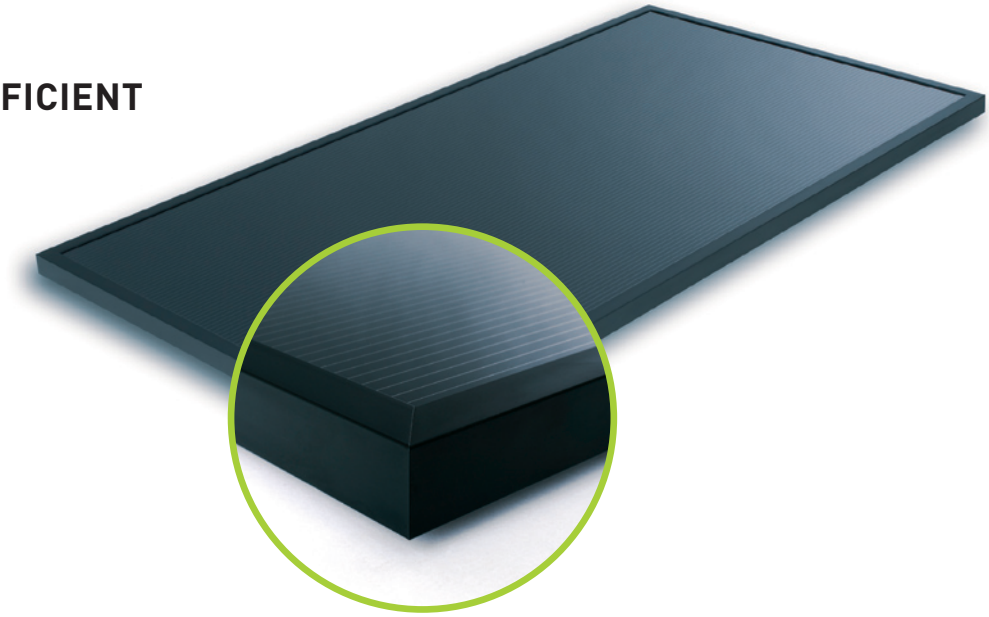
FRAMED MODULE SULFURCELL-SCG-GEN2-HV-F
(Preliminary datasheet)

SOLTECTURE

THE HIGHLY EFFICIENT MODULE



Efficient
· Thin-film module with maximum efficiency thanks to CIGSe absorbers
· Its high power density makes it ideal for small roofs

Resilient
· Excellent load capacity (snow loads up to 5,400 Pa)
· Universal use

Attractive
· Anthracite with pinstripes: The elegant alternative for solar construction

Quality made in Germany

Soltecture's production accords with the high quality standards of the semiconductor industry and it manufactures its CIS-based thin-film solar modules solely in Germany. The uniformly black glass surfaces provide visible proof of the quality and make the modules amongst the most attractive on the market. As a German quality manufacturer, we have been producing and selling solar modules based on CIS semiconductors since 2005. We place particular importance on the reliability and long-term stability of our solar modules and subject our products to quality tests that are even more stringent than those required by the commonly applied IEC standard 61646. Soltecture grants its end customers an independent product warranty lasting 10 years for all modules and an output warranty lasting 25 years***.

Our highly efficient CIGSe-based modules are particularly suitable for:

· Homes and small buildings
· Solar power systems in regions with high snow loads
· Solar power system operators with demanding architectural requirements and high quality awareness
· Or as construction elements in facade systems or for visual protection and solar shading panels

About Soltecture GmbH

The Soltecture technology company is one of the leading manufacturers of CIS-based thin-film solar modules. Whether for large commercial roofs or single-family homes – Soltecture offers suitable modules and systems for every kind of roof. The company is the exclusive partner of the Helmholtz Centre Berlin, Europe's largest research institute for thin-film photovoltaics. Its shareholders and owners include Intel Capital, Vattenfall Europe and Gaz de France Suez.

www.soltecture.de | www.soltecture.com

FRAMED MODULE SULFURCELL-SCG-GEN2-HV-F

(Preliminary datasheet)

Module SULFURCELL-	SCG75-GEN2	SCG80-GEN2	SCG85-GEN2	SCG90-GEN2
Electrical parameters at 1000 W/m²; 25 °C; AM1.5				
Rated power ** P_{max}	75.0 W	80.0 W	85.0 W	90.0 W
Tolerance (P_{max})	+5/-0 W	+5/-0 W	+5/-0 W	+5/-0 W
Module efficiency	9.3%	9.9%	10.5%	11.1%
Rated voltage* U_{mpp}	52.9 V	53.9 V	55.1 V	56.7 V
Rated current* I_{mpp}	1.49 A	1.53 A	1.58 A	1.62 A
Open circuit voltage* U_{oc}	69.2 V	70.0 V	70.8 V	72.1 V
Short circuit current* I_{sc}	1.78 A	1.79 A	1.81 A	1.83 A
Max. system voltage	1000 V	1000 V	1000 V	1000 V
Reverse current load capacity	3.5 A	3.5 A	3.5 A	3.5 A
Max. number of series modules in string (+10% tolerance; 1000 V [IEC]; -10 °C)	11	11	11	11
Max. no. of modules in parallel	Optional. Each individual string must be fitted with a 3 A fuse.			
Electrical parameters at 800 W/m²; NOCT; AM1.5				
Power* P_{max}	52.7 W	56.2 W	59.7 W	63.3 W
Voltage* U_{mpp}	47.9 V	48.8 V	49.9 V	51.3 V
Current* I_{mpp}	1.18 A	1.22 A	1.26 A	1.29 A
Open circuit voltage* U_{oc}	62.7 V	63.4 V	64.1 V	65.3 V
Short circuit current* I_{sc}	1.42 A	1.43 A	1.44 A	1.46 A
Electrical parameters at 200 W/m²; 25 °C; AM1.5				
Maximum absolute reduction in efficiency	1.0%	1.0%	1.0%	1.0%

