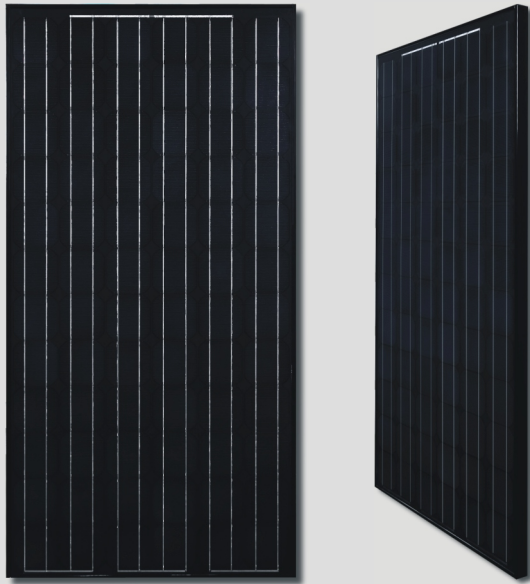


# All-black CS5A

160/170/180

(Preliminary Version)



## Key Features

- Aesthetic all-black appearance
- 6 years product warranty (materials and workmanship); 25 years module power output warranty
- Industry leading power tolerance :  $\pm 5W$  ( $\pm 2.8\%$ )
- Strong framed module, passing mechanical load test of 5400Pa to withstand heavier snow load
- The 1st manufacturer in 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

## All-purpose Module

All-black 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. The all-black modules use high efficiency mono-crystalline silicon cells, laminated with black back sheet and framed with black anodized aluminum. The all-black modules are the perfect choice of customers who not only are keen on using solar energy, but also look for aesthetic value.

## 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, TUV Safety Class II, UL 1703, CE
- ISO9001:2000: Standards for quality management systems
- ISO/TS16949:2002: The automotive quality management system
- QC080000 HSPM: The Certification for Hazardous Substances Regulations



# CS5A-160/170/180

## All-black (Preliminary Version)

### Electrical Data

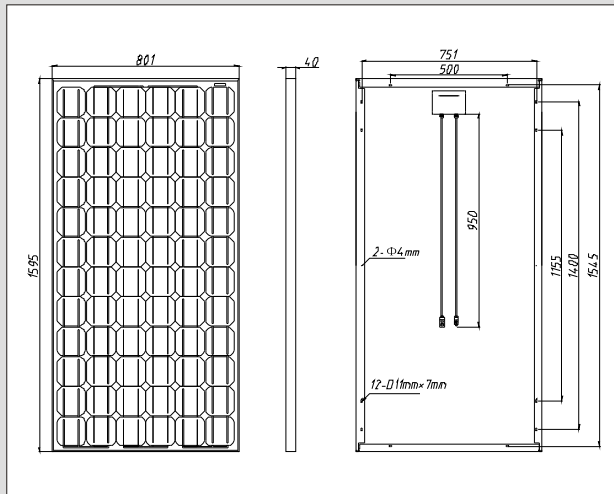
		CS5A-160M	CS5A-170M	CS5A-180M
Nominal Maximum Power at STC (Pmax)		160W	170W	180W
Optimum Operating Voltage (Vmp)		34.9V	35.5V	36.1V
Optimum Operating Current (Imp)		4.58A	4.79A	4.99A
Open Circuit Voltage (Voc)		43.6V	44.1V	44.5V
Short Circuit Current (Isc)		4.97A	5.19A	5.40A
Operating Temperature		-40°C~+85°C		
Maximum System Voltage		1,000V (IEC) /600V (UL)		
Maximum Series Fuse Rating		10A		
Power Tolerance		± 5W		
Temperature Coefficient	Pmax	-0.45%/°C		
	Voc	-0.35%/°C		
	Isc	0.060%/°C		
	NOCT	45°C		

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

### Mechanical Data

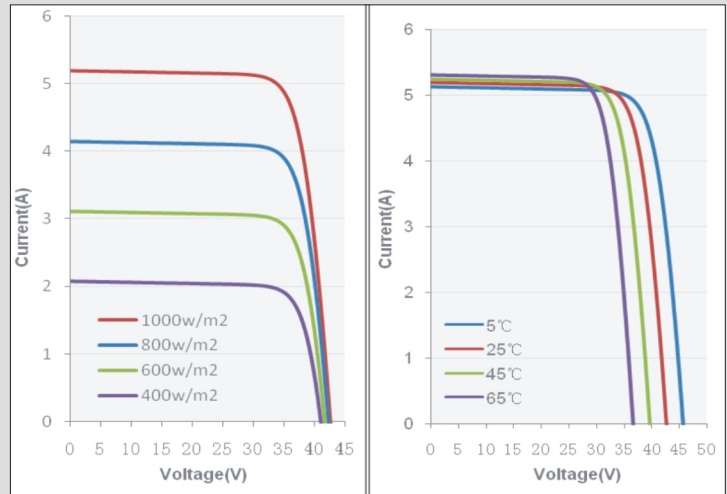
Cell Type	Mono-crystalline
Cell Arrangement	72 (6 x 12)
Dimensions	1595 x 801 x 40 mm (62.8 x 31.5 x 1.57 in)
Weight	15.5kg (34.2 lbs)
Front Cover	Tempered glass
Frame Material	Anodized aluminium alloy
Standard Packaging (Modules per Pallet)	20pcs

### Engineering Drawings



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

### I-V Curves (CS5A-170M)



### About Canadian Solar

Canadian Solar is a vertically-integrated manufacturer of ingots, wafers, cells, solar modules and custom-designed solar power applications. Canadian Solar was founded in Canada in 2001 and was successfully listed on NASDAQ Exchange (symbol: CSIQ) in November 2006.

By the end of 2008, Canadian Solar has a module capacity of over 600MW. With revenue of 709.2 million dollars in 2008, a 134% growth in revenue over 2007, Canadian Solar has become one of the fastest-growing companies in the solar industry.

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