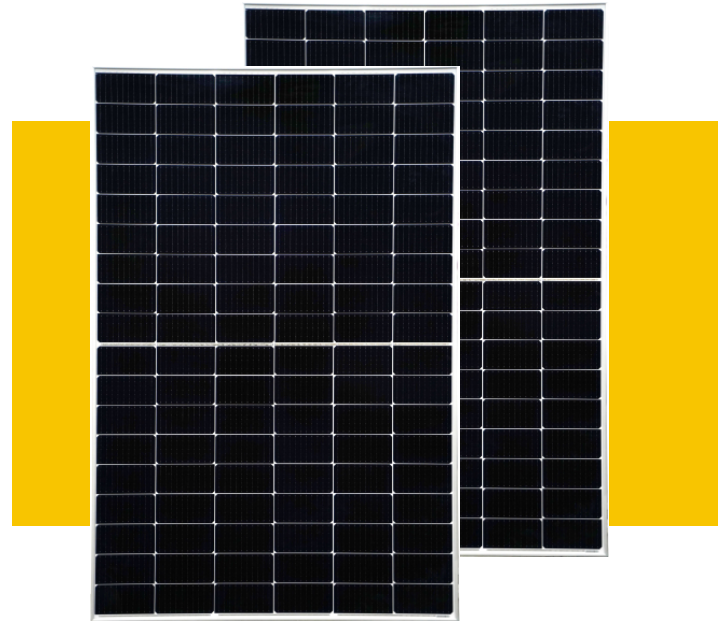









**MSMDxxxM10-54**  
**182 M10 cells half cut**

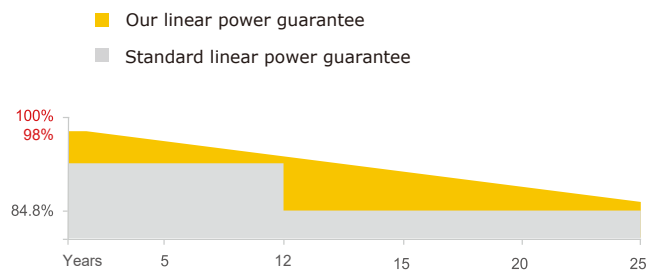
**390W-410W**



## KEY FEATURES

-  Class A fire resistant (possible on request)
-  Outstanding performance in low-light conditions
-  Low temperature coefficient (Pmax): -0.34%/°C
- +5W** 0~+5W positive tolerance- to assure high output
-  Lower internal current, lower hot spot temperature
-  Cell crack risk limited in small region, enhance the module reliability
- PID FREE** Excellent anti-PID module design, TÜV SÜD certified
-  Certified to withstand high wind loads (2400pa) and snow loads (5400 pa)
-  Salt mist and ammonia corrosion resistant

## WARRANTY



**12**  
years

Enhanced product guarantee on product and workmanship

**25**  
years

Linear power output warranty

## PRODUCT CERTIFICATES



# MSMDxxxM10-54

## ELECTRICAL CHARACTERISTICS

STC	410	405	400	395	390
Maximum Power at STC (Pmax)	410W	405W	400W	395W	390W
Optimum Operating Voltage (Vmp)	31.59V	31.38V	31.18V	30.98V	30.76V
Optimum Operating Current (Imp)	12.98A	12.91A	12.83A	12.76A	12.69A
Open Circuit Voltage (Voc)	37.45V	37.24V	37.04V	36.84V	36.62V
Short Circuit Current (Isc)	13.88A	13.81A	13.73A	13.66A	13.59A
Module Efficiency	21.0%	20.7%	20.5%	20.2%	19.9%
Operating Module Temperature	-40°C to +85°C				
Maximum System Voltage	1500 V DC (IEC)				
Maximum Series Fuse Rating	25A				
Power Tolerance	0/+5W				

STC: Irradiance 1000 W/m<sup>2</sup>, module temperature 25 °C, AM=1.5;

NMOT	410	405	400	395	390
Maximum Power at NMOT (Pmax)	309.6W	306.0W	302.3W	298.6W	294.9W
Optimum Operating Voltage (Vmp)	29.2V	29.0V	28.8V	28.6V	28.4V
Optimum Operating Current (Imp)	10.62A	10.56A	10.50A	10.44A	10.38A
Open Circuit Voltage (Voc)	35.2V	35.0V	34.8V	34.6V	34.4V
Short Circuit Current (Isc)	11.16A	11.10A	11.04A	10.98A	10.93A

NMOT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM=1.5, wind speed 1 m/s.

## TEMPERATURE CHARACTERISTICS

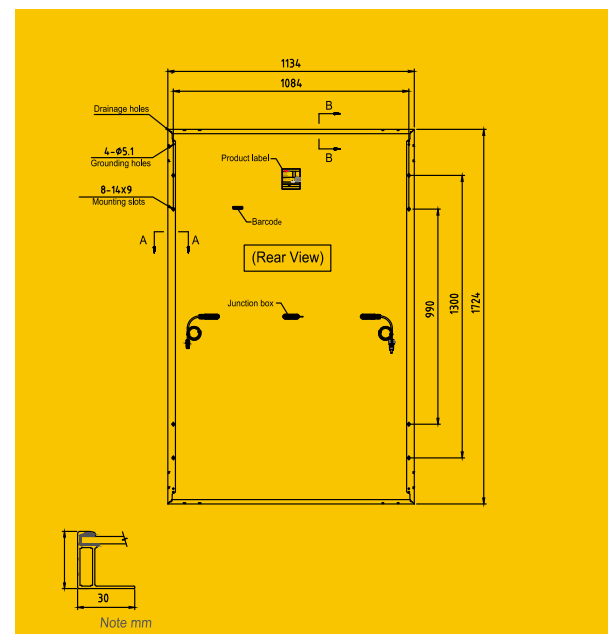
Nominal Module Operating Temperature (NMOT)	42±2°C
Temperature Coefficient of Pmax	-0.34 %/°C
Temperature Coefficient of Voc	-0.304 %/°C
Temperature Coefficient of Isc	0.05 %/°C

## MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline silicon 182 mm
No. of Cells	108 (6 × 18)
Dimensions	1724 × 1134 × 35 mm
Weight	21.2kg
Front Glass	High Transmittance AR Coated Tempered Glass/3.2mm
Frame	Anodized aluminium alloy
Junction Box	IP68
Output Cables	4.0 mm <sup>2</sup> , cable length 350mm or customized length

## PACKING CONFIGURATION

Container	20' GP	40' HC
Pieces per pallet	36+4*6	31
Pallets per container	6	26
Pieces per container	360	806



Current-Voltage & Power-Voltage Curve (410)

