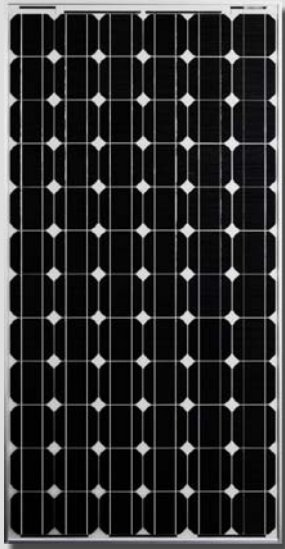


# CS5A

180/185/190/195/200/205M



## All-purpose Module

CS5A is a robust all-purpose solar module with 72 solar cells. These modules can be used for on-grid and off-grid solar applications. Our meticulous design and production techniques ensure a high-yield, long-term performance for every module produced. Our rigorous quality control and in-house testing facilities guarantee Canadian Solar's modules meet the highest quality standards possible.

## Applications

- On-grid and off-grid residential roof-tops
- On-grid and off-grid commercial/industrial roof-tops
- Rural area applications
- Solar power stations
- Other on-grid and off-grid applications

## Quality Certificates

- IEC 61215, IEC61730, UL 1703, CEC Listed, CQC JET, CE, MCS, Kemco
- ISO9001:2008: Standards for quality management systems
- ISO/TS16949:2009: The automotive quality management system

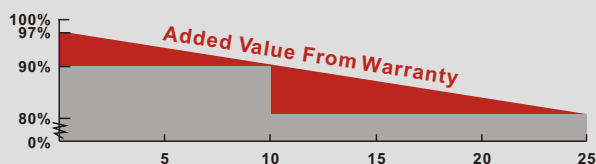
## Environmental Certificates

- ISO14001:2004: Standards for Environmental management systems
- QC080000 HSPM: The Certification for Hazardous Substances Regulations
- Reach Compliance



## Key Features

- Top ranked PVUSA (PTC) rating in California for higher energy production
- Industry first comprehensive warranty insurance by AM Best rated leading insurance companies in the world
- Industry leading plus only power tolerance: 0 ~ +5W
- Strong framed module, passing mechanical load test of 5400Pa to withstand heavier snow load
- The 1st manufacturer in the PV industry certified for ISO:TS16949 (The automotive quality management system) in module production since 2003
- ISO17025 qualified manufacturer owned testing lab, fully complying to IEC, TUV, UL testing standards
- **Backed By Our New 10/25 Linear Power Warranty Plus our added 25 year insurance coverage**



- 10 year product warranty on materials and workmanship
- 25 year linear power output warranty

# CS5A-180/185/190/195/200/205M

## Electrical Data

STC	CS5A-180M	CS5A-185M	CS5A-190M	CS5A-195M	CS5A-200M	CS5A-205M
Nominal Maximum Power (Pmax)	180W	185W	190W	195W	200W	205W
Optimum Operating Voltage (Vmp)	36.1V	36.4V	36.6V	37.0V	37.4V	37.7V
Optimum Operating Current (Imp)	4.99A	5.09A	5.19A	5.27A	5.35A	5.43A
Open Circuit Voltage (Voc)	44.6V	44.6V	44.8V	45.0V	45.3V	45.4V
Short Circuit Current (Isc)	5.34A	5.46A	5.52A	5.62A	5.71A	5.81A
Module Efficiency	14.10%	14.49%	14.88%	15.27%	15.67%	16.06%
Operating Temperature	-40°C~+85°C					
Maximum System Voltage	1000V (IEC) /600V (UL)					
Maximum Series Fuse Rating	10A					
Application Classification	Class A					
Power Tolerance	0 ~ +5W					

