



# SYMN144TBD

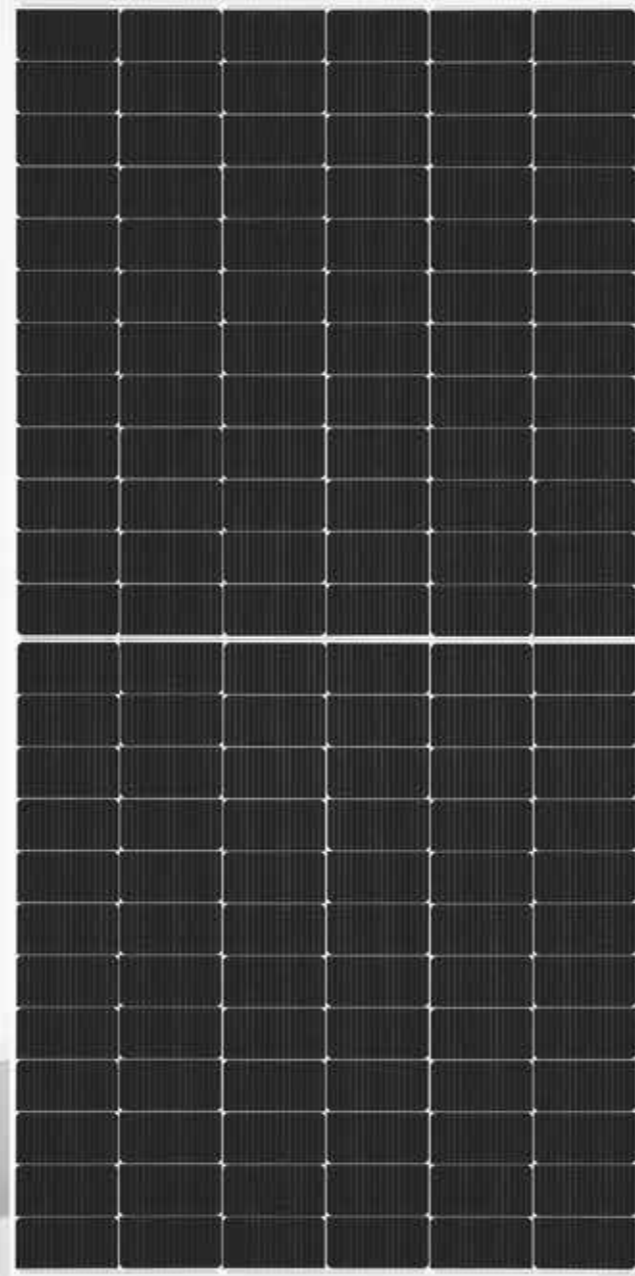
N-TYPE DOUBLE GLASS BIFACIAL MODULE

**580<sub>W</sub>**  
Maximum Power Output

**22.5%**  
Maximum Module Efficiency

**80%**  
Bifaciality

**0~+3%**  
Power Tolerance



### Lower LCOE

N-TOPCon bifacial technology: lower degradation, higher bifaciality, >= 30 years life and lower BOS cost.



### Better Temperature Coefficient

lower temperature coefficient and higher power generation under high-temperature conditions.



### ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally which can increase power generation.



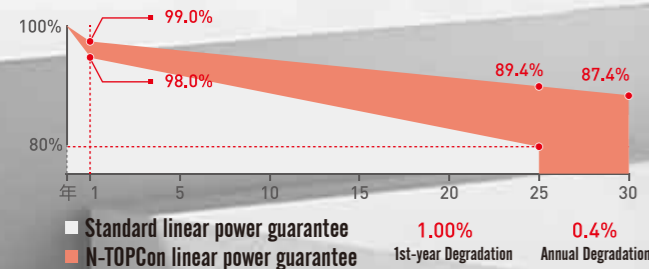
### Better Low Light Performance

Higher power output even under low-light environments like on cloudy or foggy days.



### Enhanced Mechanical Load

Heavy snow load up to 5400Pa, wind load up to 2400Pa.



