

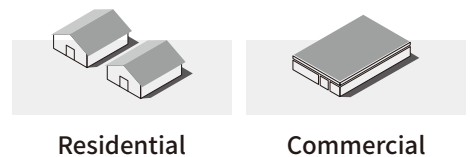
# YTM410-430N-54/D

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.

Bifacial modules bring additional power generation gain to the system.

All-black module perfectly combines with the building.



Residential

Commercial



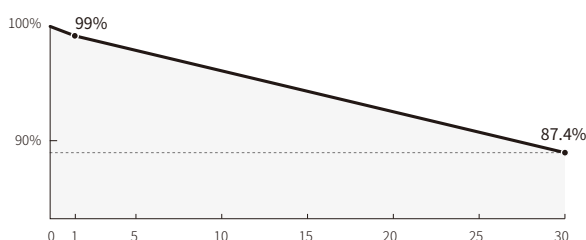
## Warranty

Product warranty 25 Years

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

Linear power warranty 30 Years

Annual degradation  $\leq 0.40\%$



## Certificates

IEC 61215, IEC 61730

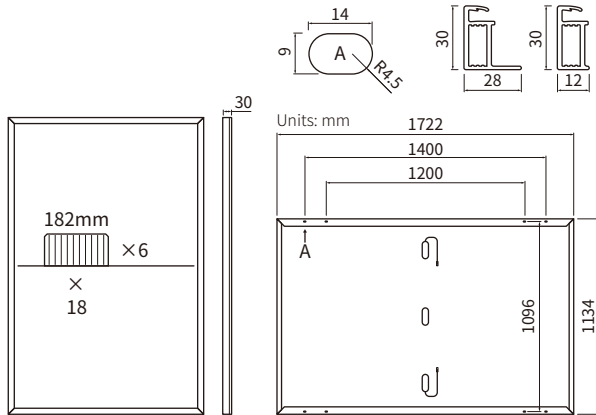
ISO 9001:2015 Quality management systems

ISO 14001:2015 Environmental management systems

ISO 45001:2018 Occupational health and safety management systems



# YTM410-430N-54/D



## Mechanical Parameters

Cell type	Mono TOPCon
No. of cells	108 (6*18)
Junction box	IP68, 3 diodes
Cable	4mm <sup>2</sup> ; (±)1200mm or customized
Glass	Dual glass, 2.0mm/2.0mm
Frame	Anodized aluminum alloy frame
Weight	23.7kg ± 3%
Dimensions	1722mm x 1134mm x 30mm
Packaging	36 pcs/pallet, 936 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	YTM410N-54/D		YTM415N-54/D		YTM420N-54/D		YTM425N-54/D		YTM430N-54/D	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Rated maximum power P <sub>max</sub> (W)	410	308	415	312	420	316	425	320	430	324
Open circuit voltage Voc (V)	38.20	36.10	38.40	36.30	38.60	36.50	38.80	36.70	39.00	36.90
Short circuit current I <sub>sc</sub> (A)	13.64	10.92	13.70	10.98	13.76	11.04	13.82	11.10	13.88	11.16
Maximum power voltage V <sub>mp</sub> (V)	32.20	29.40	32.40	29.60	32.60	29.80	32.80	30.00	33.00	30.20
Maximum power current I <sub>mp</sub> (A)	12.74	10.48	12.82	10.54	12.89	10.60	12.96	10.66	13.04	10.74
Module efficiency (%)	21.0		21.3		21.5		21.8		22.0	

Bifacial gain 10%	YTM410N-54/D		YTM415N-54/D		YTM420N-54/D		YTM425N-54/D		YTM430N-54/D	
	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Rated maximum power P <sub>max</sub> (W)	451		457		462		468		473	
Open circuit voltage Voc (V)	38.20		38.40		38.60		38.80		39.00	
Short circuit current I <sub>sc</sub> (A)	15.00		15.07		15.14		15.20		15.27	
Maximum power voltage V <sub>mp</sub> (V)	32.20		32.40		32.60		32.80		33.00	
Maximum power current I <sub>mp</sub> (A)	14.01		14.10		14.18		14.26		14.34	

## Temperature Coefficients

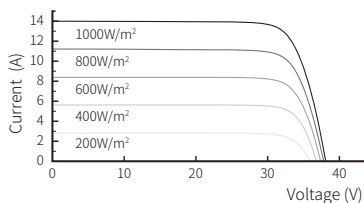
Temperature coefficient $\alpha_{Isc}$	+0.046%/°C
Temperature coefficient $\beta_{Voc}$	-0.250%/°C
Temperature coefficient $\gamma_{Pmax}$	-0.300%/°C

## Operating Conditions

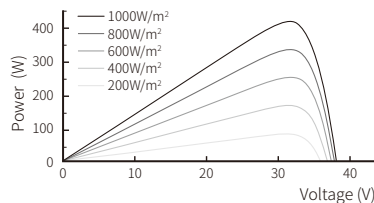
Operating temperature	-40°C~+70°C	Nominal operating cell temperature	45 ± 2°C
Tolerance of P <sub>max</sub> and Voc	± 3%	Front side Max. static test loading	5400 Pa
Tolerance of I <sub>sc</sub>	± 4%	Rear side Max. static test loading	2400 Pa
Maximum system voltage	1500V DC	Bifaciality	80 ± 5%
Maximum series fuse rating	30A	Power selection	0~+5W

## Graphs (YTM425N-54/D)

Current - Voltage Curve



Power - Voltage Curve



Current - Voltage Curve

