

SHINGLED MODULE FULL BLACK 405 - 425W

PERC
technology



Black frame
Black Backsheet

1812 x 1096 x 30 mm



HIGH QUALITY AND RELIABLE MODULES

- Withstand up to 5400 Pa snow load
- 2 EL-inspections per cell/module for defect-free consistency
- 0 ~ +5 W guaranteed positive power tolerance
- Rugged design for long-term durability; passed extended reliability tests



POWER OUTPUT WARRANTY

- 20-year product warranty
- 30-year linear power output warranty
 - 1st year : min. 98 % of the maximum nominal power output
 - 2nd - 30st year : linear degradation
 - 30st year : min. 82,05% of the maximum nominal power output



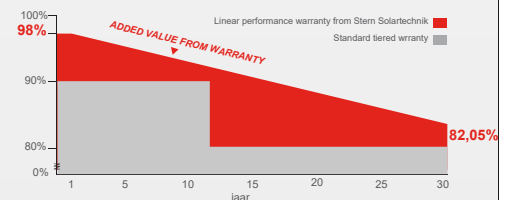
COMPREHENSIVE CERTIFICATES FOR PRODUCTS AND MANAGEMENT

- IEC 61215, IEC 61730 en CE
- ISO 9001:2015 for Quality Management Systems
- ISO 14001:2015 for Environmental Management Systems
- OHSAS 18001 Occupational Health and Safety System
- PID-test IEC 62804
- EN 60904-3

0~+5W
POWER TOLERANCE

21.4%
MAXIMUM EFFICIENCY

405-425W
POWER OUTPUT RANGE



Electrical Characteristics STC

STC: AM1.5

Irradiance 1000 W/m² / 25°C

	ST 405 SH	ST 410 SH	ST 415 SH	ST 420 SH	ST 425 SH
Maximum Power (Pmax)	405 W	410 W	415 W	420 W	425 W
Maximum Power Current (Imp)	11.86 A	11.97 A	12.08 A	12.19 A	12.30 A
Maximum Power Voltage (Vmp)	34.3 V	34.4 V	34.4 V	34.5 V	34.6 V
Short Circuit Current (Isc)	12.53 A	12.65 A	12.80 A	12.92 A	13.03 A
Open Circuit Voltage (Voc)	41.3 V	41.4 V	41.5 V	41.6 V	41.7 V
Module Efficiency	20.4 %	20.6 %	20.9 %	21.1 %	21.4 %
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W	0~+5W

Electrical Characteristics NMOT

NMOT:

Irradiance 800 W/m² / 20°C / Wind speed 1m/s

	ST 405 SH	ST 410 SH	ST 415 SH	ST 420 SH	ST 425 SH
Maximum Power (Pmax)	305 W	309 W	312 W	316 W	320 W
Maximum Power Current (Imp)	9.33 A	9.41 A	9.53 A	9.62 A	9.70 A
Maximum Power Voltage (Vmp)	32.7 V	32.8 V	32.8 V	32.9 V	33.0 V
Short Circuit Current (Isc)	10.09 A	10.19 A	10.31 A	10.41 A	10.50 A
Open Circuit Voltage (Voc)	39.4 V	39.5 V	39.6 V	39.7 V	39.8 V

Mechanische Characteristics

Solar Celle	Mono crystalline, shingled
Glass	AR coating tempered glass 3,2 mm
Frame	Anodized aluminium profile
Junction Box	IP 68
Cable	4 mm ² (EU)/1000 mm long/ MC4 of EV02
Cell orientation	305 (61*5)
Dimension	1812x1096x30 mm
Weight	20,8 KG

Thermische Characteristics

Temperature Coefficient Pmax	-0.34%/K
Temperature Coefficient Voc	-0.27%/K
Temperature Coefficient Isc	+0.04%/K
NMOT	42.3°C(±2°C)

Packing Information

Pieces per pallet	36
Pieces per container (40HQ)	924

Maximum Ratings

Operating Temperature	-40~85°C
Maximum Series Fuse Rating	20 A
Maximum System Voltage	DC 1500/1000(IEC)

I-V curves at different irradiances

Test temperature: 25°C