12 Years Product Material & Workmanship 30 Years Linear Performance Warranty

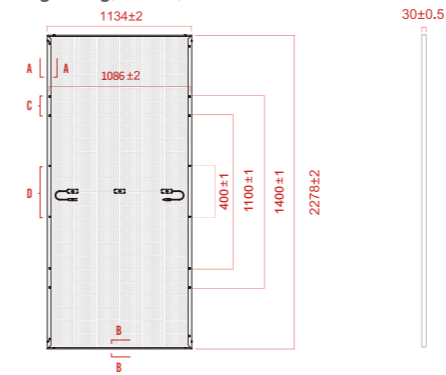


The TÜV certificate holder is Sany Silicon Energy (Zhuzhou) Co., Ltd. Made in China

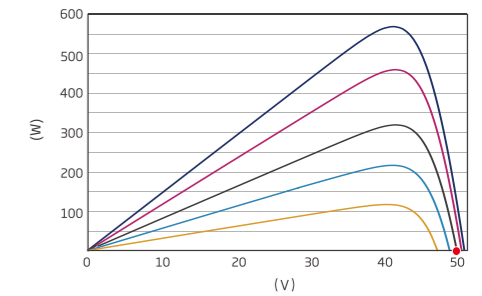
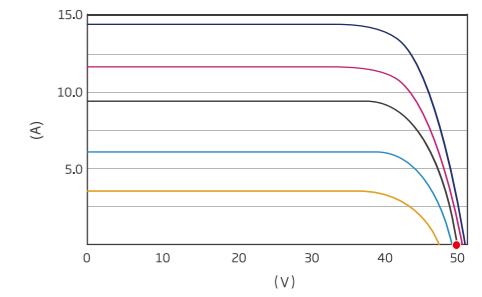


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Engineering Drawing (unit: mm)



Characteristic Curves (SYMN144TBD-580W)



### Mechanical Properties

Cell Size	182.00mm*91.00mm	Front Glass/Back Glass	Heat-strengthened glass 2mm/2mm
Number of Cells	144 (2*72)	Frame	Anodized Aluminium Alloy
Module Dimension	2278mm*1134mm*30mm (89.68in*44.65in*1.18inch)	Junction Box	IP68
Weight	32.1kg(70.77 lbs)	Connector	QC4.10-cds from QC Solar PV-XT101.2 from Suzhou XTong
Length of Cable	TUV 1×4.0mm <sup>2</sup> (+): 410mm (-): 290mm (Or Customized Length)		
Fire rating (According to UL 790)	Class A		

### SPECIFICATIONS

Testing Condition	STC*					NOCT*				
	Front Side					Front Side				
(Pmax) (W) Peak Power(Pmax)(W)	565	570	575	580	585	425	429	432	436	440
MPP Voltage(Vmp)(V)	43.10	43.27	43.44	43.61	43.78	39.95	40.06	40.17	40.29	40.44
MPP Current(Impp)(A)	13.11	13.18	13.24	13.30	13.36	10.63	10.70	10.76	10.82	10.87
Open Circuit Voltage(Voc)(V)	51.26	51.40	51.54	51.68	51.82	48.69	48.83	48.95	49.09	49.22
Short Circuit Current(Isc)(A)	13.72	13.78	13.84	13.90	13.96	11.08	11.12	11.17	11.22	11.27
Module Efficiency(%)	21.87%	22.08%	22.26%	22.45%	22.64%	*STC: Irradiance 1000 W/m <sup>2</sup> , Cell Temperature 25°C, AM1.5 *NOCT: Irradiance 800 W/m <sup>2</sup> , Ambient Temperature 20°C, Wind Speed 1 m/s				

### BIFACIAL OUTPUT-REAR SIDE POWER GAIN

5%	Maximum Power (Pmax)	583	588	593	599	604	609
	Module Efficiency STC (%)	22.6%	22.8%	23.0%	23.2%	23.4%	23.6%
10%	Maximum Power (Pmax)	611	616	622	627	633	638
	Module Efficiency STC (%)	23.6%	23.8%	24.1%	24.3%	24.5%	24.7%
20%	Maximum Power (Pmax)	666	672	678	684	690	696
	Module Efficiency STC (%)	25.8%	26.0%	26.2%	26.5%	26.7%	26.9%
30%	Maximum Power (Pmax)	722	728	735	741	748	754
	Module Efficiency STC (%)	27.9%	28.2%	28.4%	28.7%	28.9%	29.2%

Operating Properties	Temperature Coefficient	Packaging Configuration			
Operating Temperature ( °C)	-40°C~+85°C	Packing Type			
Maximum System Voltage (V)	1500V (IEC)	Temperature Coefficient of Pmax	-0.30%/°C	Pcs/Pallet	40'HQ Container
Maximum Series Fuse Rating (A)	30	Temperature Coefficient of Voc	-0.25%/°C	Pallet/Container	36 pcs
Power Sorting	0~+4.99W	Temperature Coefficient of Isc	+0.046%/°C	Pcs/Container	Pa120 trayslet/container
Bifaciality*	80±5%	Nominal Operating Cell Temperature (NOCT)	45±2°C		720 pcs

\*Bifaciality=Pmaxrear (STC) /Pmaxfront (STC)