

TS CIGS SERIE

højtydende CIGS-solcellemoduler

145 Wp / 150 Wp / 155 Wp / 160 Wp

Fordele

- * Avanceret egen CIGS tyndfilms-teknologi
- * Plus-sorting +5 W til -0 W
- * Op til 3% ekstra effekt takket "light soaking" effekt
- * Lav temperatur koefficient giver øget ydelse
- * Æstetisk sort fremtoning
- * Moduler med sorteloxerede rammer, som passer med standard montagesystemer
- * Forsynet med serie-nummer graveret i rammen for enkel sporbarhed

Kvalitet og sikkerhed

IEC, MCS og UL certificeret

- * Tåler 2.400 Pa i sne- og vind-last
- * Fri for mulig induceret nedbrydning (PID)
- * Produceret på en ISO 9001: 2008, ISO 14001 og OHSAS 18001 certificeret fabrik
- * Certificeret for barske omgivelser: korrosion fra salt-tåge (IEC 61701) og flyvende sand (DIN EN 60068-2-68)

Garantier

- * Produktgaranti **: 10 år for materialer og produktion
- * Effek-garanti **: 90% ved 10 år og 80% ved 25 år ved minimum målt output



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www.tsmc-solar.com

Tekniske data

TS CIGS SERIES HIGH-EFFICIENCY CIGS SOLAR MODULE

Electrical Characteristics

Standard Test Conditions (STC)

TS CIGS Series		TS-145C2	TS-150C2	TS-155C2	TS-160C2	
Maximum power	P_{max}	145	150	155	160	W_p
Factory binning		+5/-0	+5/-0	+5/-0	+5/-0	W
Open-circuit voltage	V_{oc}	86.0	86.6	86.7	86.8	V
Short-circuit current	I_{sc}	2.62	2.62	2.62	2.62	A
Maximum power voltage	V_{mpp}	63.6	65.5	67.1	68.7	V
Maximum power current	I_{mpp}	2.28	2.29	2.31	2.33	A
Module efficiency	Eff%	13.3	13.8	14.3	14.7	%
Power tolerance ¹		+/-5%				
Maximum reverse current	I_R	6.5 A				
Maximum system voltage		1000 Vdc (IEC), 600 Vdc (UL)				
Operating temperature		-40°C to 85°C				

IV Parameters measured at STC: 1000 W/m², module temperature 25°C, AM 1.5 after factory light soaking. All IV ratings are +/- 10%.

¹ Pre-binning power tolerance 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)

Maximum power	P_{max}	109.4	113.2	116.9	120.7	W
Open-circuit voltage	V_{oc}	78.9	79.4	79.5	79.6	V
Short-circuit current	I_{sc}	2.1	2.1	2.1	2.1	A
Maximum power voltage	V_{mpp}	60.0	61.8	63.3	64.8	V
Maximum power current	I_{mpp}	1.82	1.83	1.85	1.86	A

Conditions at NOCT: 800 W/m², 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

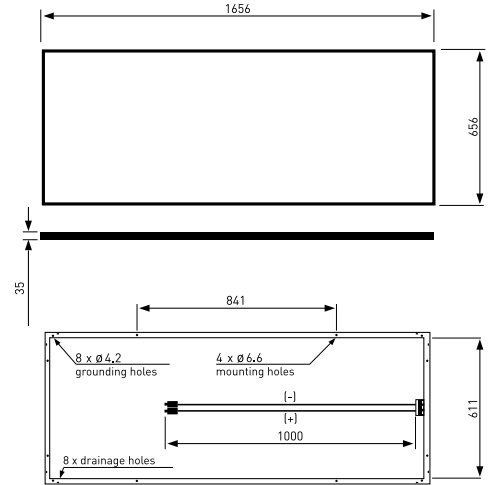
Mechanical Characteristics

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 ² , 1000 mm
Cell type	133 CIGS cells
Safety class	II
Fire rating	Class C

The information contained herein is subject to change without notice.

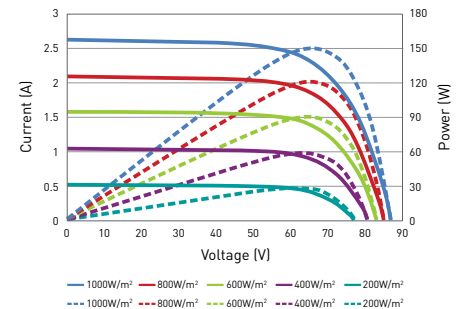
Caution: Read the installation guidelines before using, handling, installing or operating TSMC Solar modules.

Physical Specifications



All measurements in mm

I-V and P-V Curve (TS-150C2)



Performance at Low Irradiance

Typical relative efficiency reduction of maximum power from an irradiance of 1,000 W/m² to 200 W/m² at 25°C is 7%.

Certifications



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

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