



MODEL SV48 E



Premium quality



Power output
range 220-230 Wp



100% EL testing



Mechanical load
up to 5400 Pa



Low weight



Module efficiency
up to 17,51 %



Positive power
tolerance -0/+4,9 W



Made in Europe



IEC EN 61215
IEC EN 61730-1, -2



IEC EN 62716 Ed.1



IEC EN 61701



IEC TS 62804-1
(PID resistance)

Warranty:

10 years manufacturing defects

12 years limited,
90% output power

25 years limited,
80% output power



Electrical parameters at Standard Test Conditions (STC)				
MODEL		SV48-220 E	SV48-225 E	SV48-230 E
Peak power P_{MPP}	[W]	220	225	230
Peak power tolerance	[W]		-0/+4,9	
Short circuit current I_{SC}	[A]	9,48	9,53	9,56
Open circuit voltage V_{OC}	[V]	30,77	30,82	30,96
Rated current I_{MPP}	[A]	8,88	8,95	9,09
Rated voltage V_{MPP}	[V]	25,12	25,18	24,41
Current and voltage tolerance	[%]		± 3	
Module efficiency	[%]	16,75	17,13	17,51

STC: 1000W/m² irradiance, 25 °C cell temperature, AM1, 5 g spectrum according to EN 60904-3
Average relative efficiency reduction of 3,4 % at 200 W/m² according to EN 60904-1

Electrical parameters at Nominal Operating Cell Temperature (NOCT)				
MODEL		SV48-220 E	SV48-225 E	SV48-230 E
Peak power P_{MPP}	[W]	162,3	164,0	168,1
Peak power tolerance	[W]		-0/+4,9	
Short circuit current I_{SC}	[A]	7,61	7,65	7,75
Open circuit voltage V_{OC}	[V]	28,3	28,3	28,5
Rated current I_{MPP}	[A]	7,12	7,16	7,28
Rated voltage V_{MPP}	[V]	22,8	22,9	23,1

NOCT: module operating parameters at 800 W/m² irradiance, 20 °C ambient temperature, 1 m/s wind speed

MECHANICAL DATA	
Dimensions (H x W x D)	[mm] 1324 x 992 x 35
Weight	[kg] 15,0
Solar cells	48 cells, monocrystalline Si, 156 x 156 mm +/- 1mm
Cells encapsulation	Ethylene vinyl acetate (EVA)
Front	Tempered solar glass, 3,2 mm
Back	Composite polyester Film
Frame	Anodized aluminium frame with twin-wall profile and drainage holes
Junction box	IP67 with 3 Bypass diodes,
Cable and connectors	Solar cable 4 mm ² , length 1200 mm

NOTE: For extended models, SV48 E YYY, voltages and currents can vary where YYY is optional based on the chosen YYY variant (YYY = letter(s), F for black frame, B for silver frame and black backsheet, BC for full black module)

OPERATING CONDITIONS		
Temperature range	[°C]	-40 to +85
Maximum system voltage	[V]	1000
Max. series fuse rating		15A
Limiting reverse current		15A
Maximum surface load capacity		5400 Pa (Snow load)
Resistance against hail		Max. diameter of 25 mm with impact speed 23 m/s

THERMAL CHARACTERISTICS		
Temperature coefficient of P_{MPP}	[%/K]	-0,42
Temperature coefficient of I_{SC}	[%/K]	0,05
Temperature coefficient of V_{OC}	[%/K]	-0,33

