

# SG3K/ 3K6 / 4K6/5KTL-D

**SUNGROW**

www.sungrowpower.com



### Flexible

- Dual MPPT, compatible different residential rooftop system design
- Max. input voltage 600V, compatible with different PV panel and string design



### Intelligent

- Access to home WiFi system, easy to enjoy the online monitoring
- Wireless communication design, intelligent mobile phone local and remote monitoring



### Easy

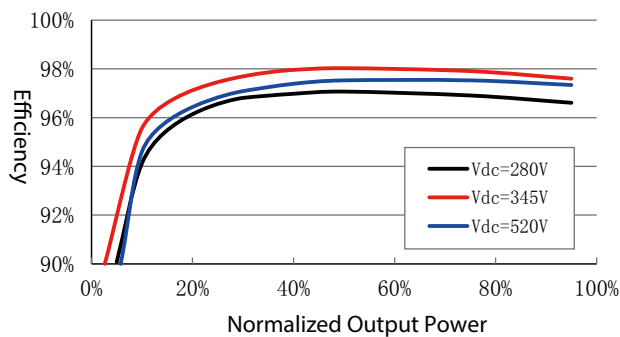
- Only 11kg, easy for handling and installation
- Easy replacement and transportation, reduce the trouble of service



### Qualified

- TÜV, CE, AS4777, AS/NZS 3100, VDE AR N 4105, certification

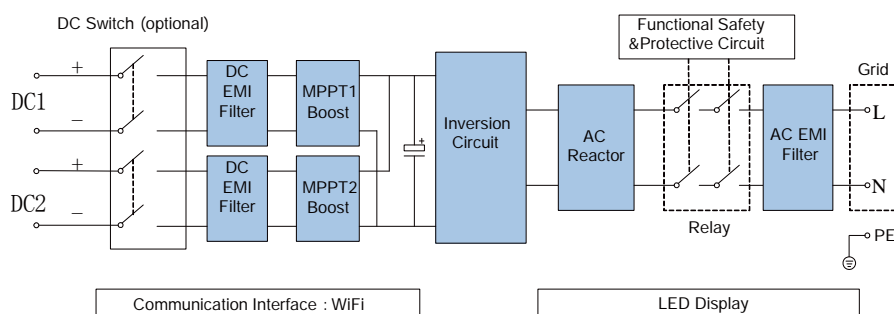
## Efficiency Curve



Input Side Data	SG3KTL-D	SG3K6TL-D	SG4K6TL-D	SG5KTL-D
Max. PV input power	3300W	3900W	4900W	5400W
Max. PV input voltage	600V			
Startup voltage	150V			
Nominal input voltage	345V			
MPP voltage range	125~560V			
MPP voltage range for nominal power	150~520V	180~520V	220~520V	240~520V
No. of MPPTs	2			
Max. number of PV strings per MPPT	1			
Max. PV input current	22A (11A/11A)			
Max. current for input connector	20A			
<b>Output Side Data</b>				
Nominal AC output power	3000W	3680W	4600W	5000W/4600W *(Australia)
Max. AC output power (PF=1)	3150W	3680W	4600W	5000W
Max. AC output apparent power	3150VA	3680VA	4600VA	5000VA
Max. AC output current	13.7A	16.0A	20A	21.7A/20A *(Australia)
Nominal AC voltage	230Vac (single phase)			
AC voltage range	180~276Vac			
Nominal grid frequency	50Hz/60Hz			
Grid frequency range	45~55Hz/55~65Hz			
THD	<3% (nominal power)			
DC current injection	<0.5 %In			
Power factor	>0.99@default value at nominal power, (adj. 0.8 overexcited ~ 0.8 underexcited)			
<b>Protection</b>				
Anti-islanding protection	Yes			
LVRT	No			
DC reverse connection protection	Yes			
AC short circuit protection	Yes			
Leakage current protection	Yes			
DC switch	Optional			
DC fuse	No			
Overvoltage protection	Varistors			
<b>System Data</b>				
Max. efficiency	98.00%			
Max. European efficiency	97.50%			
Isolation method	Transformerless			
Ingress protection rating	IP65			
Night power consumption	<1W			
Operating ambient temperature range	-25~60°C (>45°C derating)			
Allowable relative humidity range	0~100%			
Cooling method	Natural cooling			
Max. operating altitude	4000m (>2000m derating)			
Display	LED			
Communication	WiFi			
DC connection type	MC4			
AC connection type	Plug and play connector			
Certification	IEC61000-6-2, IEC61000-6-3, AS/NZS3100, AS4777.2, AS4777.3, VDE-AR-N-4105, VDE0126-1-1, CE,G83/2, C10/11, EN50438, CGC			
<b>Mechanical Data</b>				
Dimensions (W*H*D)	360*390*133 mm			
Mounting method	Wall bracket			
Weight	11kg			

