

TS CIGS SERIE

højtydende CIGS-solcellemoduler

145 Wp / 150 Wp / 155 Wp / 160 Wp / 165 Wp

Fordele

- Avanceret egen CIGS tyndfilm-teknologi
- Plussortering +5 W til -0 W
- Op til 3% ekstra effekt takket "light soaking" effekt
- Lav temperature koefficient giver øget ydelse
- Æstetisk sort fremtoning med antirefleks coating (ARC)
- Moduler med sorteloxerede rammer, som passer med standard montagesystemer
- Forsynet med serie-nummer graveret i rammen for enkel sporbarhed

Kvalitet og sikkerhed

- Lamineret dobbeltglas konstruktion for optimal styrke og levetid
- IEC, MCS and 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
- Cerificeret fir barske omgivelser: korrosion fra salt-tåge (IEC 61701) og flyvende sand (DIN EN 60068-2-68)

Garantier

- Produkt-garanti*: 10 år for materialer og produktion
- Effektiv-garanti i 25 år med 90% ved 1000 timer og 80% ved 2000 timer



A TSMC Company

www.tsmc-solar.com

Tekniske data

TS CIGS SERIE

højeffektivt CIGS-solcellemodul

Elektriske egenskaber

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/m², 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/m², ambient temperature 20°C, AM 1.5

Termiske egenskaber

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

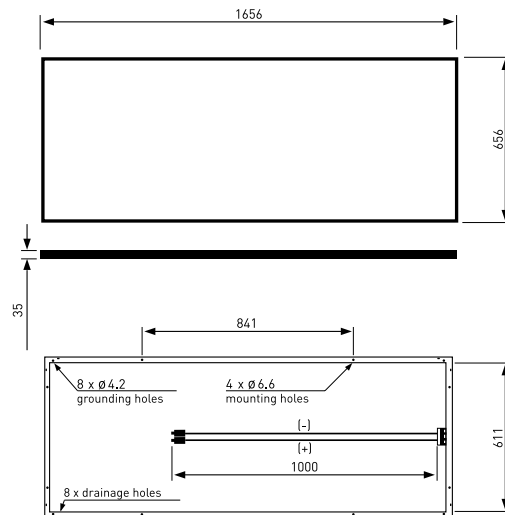
Mekaniske egenskaber

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.

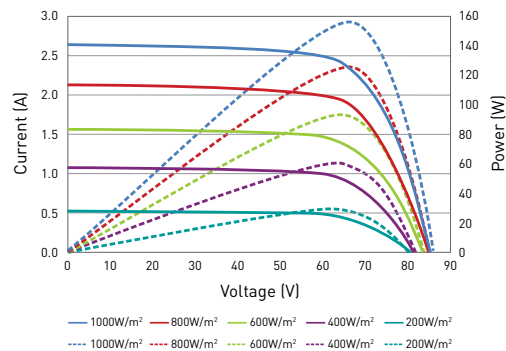
Caution: Read the installation guidelines before using, handling, installing or operating TSMC Solar modules.

Fysiske mål



All measurements in mm

I-V og P-V kurve (TS-155C2)



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%.

Certificering



tsmc solar.

Get in contact with us!
We look forward to your call or your e-mail!

EUROPE
TSMC Solar Europe GmbH
Am Kaiserkai 1
20457 Hamburg, Germany
Tel.: +49 (0) 40 / 80 80 745 40
SolarEU@tsmc.com

NORTH AMERICA
TSMC Solar North America
2595 Junction Avenue
San Jose, CA 95134, USA
Tel.: +1 408 678 2816
SolarNA@tsmc.com

ASIA/REST OF WORLD
TSMC Solar Ltd.
5, Keya W. Rd., Daya Dist.
Taichung, Taiwan 428-82
Tel.: +886 4 27 03 66 88
SolarAsia@tsmc.com

VIND & SOL
Kirkeballevvej 6
DK-5970 Ærøskøbing
Telefon +45 5851 5096
info@vindogsol.dk

tsmc A TSMC Company

© 2011-2015 TSMC and TSMC Solar. All rights reserved. TSMC, tsmc, tsmc solar and the tsmc logo are trademarks of TSMC and TSMC Solar. All other trademarks mentioned herein are the property of their respective owners.

DS-TSC2-EU-EN-01/15-01