

# C-TG 144p.2 / 450

Solar module for the highest requirements.

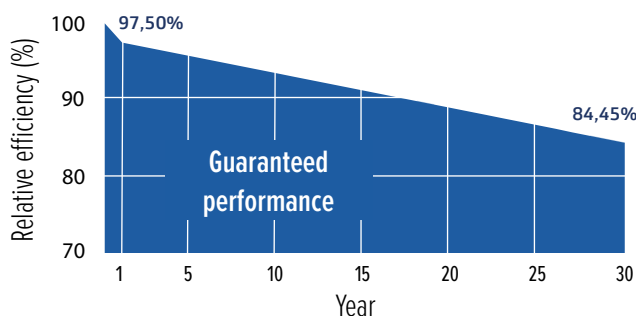


## Warranty

- 30 year product warranty \*)
  - 30 years of linear benefit commitment
  - Guaranteed plus tolerance
- \*) with registration of the system. Otherwise 20 years.

## Certifications

- IEC 61215: 20 (module reliability)
- IEC 61730 (module safety)
- IEC TS 62804-1: 2016 (PID resistance)
- IEC 61701: 2020 (salt spray resistance)



## Safety

*Electrical safety and mechanical robustness in all weather conditions are important aspects when choosing the right solar module.*

**Electric security** - The C-TG is approved for a system voltage of up to 1,500V. For maximum electrical safety, it is equipped with fully encapsulated junction boxes of protection class IP68 and original STÄUBLI MC4-Evo 2 connectors.

**Resilient** - The specially hardened glass is resistant to the harshest weather conditions. The module is certified for resistance to salty air (class 5) and is therefore approved for use near the coast.

## Reliability

*A solar system is a long-lasting investment. The durability of the modules is thus a key quality criterion.*

**Certified production facilities** - All SOLYCO solar modules are produced in the most modern, highly automated factories with the highest manufacturing standards to ensure consistent quality.

## Performance

*A high electricity production under all operating conditions - in addition to the longevity – forms the basis for the economic viability of the solar system.*

**High specific yield** - High power yield even in unfavorable weather conditions - thanks to excellent weak light behavior and a good temperature coefficient.

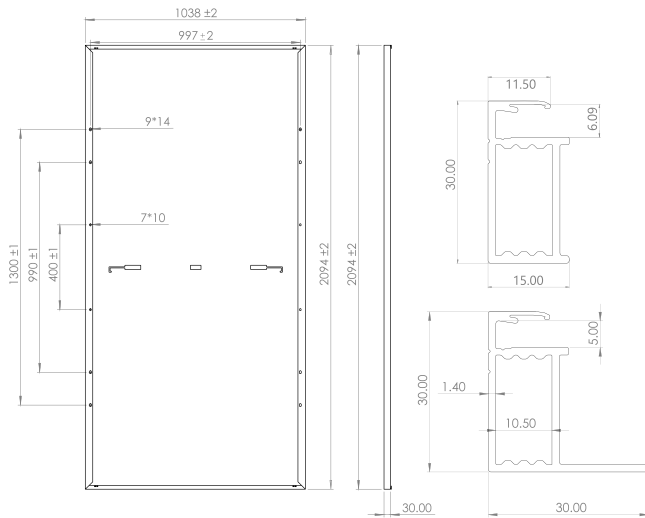
**Highly efficient solar cells** - Modern half-cell technology with multi-busbar interconnection forms the basis for the outstanding performance of our modules. The half-cell interconnection minimizes internal power losses and the risk of hot spots in the event of partial shade.

**3x PID stable** - The module is certified against potential-induced degradation (PID). The test cycle according to IEC TS 62804-1: 2015 was run through 3 times (288h at T = 85 ° C and RH of 85%) and proves the top performance of the C-TG over a long period of time.

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Bifacial double glass module with transparent rear glass

## Technical data



### General data

Cell technology	PERC; monocrystalline
Cell size and number	166mm x 83mm; 144 pcs.
Module dimensions	2.094mm x 1.038mm x 30mm
Module weight	27.5kg
Frame	Aluminum silver anodized
Front glass	2x2.0mm hardened solar glass with anti-reflective coating
Junction box	3 pcs. With one bypass diode each, IP68 fully encapsulated
Connectors	4mm <sup>2</sup> solar cable with a length of 140cm; original STÄUBLI MC4-Evo 2
Packing	36 modules vertically on pallet, 792 / 40ft.

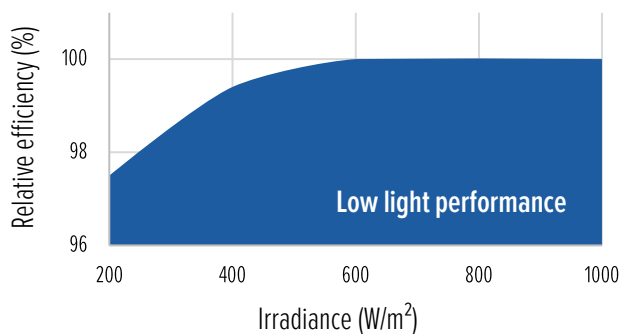
### Connection and working conditions

Maximum system voltage	1,500V
Temperature range	-40°C ... +85°C
Mechanical resilience <sup>1</sup>	Pressure resistance tested at 5,400 Pa Resistance to wind suction tested at 2,400 Pa
Safety class	II
Reverse current overload	20A
Fire class	C (UL 790)
Hail resistance	Hailstones up to 25mm in size and at a speed of 23m / s

<sup>1</sup> Specified pressure load resistance: 3,600 Pa and suction load resistance: 1,600 Pa

### Temperature coefficients

TC of maximum power (Pmax)	-0.35% / °C
TC of open circuit voltage (Voc)	-0.28% / °C
TC of short circuit current (Isc)	+0.048% / °C



### Electrical data (STC)

Nominal data at standard testing conditions (STC): Irradiance 1,000W/m<sup>2</sup>; Spectrum AM 1.5; module temperature 25°C; sorting for Pmax 0 to +5W

Module type	C-TG 144p.2 / 450
STC power output Pmax (Wp)	450
Nominal power voltage Vmp (V)	41.03
Nominal power current Imp (A)	10.97
Open circuit voltage Voc (V)	49.33
Short circuit current Isc (A)	11.41
Module efficiency	20,7%

Tolerance Pmax: ± 3,0%; tolerances Voc, Vmp, Isc, Imp: ± 5,0%

### Electrical data (NMOT)

Nominal data at NMOT (Nominal Module Operation Temperature): Irradiation intensity 800W/m<sup>2</sup>; spectral distribution AM 1.5; ambient temperature 20°C; wind velocity 1m/s

Solar cell temperature (°C)	45 +/- 2
Power output (Wp)	331
Nominal power voltage Vmp (V)	37.70
Nominal power current Imp (A)	8.78
Open circuit voltage Voc (V)	45.63
Short circuit current Isc (A)	9.20

Tolerance Pmax: ± 3,0%; tolerances Voc, Vmp, Isc, Imp: ± 5,0%

This data sheet corresponds to DIN EN 50380  
Engineered and designed in Germany.



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