



# MARS

## GSP7G60M-460W

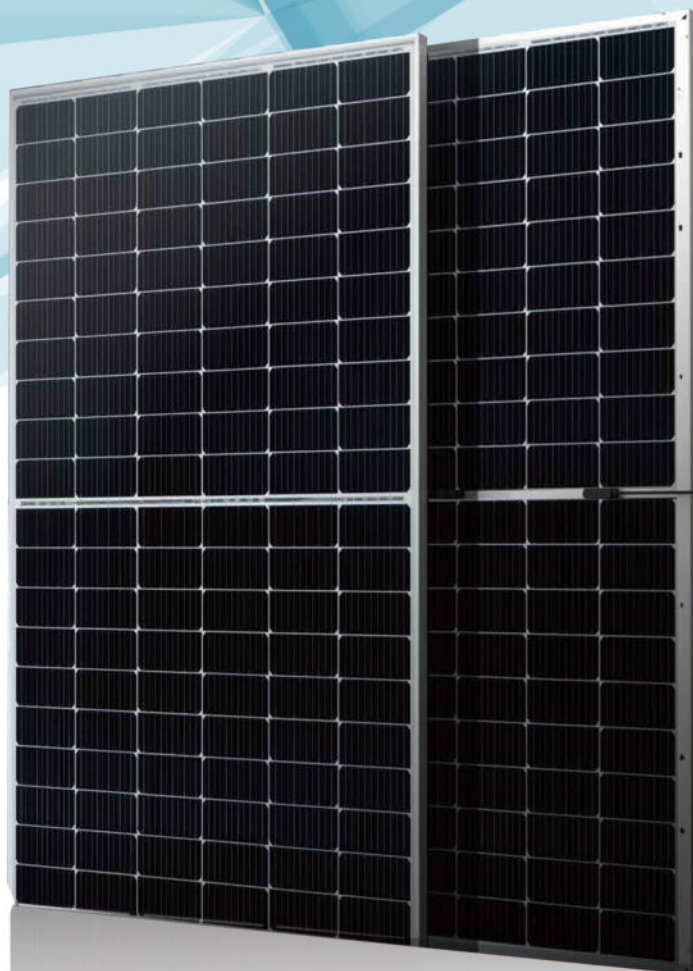
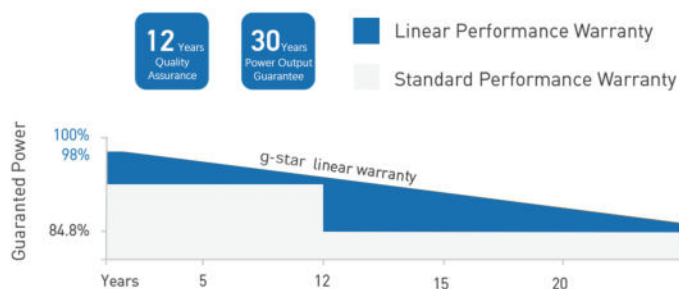
Bifacial  
10BB Half-cut Mono Perc

### 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



### KEY FEATURES



#### 10BB Half-cut Cell Technology

New circuit design, lower internal current, lower  $R_s$  loss  
Ga doped wafer, attenuation  $< 2\%$  (1st year) /  $\leq 0.45\%$  (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



#### Wider Application

No water-permeability and high wear-resistance,  
can be widely used in high-humid, windy and dusty area



#### IP68 Junction Box

High waterproof level

# Electrical Characteristics

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power(Pmax/W)	440	328	445	332	450	336	455	339	460	343
Operating Voltage (Vmpp/V)	34.35	32.1	34.53	32.2	34.70	32.4	34.87	32.6	35.04	32.7
Operating Current (Impp/A)	12.81	10.23	12.89	10.30	12.97	10.36	13.05	10.42	13.13	10.49
Open-Circuit Voltage (Voc/V)	40.99	38.6	41.16	38.7	41.33	38.9	41.50	39.1	41.67	39.2
Short-Circuit Current (Isc/A)	13.69	11.04	13.78	11.11	13.86	11.17	13.94	11.24	14.02	11.30
Module Efficiency(%)	20.30		20.50		20.70		21.00		21.20	

# Mechanical Characteristucs

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	467	490	512	534	556
Vmpp/V	34.53	34.53	34.53	34.53	34.53
Impp/A	13.53	14.18	14.82	15.47	16.11
VocV	41.16	41.16	41.16	41.16	41.16
Isc/A	14.47	15.16	15.85	16.54	17.23

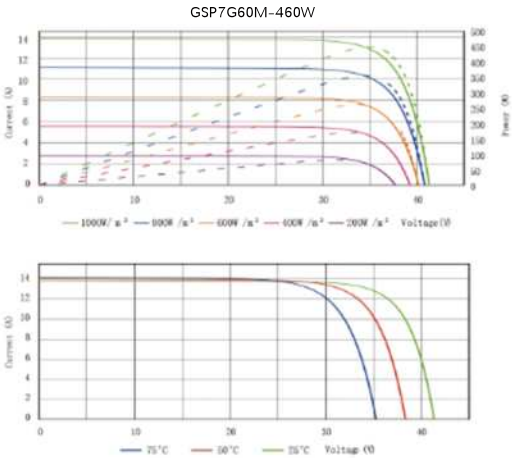
# Mechanical Characteristucs

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

# Application Conditions

Cell Type	Monocrystalline
No. of Cells	120pcs in series (6*20)
Module Dimensions	1909*1134*35mm (75.12*44.65*1.38inches)
Weight	24.3kg(53.6lbs.)
Glass	3.2mm AR Coating Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm <sup>2</sup> (IEC), 12AWG(UL)300mm in Length or Customized Length
Connectors	MC4/MC4-EV02

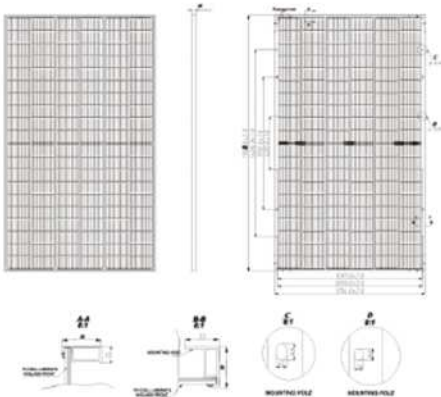
# I-V Curve



# Temperature Characteristics

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

# Technical Drawings



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