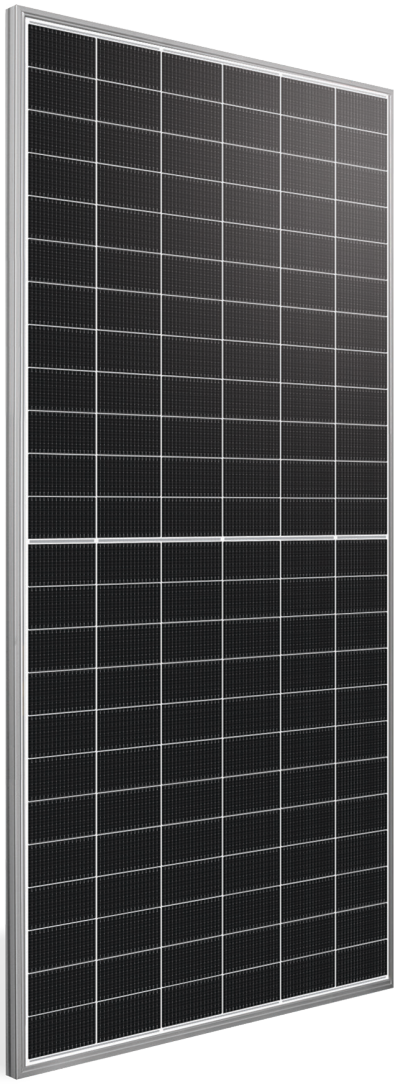
SILFAB COMMERCIAL NTC

SIL-590 XM+
BIFACIAL

SILFAB SOLAR®



NEXT-GENERATION N-TYPE CELL TECHNOLOGY

Manufactured exclusively in the USA.

- Improved Shade Tolerance
- Improved Low-Light Performance
- Increased Performance in High Temperatures
- Efficient Bifacial Energy Yield
- Enhanced Durability
- Reduced Degradation Rate
- 25-Year Product Warranty/ 30-Year Performance Warranty

TOP PERFORMER 2025 kiwa PV MODULE RELIABILITY SCORECARD

SILFABSOLAR.COM

ELECTRICAL SPECIFICATIONS		590		
Test Conditions		STC	BSTC	NOCT
Module Power (Pmax)	Wp	590	643.7	435.5
Maximum power voltage (Vpmax)	V	44.79	44.79	41.21
Maximum power current (Ipmax)	A	13.17	14.37	10.57
Open circuit voltage (Voc)	V	52.50	52.56	48.29
Short circuit current (Isc)	A	13.91	15.17	11.17
Module efficiency	%	22.8%		
Maximum system voltage (VDC)	V	1500		
Series fuse rating	A	30		
Power Tolerance	Wp	0 to +10		
Bifaciality Factor	%	80 ± 10		

Performance conditions: Measurement tolerance ≤ 3% • Standard Test Conditions (STC): 1000 W/m², AM 1.5, Temperature 25 °C • Nominal Operating Cell Temperature (NOCT): 800 W/m², AM 1.5 • Bifacial Standard Test Conditions (BSTC): 1000 W/m2 + φ × 135 W/m2 , φ = 80 % , AM 1.5 • Electrical characteristics may vary by ±5%.

