

RAPID N-MAX

G12 TOPCon Series

SMART MODULE



SparkTM
Solar

Powered By The SunTM

TOPCon N-Type



680~700W

- TOPCon / Multi-busbar / Half-cut
- Non-destructive cutting
- PID resistance
- Lower BOS cost & LCOE

HOW IT WORKS

Spark Rapid 132 TOPCon G12 module Produces energy even if part of the module is shaded. Whereas if standard module is partially shaded minimum one string will completely stop producing power, this accounts to one third reduction in power generation. Moreover, it can even completely stop generating power if shaded across its breadth. Rapid 132 TOPCon G12 Series module is split into two parts. Each section of 66 half-cut cells generates power on standalone basis but combines again before current exits the module. This structure results in power generation in non-shaded area of the module even if one of the section is partially or completely shaded, resulting in higher overall energy yield as compared to standard module.

The Ultimate Power

Performance | Durability | Reliability

FEATURES



Temperature Coefficient

Even on hot days, Spark Solar modules produce reliable yields and lose less efficiency than standard solar modules.



Higher Performance

Half-cell technology offer more power per square meter, resulting in higher yields at lower BOS cost.



Low-light Behaviour

High yields with low radiation intensity



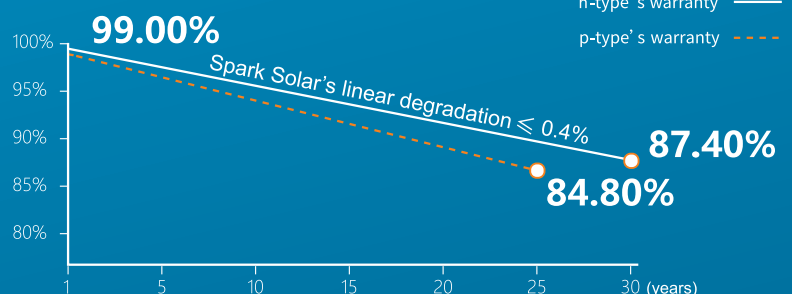
Remarkable Performance

Remarkable performance in shaded condition



12-year Product Warranty

30-year Linear Power Warranty



SS 132 TOPCon | G12 Series

upto **22.5%**
12
30

EFFICIENCY

YEAR PRODUCT WARRANTY

YEAR LINEAR POWER OUTPUT WARRANTY

TEMPERATURE RATINGS*

Nominal Module Operating Temperature	:	41.0°C (±2°C)
Temperature coefficient of P_{MPP}	(Y)	-0.30 %/°C
Temperature coefficient of V_{OC}	(β)	-0.24 %/°C
Temperature coefficient of I_{SC}	(α)	0.04 %/°C

*The temperature coefficients stated are linear values

GENERAL DATA

Cell type	:	N-type TOPCon monocrystalline MBB cells
Cell matrix	:	132 [2 X (11 X 6)]
Junction box	:	3-part, 3 bypass diodes, IP 68 rated
Cable	:	4mm ² solar cable, Portrait : N (-) 400 mm, P (+) 300 mm Landscape : ≥ 1300 mm / Customized
Frame	:	Silver anodized aluminum alloy
Glass	:	3.2 mm low iron solar glass with anti-reflection technology
Connectors	:	UTX / Multi-Contact MC4 (4 mm ²)

MAXIMUM RATINGS

Operating temperature	:	-40 upto +85°C (Permitted Module Temperature on Continuous Duty)
Maximum system voltage	:	1500 V _{DC(IEC/UL)}
Max series fuse rating	:	30 A
Max reverse current	:	30 A
Maximum test load (front)	:	5400 Pa (550 kg/m ²)*
Maximum test load (rear)	:	2400 Pa (244 kg/m ²)*
Application classification	:	Class A
Safety Class	:	II
Fire Rating	:	C

* See installation manual for mounting instructions.
Design load = Test load /1.5 (safety factor)

MECHANICAL SPECIFICATION

Dimensions	:	2384 x 1303 x 35 mm
Area	:	3.11 m ²
Weight	:	34.8 kg (76.72 lbs)

PACKAGING INFORMATION

Container Size	20'	40'HC
Quantity Per Pallet	: 31	31
Pallets/Container	: 8	17
Quantity/Container	: 248	527

*Due to continuous innovation, research and product improvement the specifications in this product information sheet are subject to change without prior notice. Installation instructions must be followed. See the installation manual or contact technical service department for further information on approved installation. At least 99.00% of nominal power during first year. Thereafter max. degression in performance of 0.4% p.a. See warranty conditions for further details.