\* When the country parameter of SG5KTL-D is set to Australia, nominal output is 4600W and maximum output current is 20A.

## Circuit Diagram





## QUARTECH CS6K- 270 | 275 M

Canadian Solar's new Quartech modules have significantly raised the standard of module efficiency in the solar industry. They introduced innovative four busbar cell technology, which demonstrates higher power output and higher system reliability. Worldwide, our customers have embraced this next generation of modules for their excellent performance, superior reliability and enhanced value.

### NEW TECH NOLO GY

- Reduces cell series resistance
- Reduces stress between cell interconnectors
- Improves module conversion efficiency
- Improves product reliability

### KEY FEATURES



#### Higher energy yield

- Outstanding performance at low irradiance
- Maximum energy yield at low NOCT
- Improved energy production through reduced cell series resistance



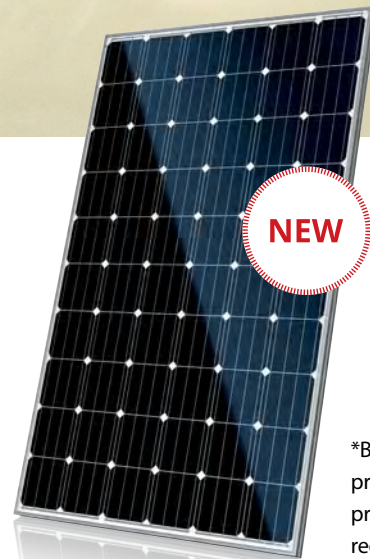
#### Increased system reliability

- Long-term system reliability with IP67 junction box
- Enhanced system reliability in extreme temperature environment with special cell level stress release technology



#### Extra value to customers

- Positive power tolerance up to 5 W
- Stronger 40 mm robust frame to hold snow load up to 5400 Pa and wind load up to 2400 Pa
- Anti-glare project evaluation
- Salt mist, and ammonia resistance, apply to seaside, and farm environments



\*Black frame product can be provided upon request.



insurance-backed warranty  
non-cancelable, immediate warranty insurance  
linear power output warranty



product warranty on materials  
and workmanship

### MANAGEMENT SYSTEM CERTIFICATES \*

ISO 9001:2008 / Quality management system  
ISO/TS 16949:2009 / The automotive industry quality management system  
ISO 14001:2004 / Standards for environmental management system  
OHSAS 18001:2007 / International standards for occupational health & safety

### PRODUCT CERTIFICATE S\*

IEC 61215 / IEC 61730: VDE / CE / MCS / CEC AU  
UL 1703 / IEC 61215 performance: CEC listed (US)  
UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / PV CYCLE (EU)

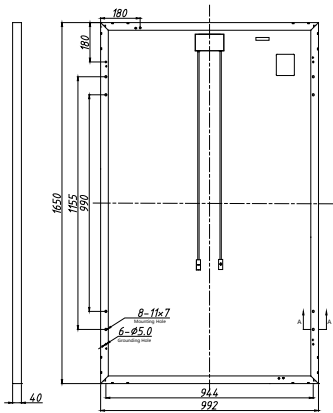


\* As there are different certification requirements in different markets, please contact your local Canadian Solar sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

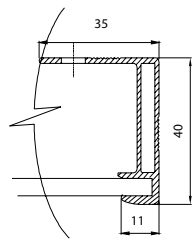
CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading manufacturer of solar modules and PV project developer with about 10 GW of premium quality modules deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

