

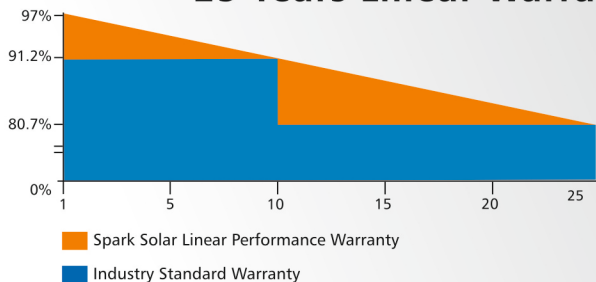


# Spark<sup>TM</sup> Solar

## SPARK 60 CELL P SERIES



### 25 Years Linear Warranty



## PROVEN PERFORMANCE EXCELLENT DURABILITY



### Positive Tolerance

0/+5W

Positive tolerance of up to 5W delivers output reliability



### A Reliable Investment

Inclusive 10-year product warranty and 25-year linear performance warranty\*



### New All-Weather Technology

Optimal yields, with excellent low-light and temperature behavior.



### High PID Resistant

Advanced cell technology and qualified materials lead to high PID resistance



### Advanced Glass

Our high-transmission glass features a unique anti-reflective coating that directs more light on the solar cells, resulting in a higher energy yield.



### Special four bus bar design

A shorter distance for electrons to travel vastly reduces electrodes resistance and raise in conversion efficiency. Less residual stress, less micro-cracks and hotspot risks.

# Spark 60 Cell - P Series

upto **16.2%** EFFICIENCY

**10** YEAR PRODUCT WARRANTY

**25** YEAR LINEAR POWER OUTPUT WARRANTY

## TEMPERATURE RATINGS

Nominal operating cell temperature (NOCT)	44.7°C (±2°C)
Temperature coefficient of $P_{MPP}$ (Y)	-0.40 %/°C
Temperature coefficient of $V_{OC}$ (β)	-0.30 %/°C
Temperature coefficient of $I_{SC}$ (α)	+0.04 %/°C

## GENERAL DATA

Cell type	: Multi-crystalline
Cell Matrix	: 60 cells (6 x 10)
Junction box	: Protection class IP 67, with 3 bypass diodes
Cable	: 4mm <sup>2</sup> solar cable, (+) ≥ 1000 mm, (-) ≥ 1000 mm
Frame	: Anodized aluminum (silver)
Glass	: 3.2 mm solar glass with anti-reflective coating
Connectors	: Multi-Contact MC4 (4 mm <sup>2</sup> )

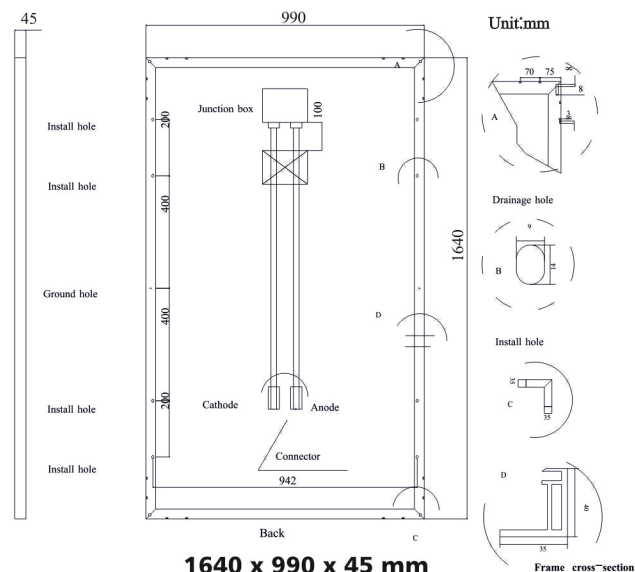
## MAXIMUM RATINGS

Operating temperature (Permitted Module Temperature on Continuous Duty)	: -40 upto +85°C
Maximum system voltage	: 1000 V
Max series fuse rating	: 15 A
Max reverse current	: 15 A
Maximum wind load	: 244 kg/m <sup>2</sup> (2400 Pa)
Maximum snow load	: 550 kg/m <sup>2</sup> (5400 Pa)
Max. hailstone impact (diameter / velocity)	: 255mm /23m/s
Safety Class	: II
Fire Rating	: C

## MECHANICAL SPECIFICATION

Dimensions	: 1640 x 990 x 45 mm
Area	: 1.652 m <sup>2</sup>
Weight	: 19.1 kg (43 lbs)

Note: Specification subject to change without notice. Installation instructions must be followed. See the installation manual or contact technical service department for further information on approved installation. Atleast 97% of nominal power during first year. Thereafter max. degression in performance of 0.7% p.a. See warranty conditions for further details.



**1640 x 990 x 45 mm**

## ELECTRICAL DATA@STC

		SS 250	SS 255	SS 260	SS 265	SS 270
Nominal Power	- $P_{MPP}$ (Wp)	250	255	260	265	270
Short Circuit Current	- $I_{SC}$ (A)	8.86	8.91	9.07	9.15	9.23
Open Circuit Voltage	- $V_{OC}$ (V)	37.40	37.60	37.70	37.93	38.16
Nominal Power Current	- $I_{MPP}$ (A)	8.30	8.42	8.46	8.54	8.62
Nominal Power Voltage	- $V_{MPP}$ (V)	30.20	30.5	30.74	31.03	31.31
Panel Efficiency	- (%)	15.2	15.5	15.6	16.0	16.2
Power Tolerance	- (W)	0/+5	0/+5	0/+5	0/+5	0/+5

Values at standard test conditions STC (airmass AM 1.5, irradiance 1000 W/m<sup>2</sup>, cell temperature 25°C).

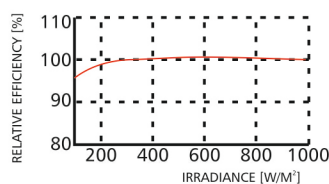
## ELECTRICAL DATA@ NOCT

		SS 250	SS 255	SS 260	SS 265	SS 270
Nominal Power	- $P_{MPP}$ (Wp)	183	187	191.3	194.9	198.6
Short Circuit Current	- $I_{SC}$ (A)	7.11	7.18	7.31	7.38	7.44
Open Circuit Voltage	- $V_{OC}$ (V)	34.70	34.8	35.09	35.31	35.52
Nominal Power Current	- $I_{MPP}$ (A)	6.58	6.68	6.62	6.68	6.75
Nominal Power Voltage	- $V_{MPP}$ (V)	27.80	28.00	28.90	29.16	29.42

Nominal operating cell temperature NOCT (800 W/m<sup>2</sup>, AM 1.5, windspeed 1 m/s, ambient temperature 20°C).

Typical values, actual values may differ

## PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison STC conditions (25 °C, 1000 W/m<sup>2</sup>).

## PACKAGING INFORMATION

Container Size	20'	(40'HC)
Quantity Per Pallet	: 24	25
Pallets/Container	: 14	28
Quantity/Container	: 336	700