



Technical data

# TS CIGS SERIE

## højeffektivt

## CIGS solcellemodul

### Electrical Characteristics

Standard Test Conditions (STC)

TS CIGS Series		TS-145C2	TS-150C2	TS-155C2	TS-160C2	TS-165C2		
Max power	$P_{max}$	145	150	155	160	165	$W_p$	
Factory binning		+5/-0	+5/-0	+5/-0	+5/-0	+5/-0	W	
Open-circuit voltage	$V_{oc}$	85.2	86.1	86.9	87.8	88.7	V	
Short-circuit current	$I_{sc}$	2.66	2.66	2.66	2.66	2.66	A	
Max power voltage	$V_{mpp}$	60.4	62.5	64.6	66.7	68.5	V	
Max power current	$I_{mpp}$	2.40	2.40	2.40	2.40	2.41	A	
Module efficiency	Eff%	13.3	13.8	14.3	14.7	15.2	%	
Max reverse current	$I_R$	6.5 A						
Max system voltage		1000 Vdc [IEC], 600 Vdc [UL]						
Operating temperature		-40°C to 85°C						

IV Parameters measured at STC: 1000 W/m<sup>2</sup>, module temperature 25°C, AM 1.5 after factory light soaking. All IV ratings are +/- 10%.

Pre-binning power tolerance of +/-5%, as certified by UL/TÜV-SÜD. TSMC Solar only delivers modules with greater than or equal to nameplate power.

### Normal Operating Cell Temperature Conditions (NOCT)

		109.4	113.2	116.9	120.7	124.6	W
Max power	$P_{max}$						
Open-circuit voltage	$V_{oc}$	79.3	80.2	80.9	81.8	82.6	V
Short-circuit current	$I_{sc}$	2.14	2.14	2.14	2.14	2.14	A
Max power voltage	$V_{mpp}$	56.8	58.7	60.7	62.7	64.4	V
Max power current	$I_{mpp}$	1.93	1.93	1.93	1.93	1.93	A

Conditions at NOCT: 800 W/m<sup>2</sup>, ambient temperature 20°C, AM 1.5

### Thermal Characteristics

NOCT	46.5 ± 1°C
Temperature Coefficient of $P_{max}$	-0.30% / °C
Temperature Coefficient of $V_{oc}$	-0.29% / °C
Temperature Coefficient of $I_{sc}$	0.01% / °C

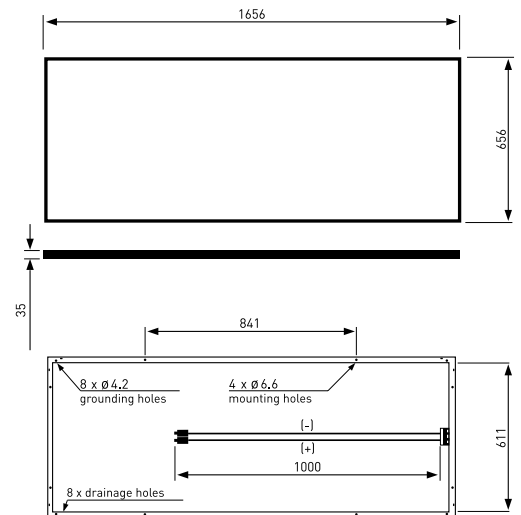
### Mechanical Characteristics

Snow/wind load (IEC)	2,400 Pa
Dimensions in mm	1656 x 656 x 35
Weight in kg	17.5
Frame	Black anodised aluminum
Front cover	Anti-reflective coated, textured white tempered glass
Junction box, connector	IP 67, MC-4 compatible
Output cable cross section and length	2.5 mm <sup>2</sup> , 1000 mm
Cell type	133 CIGS cells
Safety class	II
Fire rating	Class C

The information contained herein is subject to change without notice.

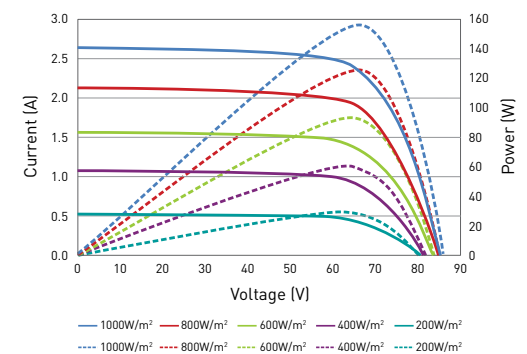
Caution: Read the installation guidelines before using, handling, installing or operating TSMC Solar modules.

### Physical Specifications



All measurements in mm

### I-V and P-V Curve (TS-155C2)



### Performance at Low Irradiance

Typical relative efficiency reduction of maximum power from an irradiance of 1,000 W/m<sup>2</sup> to 200 W/m<sup>2</sup> at 25°C is 7%.

### Certifications



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We look forward to your call or your e-mail!

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