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

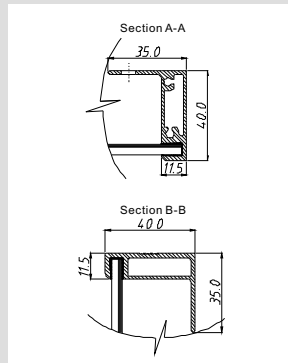
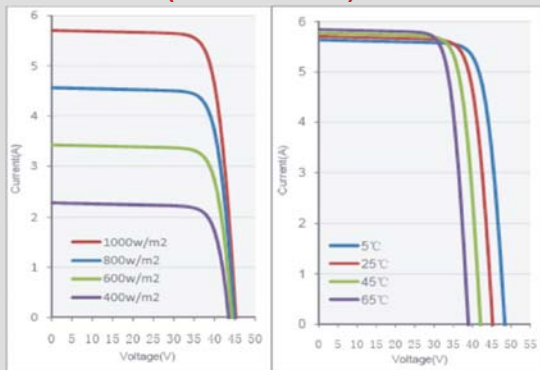
NOCT	CS5A-180M	CS5A-185M	CS5A-190M	CS5A-195M	CS5A-200M	CS5A-205M
Nominal Maximum Power (Pmax)	130W	134W	137W	141W	144W	148W
Optimum Operating Voltage (Vmp)	32.9V	33.2V	33.4V	33.7V	34.1V	34.4V
Optimum Operating Current (Imp)	3.95A	4.02A	4.11A	4.17A	4.23A	4.30A
Open Circuit Voltage (Voc)	40.9V	40.9V	41.1V	41.3V	41.5V	41.6V
Short Circuit Current (Isc)	4.32A	4.42A	4.47A	4.55A	4.62A	4.70A

Under Normal Operating Cell Temperature, Irradiance of 800 W/m<sup>2</sup>, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s

## Mechanical Data

Cell Type	Mono-crystalline 125 x 125mm, 2 Busbars
Cell Arrangement	72 (6 x 12)
Dimensions	1580 x 808 x 40mm (62.2x 31.8 x 1.57in)
Weight	15.8kg (34.8 lbs)
Front Cover	3.2mm Tempered glass
Frame Material	Anodized aluminium alloy
J-BOX	IP65, 3 diodes
Cable	4mm <sup>2</sup> (IEC)/12AWG(UL), 950mm
Connectors	MC4 or MC4 Comparable
Standard Packaging (Modules per Pallet)	24pcs
Module Pieces per container (40 ft. Container)	672pcs

## I-V Curves (CS5A-200M)



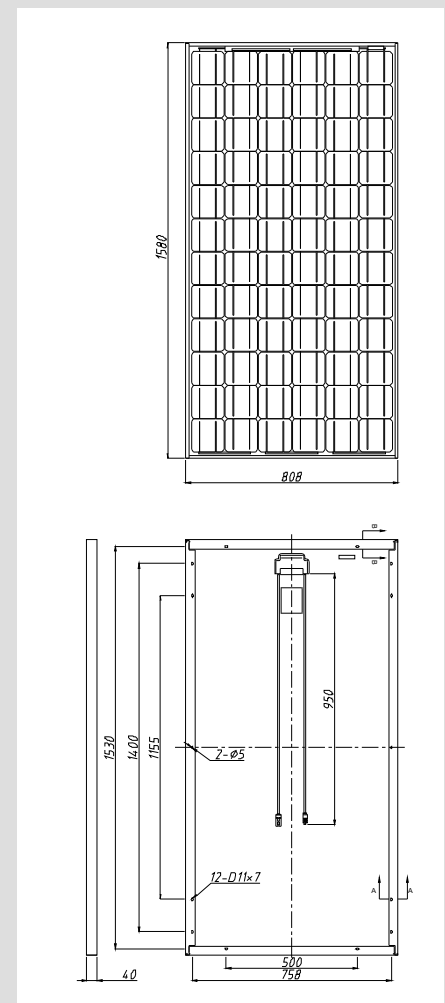
## Temperature Characteristics

Temperature Coefficient	Pmax	-0.45%/°C
	Voc	-0.35 %/°C
	Isc	0.060 %/°C
Normal Operating Cell Temperature	45±2°C	

## Performance at Low Irradiance

Industry leading performance at low irradiation environment, +95.5% module efficiency from an irradiance of 1000w/m<sup>2</sup> to 200w/m<sup>2</sup> (AM 1.5, 25 °C)

## Engineering Drawings



\*Specifications included in this datasheet are subject to change without prior notice.

## About Canadian Solar

Canadian Solar Inc. is one of the world's largest solar companies. As a leading vertically-integrated manufacturer of ingots, wafers, cells, solar modules and solar systems. Canadian Solar delivers solar power products of uncompromising quality to worldwide customers. Canadian Solar's world class team of professionals works closely with our customers to provide them with solutions for all their solar needs.

Canadian Solar was founded in Canada in 2001 and was successfully listed on NASDAQ Exchange (symbol: CSIQ) in November 2006. Canadian Solar has already expanded its module manufacturing capacity to 2.05GW and cell manufacturing capacity to 1.3GW in 2011.