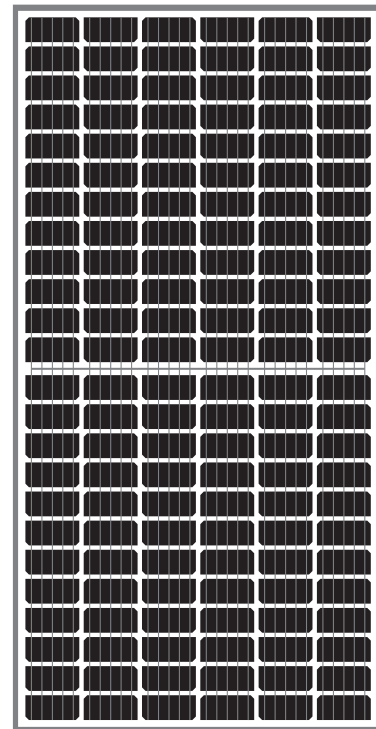
Severe Weather Resilience:

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).



DURABILITY AGAINST EXTREME ENVIRONMENTAL CONDITIONS:

High salt mist and ammonia resistance certified by TUV NORD.



GAMKO SOLAR MODULE BOM

CELLS:TIER 1 BRANDS SOLAR CELLS

TEMPERED GLASS:ULTRA-CLEAR

EVA:TRANSPARENCY>93%

BACKSHEETS:REFLECTIVITY>80%, TPT

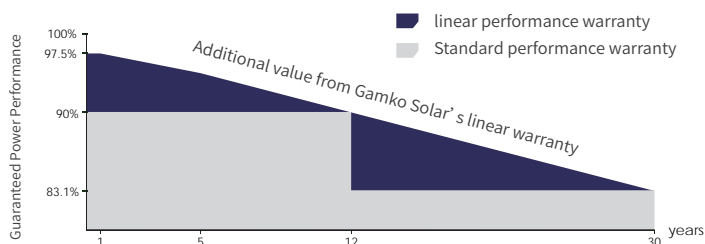
JUNCTION BOX:IP65/IP67 MAX 30A

SILICON GEL: UV, AGING-RESISTANT

FRAME:ANODIZED ALUMINUM 6005-T5

LINEAR PERFORMANCE WARRANTY

12 Year Product Warranty • 30 Year Linear Power Warranty



GAMKO QUALITY CONTROL

- ◆ 2 EL testing avoid cells cracking of each solar module.
- ◆ 2 Power flash testing avoid false welding and insufficient power of each module.
- ◆ Packing tightly with angle protection avoid transportation broken.
- ◆ Gamko Official Warranty cover all Gamko solar module 30 years.

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ELECTRICAL CHARACTERISTICS AT STC

Nominal Power (P_{max})	370W	375W	380W	390W	395W	400W	405W	410W
Open Circuit Voltage (V_{oc})	48.1V	48.3V	48.6V	50.1V	50.4V	50.6V	50.9V	51.6V
Short Circuit Current (I_{sc})	9.81A	9.90A	9.98A	9.92A	9.99A	10.07A	10.15A	10.13A
Voltage at Nominal Power (V_{mp})	39.4V	39.6V	39.8V	41.1V	41.3V	41.5V	41.7V	42.3V
Current at Nominal Power (I_{mp})	9.39A	9.47A	9.55A	9.49A	9.56A	9.64A	9.71A	9.69A
Module Efficiency (%)	19.07%	19.33%	19.58%	19.44%	19.69%	19.94%	20.19%	20.44%
Operating Temperature	-40°C to +85°C							
Maximum System Voltage	1000VDC (IEC)							
Fire Resistance Rating	Type 1(in accordance with 1703)/Class C(IEC61730)							
Maximum Series Fuse Rating	20A							

*STC: Irradiance 1000W/m², Cell temperature 25°C, AM1.5

ELECTRICAL CHARACTERISTICS AT NOCT

Nominal Power (P_{max})	274W	278W	281W	289W	292W	296W	300W	303W
Open Circuit Voltage (V_{oc})	44.2V	44.4V	44.7V	46.1V	46.4V	46.6V	46.8V	47.5V
Short Circuit Current (I_{sc})	7.95A	8.02A	8.08A	8.03A	8.10A	8.16A	8.22A	8.20A
Voltage at Nominal Power (V_{mp})	35.9V	36.1V	36.3V	37.5V	37.7V	37.8V	38.0V	38.6V
Current at Nominal Power (I_{mp})	7.61A	7.67A	7.73A	7.69A	7.75A	7.81A	7.87A	7.85A

*NOCT: Irradiance 800W/m², Ambient temperature 20°C, Wind Speed 1 m/s

MECHANICAL CHARACTERISTICS

Cell type	Mono 156.75x156.75mm/158.75x158.75mm
Number of cells	144(6x24)
Module dimensions	1956x992x35mm/2002x1002x35mm
Weight	21kg/23kg
Front cover	3.2mm, Anti-Reflection Coating, Tempered Glass
Frame	Anodized Aluminium Alloy
Junction box	IP67 Rated
Cable	TÜV 1x4.0mm ² , Length:300mm or Customized Length
Connector	PV Connector (compatible)

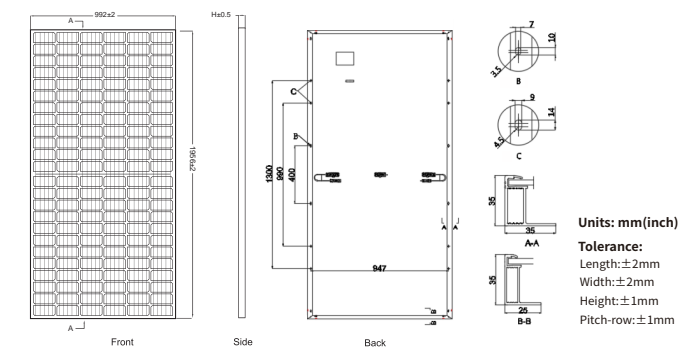
TEMPERATURE CHARACTERISTICS

Nominal Operating Cell Temperature (NOCT)	45°C ± 2°C
Temperature Coefficients of P_{max}	-0.37%/°C
Temperature Coefficients of V_{oc}	-0.28%/°C
Temperature Coefficients of I_{sc}	0.048%/°C

PACKAGING

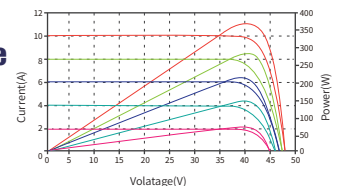
Standard packaging	31pcs/pallet
Module quantity per 20' container	324pcs
Module quantity per 40' container	688pcs(GP)/738pcs(HQ)

ENGINEERING DRAWINGS

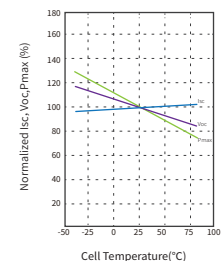


Electrical Performance & Temperature Dependence

Current-Voltage and Power-Voltage Curves (390W)



Temperature Dependence of I_{sc} , V_{oc} , P_{max}



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