



PULLING
ENERGY

Monofacial

Bifacial

PU460-480WNM101 N-Type

Rated Power 460-480W



No risk of spontaneous detonation



Bifacial Module is 30% lighter than Dual-Glass Module



Bifacial cells, provide an additional output



Ability to breath, The inner CH₃COOH can be released



N-Type MBB Cell
New circuit design N-type cells, can increase the output power of 10W~20W



Low Light Features
Higher performance under low light environment.



Higher Output Power
Module adopts 182*182mm half cells, bifacial module provide an additional 5%~25% output.



PID Protection
Ensure the attenuation probability caused by PID phenomenon is minimized.



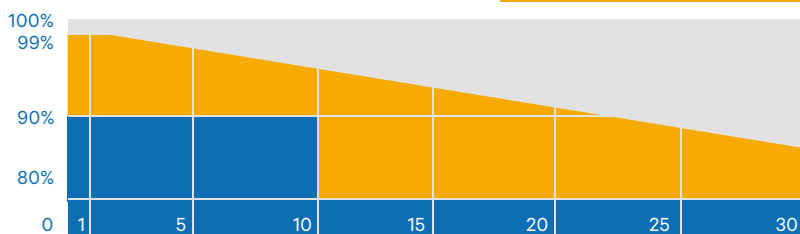
Harsh Environmental Adaptability
Strict salt spray and ammonia corrosion test by TUV Nord.



Load Capacity
Mechanical load tests including wind load 2400 Pa and snow load 5400 Pa done by TUV Nord.

■ Pulling Linear Power Warranty ■ Industry Warranty

0.4% Annual Degradation over 30 years



87.4%



*J-PEC Product



IEC 61215-2: 2016
IEC 61730-2: 2016

SUZHOU PULLING ENERGY CO., LTD

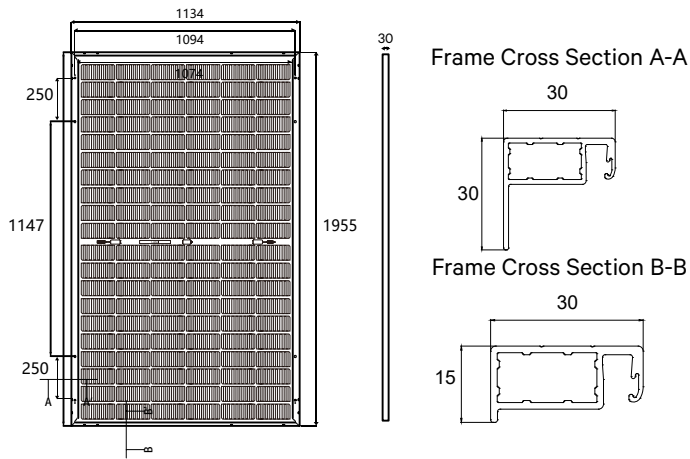
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MECHANICAL DIAGRAMS



SPECIFICATIONS

Weight	23.5kg
Dimensions	1955mm*1134mm*30mm
Cell Dimensions	182*182mm
Cell Amount	60*2 pcs
Maximum System Voltage	1500V
Junction Box	IP68
Frame	Aluminum Alloy
Cable	4mm ² , N 1200mm/P 1200mm or customized length
Connector	MC4 compatible
Application Level	Class A
Bifaciality	80±5%

ELECTRICAL PARAMETERS AT STC

Power	460W	465W	470W	475W	480W
Open Circuit Voltage	42.51V	42.68V	42.85V	43.03V	43.19V
Short Circuit Current	13.60A	13.67A	13.75A	13.83A	13.90A
Maximum Power Voltage	35.22V	35.36V	35.55V	35.69V	35.90V
Maximum Power Current	13.06A	13.15A	13.22A	13.31A	13.37A
Module Efficiency	20.75%	20.97%	21.20%	21.43%	21.65%

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL PARAMETERS AT NMOT

Power	346W	350W	354W	358W	361W
Open Circuit Voltage	40.37V	40.53V	40.69V	40.86V	41.03V
Short Circuit Current	10.90A	10.97A	11.03A	11.09A	11.15A
Maximum Power Voltage	33.05V	33.24V	33.43V	33.62V	33.80V
Maximum Power Current	10.47A	10.53A	10.59A	10.65A	10.68A
Module Efficiency	15.62%	15.79%	15.96%	16.13%	16.30%

* Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

ELECTRICAL PARAMETERS (AT 10% BIFACIAL POWER OUTPUT)

Output Power	506W	512W	517W	523W	528W
Open Circuit Voltage	42.70V	42.88V	43.08V	43.23V	43.41V
Short Circuit Current	14.99A	15.08A	15.18A	15.29A	15.39A
Maximum Power Voltage	35.31V	35.51V	35.66V	35.82V	36.02V
Maximum Power Current	14.33A	14.42A	14.50A	14.60A	14.66A

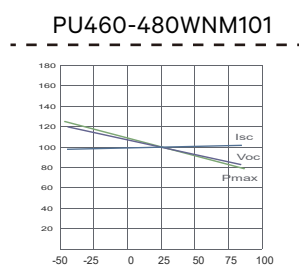
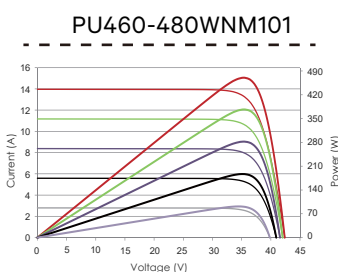
TEMPERATURE CHARACTERISTICS

NMOT	41±3°C	Temp Coefficient of ISC	+0.046%/°C
Temp Coefficient of VOC	-0.25%/°C	Temp Coefficient of Pmax	-0.30%/°C

PACKING CONFIGURATION

Modules/Pallet	36 Pieces	Modules/40'Container	864 Pieces
Packing Description	24 Pallets, Total=(36+36)x12=864 Pieces		

CHARACTERISTICS



MAXIMUM RATING

Output Tolerance	0~+5W
Operating Temperature	-40°C~+85°C
Wind Load/Snow Load	2400pa/5400pa
Fuse Current	25A

15 YEARS Quality Warranty

30 YEARS Power Warranty

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