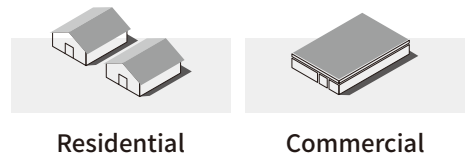


# YTM460-480N-60/M

Adopting N-type TOPCon technology on M10 wafer, achieves high efficiency and ultra-low degradation, and perfectly matches mainstream system design and mature logistics scheme.

Advanced module technologies are adopted like multi-busbar, half cell, non-destructive cutting, and intelligent soldering.



Residential

Commercial



**High Efficiency**



**Low LCOE**



**Low Degradation**



**Better Temperature Coefficients**

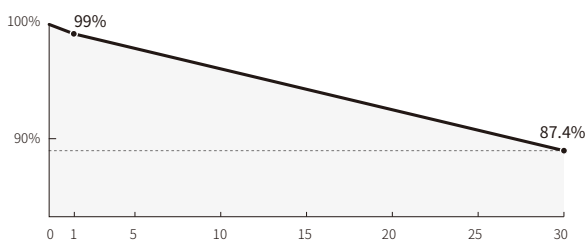
## Warranty

Product warranty 12 Years

1<sup>st</sup> year degradation  $\leq 1\%$

Linear power warranty 30 Years

Annual degradation  $\leq 0.40\%$



## Certificates

IEC 61215, IEC 61730

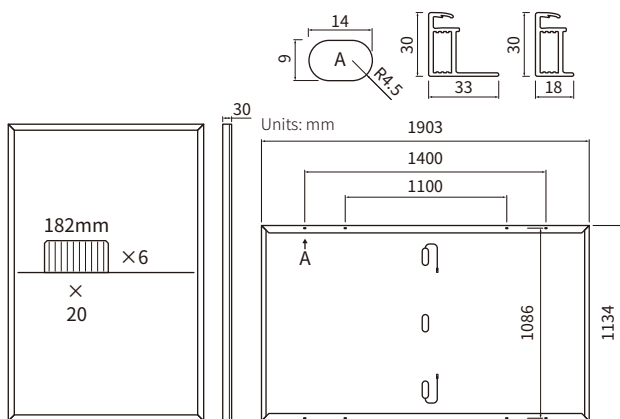
ISO 9001:2015 Quality management systems

ISO 14001:2015 Environmental management systems

ISO 45001:2018 Occupational health and safety management systems



# YTM460-480N-60/M



## Mechanical Parameters

Cell type	Mono TOPCon
No. of cells	120 (6*20)
Junction box	IP68, 3 diodes
Cable	4mm <sup>2</sup> ; 300mm(+)/400mm(-) or customized
Glass	Single glass, 3.2mm
Frame	Anodized aluminum alloy frame
Weight	22.3kg±3%
Dimensions	1903mm x 1134mm x 30mm
Packaging	36 pcs/pallet, 864 pcs/40HQ container

## Electrical Parameters

STC: AM1.5 1000W/m<sup>2</sup> 25°C    NMOT: AM1.5 800W/m<sup>2</sup> 20°C 1m/s

Module type	YTM460N-60/M		YTM465N-60/M		YTM470N-60/M		YTM475N-60/M		YTM480N-60/M	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Rated maximum power P <sub>max</sub> (W)	460	346	465	350	470	354	475	358	480	362
Open circuit voltage V <sub>oc</sub> (V)	42.04	39.92	42.20	40.10	42.36	40.26	42.52	40.42	42.70	40.58
Short circuit current I <sub>sc</sub> (A)	14.00	11.30	14.08	11.36	14.16	11.42	14.24	11.48	14.32	11.56
Maximum power voltage V <sub>mp</sub> (V)	34.75	32.58	34.91	32.84	35.08	33.02	35.24	33.22	35.40	33.40
Maximum power current I <sub>mp</sub> (A)	13.24	10.62	13.32	10.66	13.40	10.72	13.48	10.78	13.56	10.84
Module efficiency (%)	21.3		21.5		21.8		22.0		22.2	

## Temperature Coefficients

Temperature coefficient  $\alpha_{Isc}$  +0.046%/°C

Temperature coefficient  $\beta_{Voc}$  -0.250%/°C

Temperature coefficient  $\gamma_{Pmax}$  -0.300%/°C

## Operating Conditions

Operating temperature -40°C~+70°C    Nominal operating cell temperature 45±2°C

P<sub>max</sub>, V<sub>oc</sub>, I<sub>sc</sub> tolerance ±3%    Front side Max. static test loading 5400 Pa

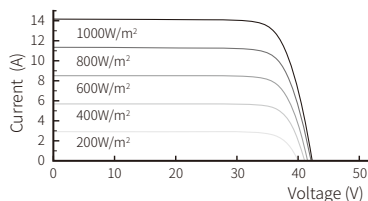
Power selection 0~5W    Rear side Max. static test loading 2400 Pa

Maximum system voltage 1500V DC

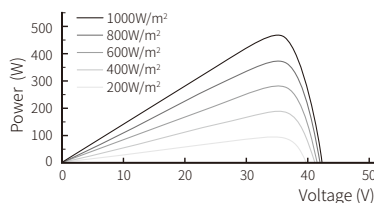
Maximum series fuse rating 25A

## Graphs (YTM470N-60/M)

Current - Voltage Curve



Power - Voltage Curve



Current - Voltage Curve

