



THE PRIMAX

BIFACIAL DUAL GLASS MONOCRYSTALLINE MODULE

460W

MAXIMUM POWER OUTPUT

21.3%

MAXIMUM EFFICIENCY

0-+5W

POSITIVE POWER TOLERANCE

PRODUCTS

SPH-DEG18C.20

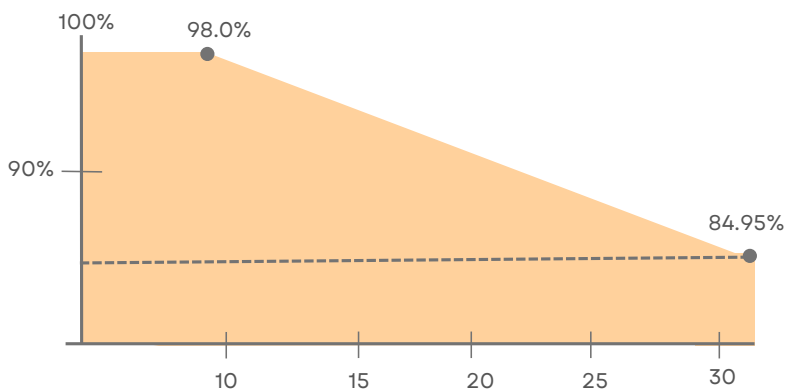
POWER RANGE

440W - 460W



Sunphase is a top tier 1 class panel brand that was established in 2017 in order to globally spread solar energy to every household and business. We revolutionize the way energy is delivered to customers, using a cleaner and more affordable alternative to their utility bill.

Since its inception, the company has made its goal to be the standard for the solar module industry and to bring clean and green electricity, both to the urban environment and the periphery.



PRIMAX - SPH-M10S BIFACIAL MODULE

Sunphase Primax showcases a thin profile double-glass construction that yields higher power and superior aesthetics that are a perfect complement to roofs, carports, and canopies.

Primax uses a highly scalable process to deliver high-output solar power at a very competitive Levelized Cost of Energy (LCOE).

KEY FEATURES

- With a high power output
- Robust quality and reliability
- High Module Efficiency
- Competitive Weak Light Performance
- Withstands harsh environment
- Ideal solution for utility and industrial projects

LINEAR PERFORMANCE WARRANTY

- 12 Year Product Warranty
- 30 Year Linear Power Warranty

COMPREHENSIVE CERTIFICATES

IEC 61215 / IEC61 / IEC 62716 /UL703
ISO 14001 : 2015 Environmental Management System
ISO 9001 : 2015 Quality Management System
ISO 45001 : 2018 Occupational Health and Management System.



ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)	440	445	450	455	460
Power Output Tolerance-PMAX (W)					
Maximum Power Voltage-VMPP (V)	34.40V	34.60V	34.80V	35.00V	35.20V
Maximum Power Current-IMPP (A)	12.79A	12.86A	12.93A	13.00A	13.07A
Open Circuit Voltage-Voc (V)	41.20V	41.40V	41.60V	41.80V	42.00V
Short Circuit Current ISC(A)	13.58A	13.64A	13.70A	13.76A	13.82A
Module Efficiency (%)	20.3%	20.6%	20.8%	21.0%	21.3%

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5

TEMPERATURE RATINGS

Temperature Coefficients of Pmax	-0.350%/°C
Temperature Coefficients of Voc	-0.270%/°C
Temperature Coefficients of Isc	0.048%/°C

MAXIMUM RATINGS

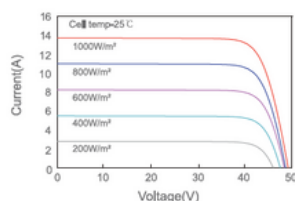
Operational Temperature	-40~+85°C
Maximum System Voltage	1500V
Max Series Fuse Rating	25A

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

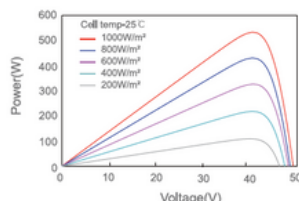
DOUBLE SIDE POWER GENERATION DATA (BACKSIDE GAIN)

5%	Pmax (Wp)	462Wp	467Wp	473Wp	478Wp	483Wp
	Module Efficiency (%)	21.42%	21.66%	21.90%	22.15%	22.39%
15%	Pmax (Wp)	506Wp	511Wp	517Wp	523Wp	529Wp
	Module Efficiency (%)	23.46%	23.72%	24.99%	24.25%	24.52%
25%	Pmax (Wp)	550Wp	556Wp	562Wp	568Wp	575Wp
	Module Efficiency (%)	25.49%	25.78%	26.08%	26.37%	26.66%

CHARACTERISTICS

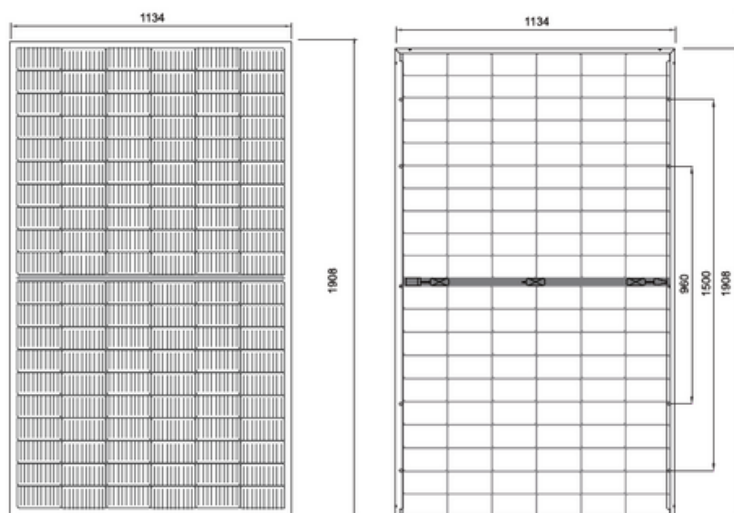


Current-Voltage Curve



Power-Voltage Curve

MECHANICAL DIAGRAMS



MECHANICAL DATA

Solar Cells	Monocrystalline 182x91mm
Cell Orientation	120 cells (6x20)
Module Dimension	1908x1134x30mm
Weight	27kg
Glass	2.0mm (0.13 inches), High Transmission AR Coated Tempered Glass
Backsheet	White
Frame	Silver Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006in ²)
Connector	MC4

PACKAGING CONFIGURATION

Modules per box	36 pieces
Modules per 40'	HQ Container: 864 pieces