## MODULE / ENGINEERING DRAWING (mm)

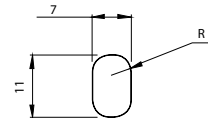
Rear View



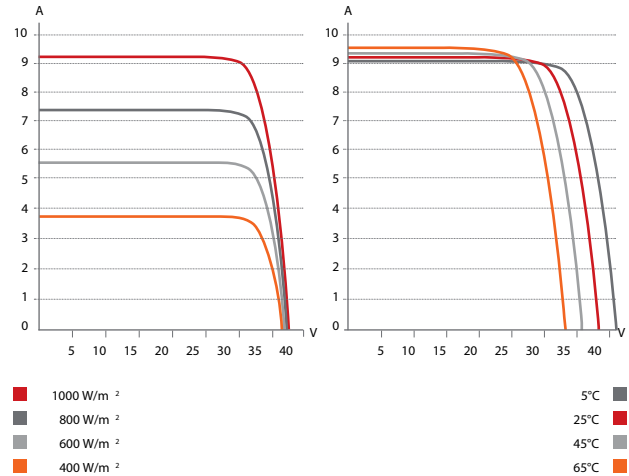
Frame Cross Section A-A



Mounting Hole



## CS6K-270M / I-V CURVES



## ELECTRICAL DATA / STC\*

Electrical Data CS6K	270M	275M
Nominal Max. Power (Pmax)	270 W	275 W
Opt. Operating Voltage (Vmp)	31.1 V	31.3 V
Opt. Operating Current (Imp)	8.67 A	8.80 A
Open Circuit Voltage (Voc)	38.2 V	38.3 V
Short Circuit Current (Isc)	9.19 A	9.31 A
Module Efficiency	16.50%	16.80%
Operating Temperature	-40°C ~ +85°C	
Max. System Voltage	1000 V (IEC) or 1000 V (UL)	
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)	
Max. Series Fuse Rating	15 A	
Application Classification	Class A	
Power Tolerance	0 ~ + 5 W	

\* Under Standard Test Conditions (STC) of irradiance of 1000 W/m<sup>2</sup>, spectrum AM 1.5 and cell temperature of 25°C.

## ELECTRICAL DATA / NOCT\*

Electrical Data CS6K	270M	275M
Nominal Max. Power (Pmax)	195 W	199 W
Opt. Operating Voltage (Vmp)	28.4 V	28.5 V
Opt. Operating Current (Imp)	6.87 A	6.95 A
Open Circuit Voltage (Voc)	35.0 V	35.1 V
Short Circuit Current (Isc)	7.44 A	7.54 A

\* Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/m<sup>2</sup>, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

## PERFORMANCE AT LOW IRRADIANCE

Industry leading performance at low irradiance, average 96.5% relative efficiency from an irradiance of 1000 W/m<sup>2</sup> to 200 W/m<sup>2</sup> (AM 1.5, 25°C).

The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, Canadian Solar Inc. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Caution: For professional use only. The installation and handling of PV modules requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the modules.

## MODULE / MECHANICAL DATA

Specification	Data
Cell Type	Mono-crystalline, 6 inch
Cell Arrangement	60 (6 × 10)
Dimensions	1650 × 992 × 40 mm (65.0" × 39.1" × 1.57 in)
Weight	18.2 kg (40.1 lbs)
Front Cover	3.2 mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP67, 3 diodes
Cable	4 mm <sup>2</sup> (IEC) or 4 mm <sup>2</sup> & 12 AWG 1000 V (UL), 1000 mm (39.4 in)
Connectors	Friends PV2a (IEC), Friends PV2b (IEC / UL)
Standard Packaging	26 pieces, 520 kg (1146.4 lbs) (quantity & weight per pallet)
Module Pieces per Container	728 pieces (40' HQ)

## TEMPERATURE CHARACTERISTICS

Specification	Data
Temperature Coefficient (Pmax)	-0.41% / °C
Temperature Coefficient (Voc)	-0.31% / °C
Temperature Coefficient (Isc)	0.053% / °C
Nominal Operating Cell Temperature	45±2°C

## PARTNER SECTION