Notes

* Tolerance of the electrical parameters ± 10%

**Determined under standard test conditions: 25°C, 1000 W/m², AM1.5

The modules are not suitable for mobile and maritime applications.

Please note that if the modules are stored in darkness for longer periods of time, they only attain their rated output once they have been exposed to sufficient solar radiation. **Please refer to our user information, which is available at www.soltecture.com. Since we continually optimise our solar modules, this can lead to changes in the technical data specified in the data sheet.** All data applies exclusively to modules produced from the given date.

*** See Soltecture GmbH's independent manufacturer's warranty for end customers for SCG-type PV modules (as of July 2010).

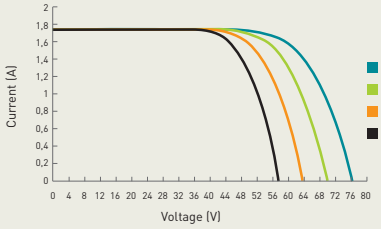
The modules are currently permitted for use in the following countries: EU Member States, Switzerland, Norway, Turkey, Liechtenstein, Israel, Lebanon, Croatia, Bosnia-Herzegovina, Serbia. (09/2010)

**** Observe installation instructions.

Thermal behaviour	
Working temperature (NOCT)	52 °C
Power-temperature coefficient T_K (P_{max})	-0.45%/K
Voltage-temperature coefficient T_K (U_{oc})	-0.35%/K
Current-temperature coefficient T_K (I_{sc})	-0.01%/K
Operating conditions	
Temperature range	-40 °C to +85 °C
Maximum mechanical load****	5400 Pa
Maximum winding	1.2°
Protection class (i.a.w. DIN EN 60529)	IP65
Protection class (i.a.w. DIN EN 61140)	II
Application class (i.a.w. IEC 61730)	A
Fire class (to IEC 61730)	C (Undergoing certification)

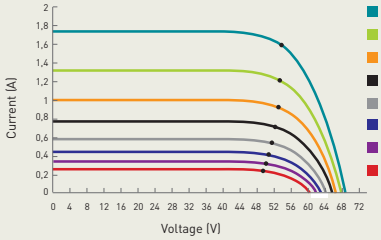
Dimensions	
Height / Width	1258 mm / 658 mm
Thickness / Thickness with canister	30 mm / 30 mm
Weight	14.6 kg
Other information	
Recommended string fuse	3 A (e.g. Socomec 60PV0003)
Included bypass diode	1 x Diotec BY550-1000
Connector cable	(+) 1000 mm; (-) 1000 mm
Connection plug	Y-SOL 4
Covering glass	3 mm tempered glass
Rear-side glass	3 mm float glass
Encapsulation	EVA
Frame type	Anodized aluminium

Dependence of power output and temperature **Module Type SCG85-GEN2-HV-F**

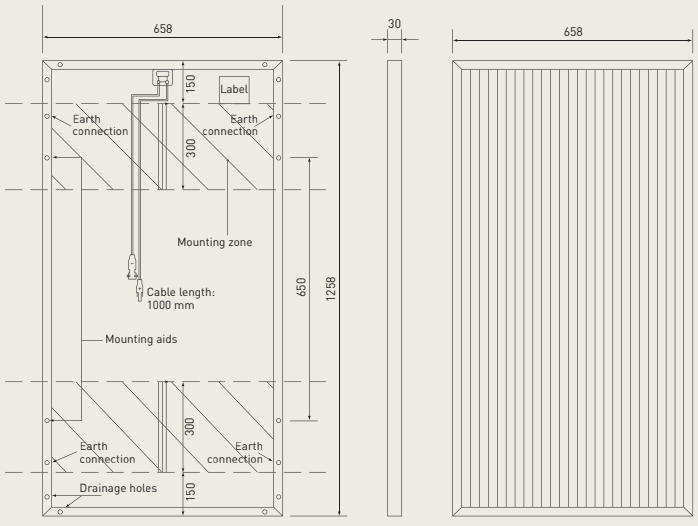


Temp	I_{mpp} (V)	U_{mpp} (A)	Power (Wp)
75 °C	41,4	1,48	60,8
50 °C	47,2	1,49	70,4
25 °C	53,1	1,51	80,0
0 °C	58,9	1,52	89,6

Dependence of power output and irradiance **Module Type SCG85-GEN2-HV-F**



E (W/m²)	U_{mpp} (A)	I_{mpp} (V)
1000	1,59	53,8
760	1,22	53,5
581	0,93	53,1
445	0,71	52,4
340	0,54	51,5
261	0,41	50,8
200	0,32	50,1
152	0,24	49,5



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