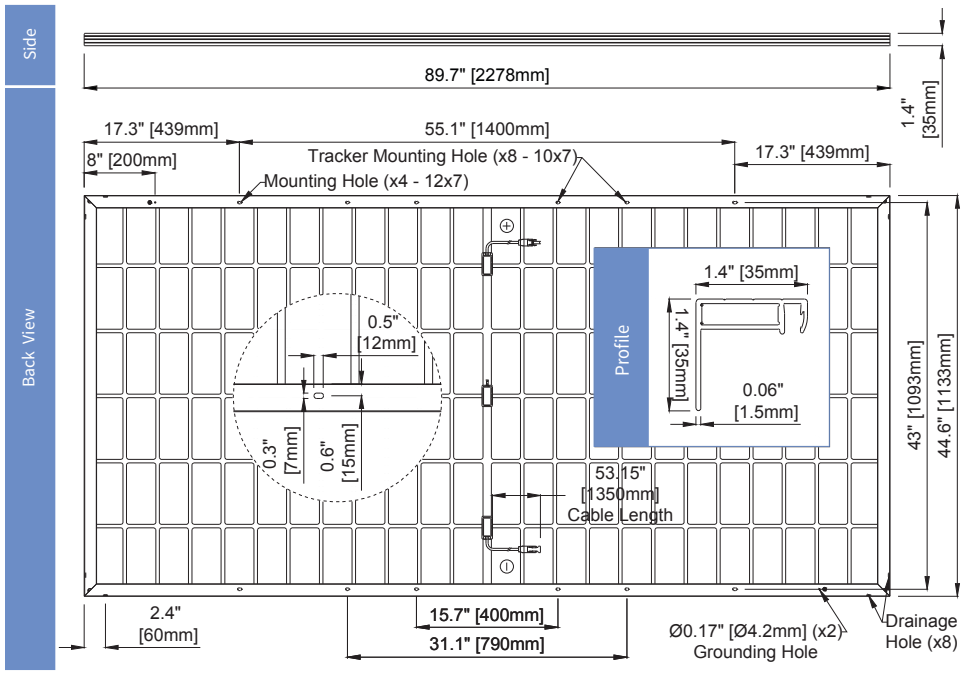
MECHANICAL PROPERTIES / COMPONENTS	METRIC	IMPERIAL
Module weight	28.5 kg ± 0.2 kg	62.8 lbs ± 0.4 lbs
Dimensions (H x L x D)	2278 mm x 1133 mm x 35 mm	89.7 in x 44.6 in x 1.4 in
Maximum surface load (wind/snow)*	2400 Pa rear load / 5400 Pa front load	50.1 lb/ft² rear load / 112.8 lb/ft² front load
Hail impact resistance	ø 50 mm at 116.6 km/h	ø 2 in at 72.5 mph
Cells	144 Half cells - N-Type Silicon solar cell 182 mm x 92 mm	144 Half cells - N-Type Silicon solar cell 7.17 in x 3.62 in
Glass	3.2 mm high transmittance, tempered, anti-reflective coating	0.126 in high transmittance, tempered, anti-reflective coating
Cables and connectors (refer to installation manual)	1350 mm, ø 5.7 mm, MC4-EVO2A from Staubli	53.1 in, ø 0.22 in (12 AWG), MC4-EVO2A from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, transparent PV backsheet	
Frame	Anodized Aluminum (Silver)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP68 rated, 3 diodes	

TEMPERATURE RATINGS		WARRANTIES	
Temperature Coefficient Isc	0.04 %/°C	Module product workmanship warranty	25 years**
Temperature Coefficient Voc	-0.24 %/°C	Linear power performance guarantee	30 years
Temperature Coefficient Pmax	-0.29 %/°C		≥ 98% end 1st yr ≥ 94.7% end 12th yr ≥ 90.8% end 25th yr ≥ 89.3% end 30th yr
NOCT (± 2°C)	45 °C		
Operating temperature	-40/+85 °C		

CERTIFICATIONS		SHIPPING SPECS	
Product	UL 61215, UL 61730, CSA C22.2#61730, IEC 61215, IEC 61730, IEC 61701 (Salt Mist Corrosion), IEC 62716 (Ammonia Corrosion), CEC Listed, UL Fire Rating: Type 1	Modules Per Pallet:	29
		California (Pallets per load)	21
Factory	ISO9001:2015	Others (Pallets per load)	22

* ⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

** 12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at silfabsolar.com.
PAN files generated from 3rd party performance data are available for download at: silfabsolar.com/downloads.



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