680~700W

POWER RANGE

0~+5W

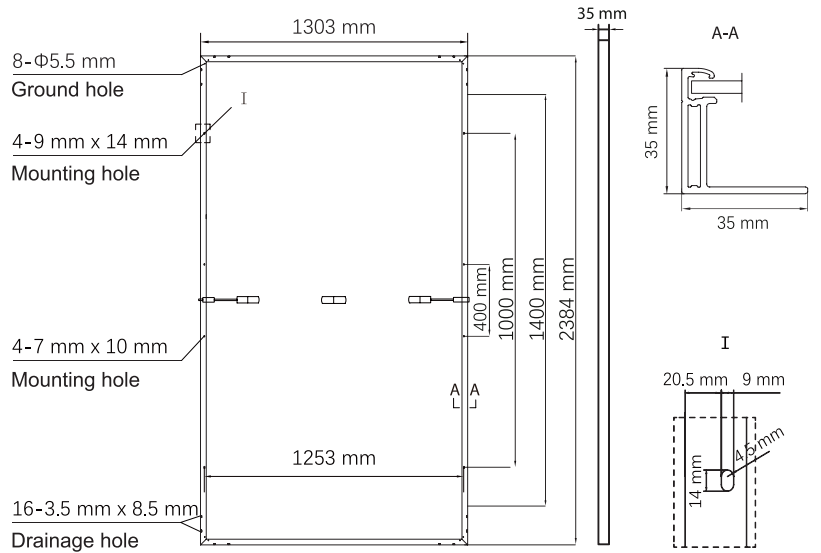
POWER TOLERANCE

≤1.0%

FIRST YEAR POWER DEGRADATION

≤0.4%

YEAR 2-30 POWER DEGRADATION



ELECTRICAL DATA@STC

Module code* : SSXXX132 TOPCon G12

		680	685	690	695	700
Nominal Power	- P_{MPP} (Wp)	680	685	690	695	700
Power Tolerance	- (W)	0/+5	0/+5	0/+5	0/+5	0/+5
Nominal Power Voltage	- V_{MPP} (V)	39.31	39.48	39.65	39.82	40.0
Nominal Power Current	- I_{MPP} (A)	17.30	17.35	17.40	17.46	17.50
Open Circuit Voltage	- V_{OC} (V)	47.37	47.57	47.78	47.98	48.74
Short Circuit Current	- I_{SC} (A)	18.03	18.11	18.19	18.27	18.36
Panel Efficiency	- (%)	21.9	22.1	22.2	22.4	22.5

Values at standard test conditions STC (airmass AM 1.5, irradiance 1000 W/m², cell temperature 25°C).
*Where xxx indicates the nominal power class (P_{MPP}) at STC indicated above.

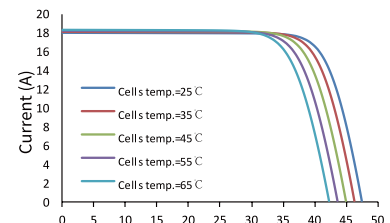
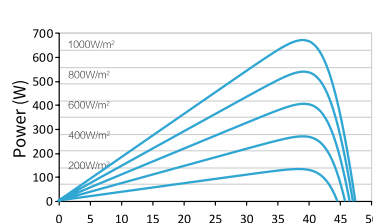
ELECTRICAL DATA@NMOT

Nominal Power	- P_{MPP} (Wp)	511.4	515.1	518.9	522.6	525.1
Nominal Power Voltage	- V_{MPP} (V)	37.00	37.16	37.32	37.48	38.67
Nominal Power Current	- I_{MPP} (A)	13.82	13.86	13.90	13.95	14.1
Open Circuit Voltage	- V_{OC} (V)	44.99	45.19	45.38	45.57	45.87
Short Circuit Current	- I_{SC} (A)	14.56	14.62	14.68	14.75	14.97

Nominal Module Operating Temperature NMOT (800 W/m², AM 1.5, windspeed 1 m/s, ambient temperature 20°C). Typical values, actual values may differ. *Where xxx indicates the nominal power class (P_{MPP}) at STC indicated above.

Electrical Performance & Temperature Dependence

Current-Voltage & Power-Voltage Curves



Power - Voltage

Current - Voltage



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