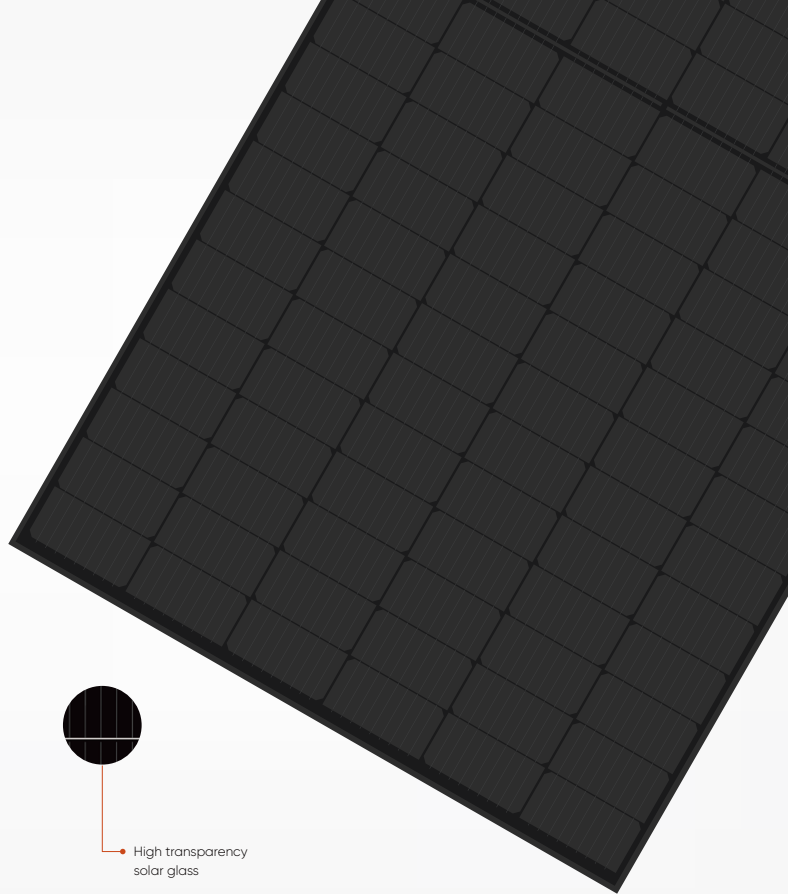


MT4 445-465W

MS465M-72H

Full Black
Monocrystalline Module



Features

High Efficiency up to 21.4%

Large area cells based on 166mm silicon wafers,
High module efficiency with high density interconnect technology

High Energy Yield

Excellent low irradiation performance,
Lower temperature coefficient and operating temperature

High Reliability

Resistant to harsh environments such as salt, ammonia, sand,
high temperature and high humidity areas

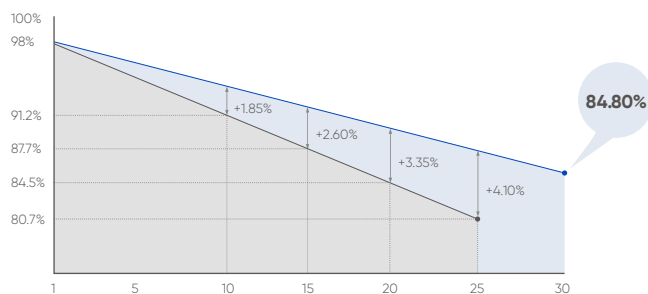
High Customer Value

Lowest guaranteed first year and annual degradation,
Compatible with existing mainstream system components

Quality Guarantee

12-Year Warranty for Materials and Processing

30-Year Warranty for Extra Linear Power Output



* Please refer to Mate Solar standard warranty for details

Certifications

IEC 61215, IEC 61730, UL 61730

ISO 9001: 2015: ISO Quality Management System

ISO 14001: 2015: ISO Environment Management System

ISO 45001: 2018: Occupational Health and Safety



WEB



WECHAT

Mechanical Data

Number of Cells	144 Cells (6x24)
Dimensions of Module L*W*H	2094 x 1038 x 35mm
Weight	23.3kg
Front Side Glass	High transparency solar glass 3.2mm
Backsheet	Black
Frame	Silver / Black, anodized aluminium alloy
Junction Box	IP68 Rated, 3 Diodes
Cable	4.0mm ² , Portrait: 300mm / Landscape: 1300mm
Wind/Snow Load	2400Pa/5400Pa*
Connector	MC Compatible

* Please check the installation manual for more details

Electrical Specification (STC*)

Maximum Power (Pmax/W)	445	450	455	460	465
Maximum Power Voltage (Vmp/V)	41.75	42.10	42.41	42.76	43.10
Maximum Power Current (Imp/A)	10.66	10.69	10.73	10.76	10.79
Open Circuit Voltage (Voc/V)	49.55	49.84	50.10	50.39	50.68
Short Circuit Current (Isc/A)	11.31	11.34	11.37	11.40	11.43
Module Efficiency (%)	20.5	20.7	20.9	21.2	21.4
Power Output Tolerance (W)	0~+5				

* Irradiance 1000W/m², Cell Temperature 25°C, Air Mass 1.5

Electrical Specification (NMOT*)

Maximum Power (Pmax / W)	324.8	328.6	332.4	336.2	340.0
Maximum Power Voltage (Vmp / V)	38.13	38.42	38.71	39.00	39.29
Maximum Power Current (Imp / A)	8.52	8.55	8.59	8.62	8.65
Open Circuit Voltage (VOC / V)	45.82	46.08	46.34	46.60	46.86
Short Circuit Current (Isc / A)	9.14	9.17	9.19	9.22	9.25

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

Maximum Ratings

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	20A

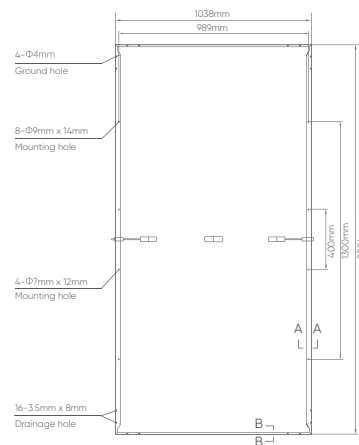
Packaging Configuration

Module per Box	31 pieces
Module per 40' Container	682 pieces

Temperature Ratings

NMOT (Nominal Module Operating Temperature)	43±2°C
Temperature Coefficient of Isc	+0.05%/°C
Temperature Coefficient of Voc	-0.28%/°C
Temperature Coefficient of Pmax	-0.36%/°C

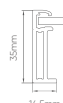
Module Dimension



Back View

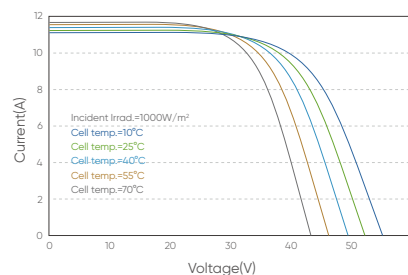


A-A



B-B

I-V Curve at Different Temperature (465W)



I-V/P-V Curve at Different Temperature (465W)

