



CS6K-270 | 275 | 280 | 285M-SD

Canadian Solar's SmartDC module features an innovative integration of Canadian Solar's module technology and SolarEdge's power optimization for grid-tied PV applications.

By replacing the traditional junction-box with a power optimizer, the SmartDC module optimizes power output at module-level. With this feature, the SmartDC module can eliminate module-level mismatch and decrease shading losses. Furthermore, the SmartDC module provides module-level monitoring that allows effective system management and minimizes operational costs.



KEY FEATURES



Harvests up to 25% more energy from each module

- Maximizes power from each individual module against potential mismatch risk
- Decreases shading losses



Easy installation, simple system design

- Integrated smart solution, no need to add other accessories
- Enhances the shading tolerance



Reduces BoS Costs

- Up to 11.25 kW ~ 12.75 kW per string allows for more modules to be based on different inverters



Free module-level monitoring system

- Full visibility of system performance with a free smartphone app



Safety

- Automatic drop of DC current and voltage when inverter or grid power is shut down



linear power output warranty



product warranty on materials and workmanship

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2008 / Quality management system

ISO 14001:2004 / Standards for environmental management system

OHSAS 18001:2007 / International standards for occupational health & safety

PRODUCT CERTIFICATES*

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

IEC 60068-2-68: SGS

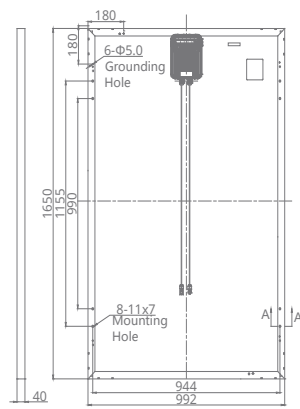


*As there are different certification requirements in different markets, please contact your Canadian Solar sales representative for the specific certificates applicable to the products.

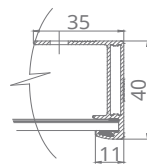
CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading PV project developer and manufacturer of solar modules with over 17 GW deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

ENGINEERING DRAWING (mm)

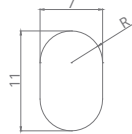
Rear View



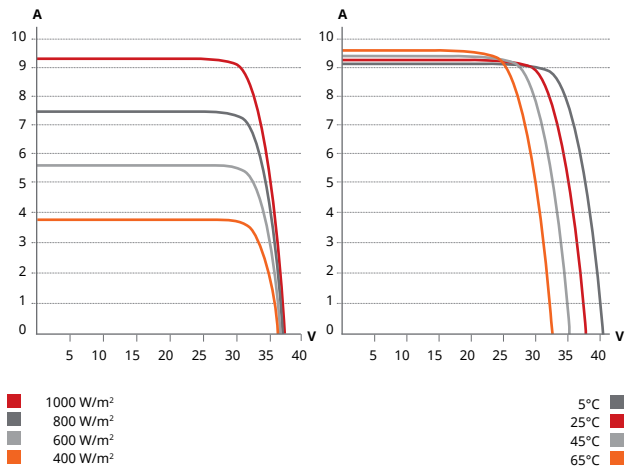
Frame Cross Section A-A



Mounting Hole



CS6K-280M-SD / I-V CURVES



ELECTRICAL DATA | STC*

Power Optimizer connected to a SolarEdge Inverter

CS6K	270M-SD	275M-SD	280M-SD	285M-SD
Nom. Max. PWR (Pmax STC)	270 W	275 W	280 W	285 W
Nom. Max. PWR (Pmax NOCT)	195 W	199 W	202 W	206 W
Open Circuit Voltage (Voc STC)	38.2 V	38.3 V	38.5 V	38.6 V
Output Voltage Range (Vout)	5-60 V	5-60 V	5-60 V	5-60 V
Max. Output Current (Imax)	15 A	15 A	15 A	15 A
Max. Series Fuse Rating	20 A	20 A	20 A	20 A
Module Efficiency	16.50%	16.80%	17.11%	17.41%
Output During Standby (power optimizer disconnected from inverter or inverter off)	1 V			

* Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C. Measurement uncertainty: ±3% (Pmax).

MECHANICAL DATA OF PV MODULE

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	19.3 kg (42.5 lbs)
Front Cover	3.2 mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP65
Cable	PV1-F 1*6.0 mm ² / 952 mm
Connectors	MC KST4/X and KBT4/X
Per Pallet	26 pieces, 548 kg (1208 lbs)
Per container (40' HQ)	728 pieces

PV SYSTEM DESIGN

Min. String Length	EU & APAC	1 ph	8			
		3 ph	16			
		3 ph - MV	18			
	US & Canada	1 ph	8			
		3 ph (208 V)	10			
		3 ph (480 V*)	18			
Max. String Length	EU & APAC	1 ph	19	19	18	18
		3 ph	41	40	40	39
		3 ph - MV	47	46	45	44
	US & Canada	1 ph	19	19	18	18
		3 ph (208 V)	22	21	21	21
		3 ph (480 V*)	47	46	45	44
Max. Power per String (W)	EU & APAC	1 ph	5250			
		3 ph	11250			
		3 ph - MV	12750			
	US & Canada	1 ph	5250			
		3 ph (208 V)	6000			
		3 ph (480 V*)	12750			
Parallel Strings of Diff. Lengths	Yes					
Parallel Strings of Diff. Orientations	Yes					
Operating Temperature	-40°C ~ +85°C					
Max. System Voltage	1000 V (IEC) / 1000 V (UL) / 600 V (UL)					
Application Classification	Class A					
Fire Rating	Type 1 (UL1703) / Class C (IEC61730)					
Power Tolerance	0 ~ +5 W					

* UL1000V model available.

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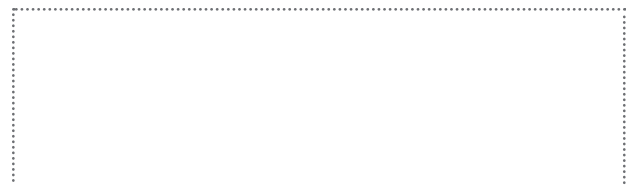
TEMPERATURE CHARACTERISTICS

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

STANDARD COMPLIANCE

Specification	Standard
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3
PV Module	IEC61215, IEC61730, UL1703, CEC listing
PV Optimizer J-Box	EN50548, UL3730, IEC62109-1 (class II safety), UL1741
Fire Safety	VDE-AR-E 2100-712:2013-05

PARTNER SECTION



* This datasheet is written in English with Chinese (or other language) translation for reference only. In case there are inconsistencies or conflicts between the English version and the Chinese version (or other language version) of this datasheet, the English version shall prevail and take control in all respects.