

## CS6K-285 | 290 | 295P HIGH EFFICIENCY POLY MODULE

Canadian Solar's modules use the latest innovative poly cell technology, increasing module power output and system reliability, ensured by 16 years of experience in module manufacturing, well-engineered module design, stringent BOM quality testing, an automated manufacturing process and 100% EL testing.



linear power output warranty





product warranty on materials and workmanship

### **KEY FEATURES**



Excellent module efficiency of up to: 18.02 %



Outstanding low irradiance performance of up to: 96.5%



IP68 junction box for long-term weather endurance



Heavy snow load up to 6000 Pa, wind load up to 4000 Pa \*

#### **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 UL 1703: CSA Take-e-way















\*Black frame

product can be

provided upon

request.

\* If you need specific product certificates, and if module installations are to deviate from our guidance specified in our installation manual, please contact your local Canadian Solar sales and technical representatives.

**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 24 GW deployed around the world since 2001, Canadian Solar Inc. is one of the most bankable solar companies worldwide.

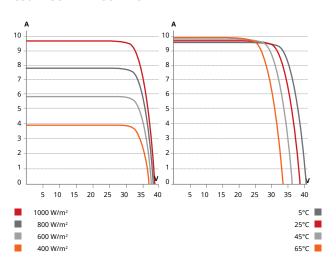
#### **CANADIAN SOLAR INC.**

<sup>\*</sup>For detailed information, please refer to the Installation Manual.

#### **ENGINEERING DRAWING (mm)**

## **Rear View Frame Cross Section A-A** 155 96 **Mounting Hole** 951 40 992

#### CS6K-295P / I-V CURVES



#### **ELECTRICAL DATA | STC\***

CS6K	285P	290P	295P
Nominal Max. Power (Pmax)	285 W	290 W	295 W
Opt. Operating Voltage (Vmp)	31.4 V	31.6 V	31.8 V
Opt. Operating Current (Imp)	9.06 A	9.18 A	9.28 A
Open Circuit Voltage (Voc)	38.3 V	38.5 V	38.6 V
Short Circuit Current (Isc)	9.64 A	9.72 A	9.81 A
Module Efficiency	17.41%	17.72%	18.02%
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 (IE	EC 61730)	
Max. Series Fuse Rating	15 A		
Application Classification	Class A		
Power Tolerance	0 ~ + 5 W		

<sup>\*</sup> Under Standard Test Conditions (STC) of irradiance of 1000 W/m², spectrum AM 1.5 and cell temperature of 25°C.

#### **MECHANICAL DATA**

Specification	Data
Cell Type	Poly-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	IP68, 3 diodes
Cable	4.0 mm <sup>2</sup> (IEC), 12 AWG (UL),
	1000 mm (39.4 in)
Connector	T4 series
Per Pallet	27 pieces, 538 kg (1186.1 lbs)
Per Container (40' HQ)	756 pieces

#### **ELECTRICAL DATA | NMOT\***

CS6K	285P	290P	295P
Nominal Max. Power (Pmax)	210 W	214 W	218 W
Opt. Operating Voltage (Vmp)	28.9 V	29.1 V	29.3 V
Opt. Operating Current (Imp)	7.28 A	7.36 A	7.44 A
Open Circuit Voltage (Voc)	35.8 V	36.0 V	36.1 V
Short Circuit Current (Isc)	7.78 A	7.85 A	7.92 A

<sup>\*</sup> Under Nominal Module Operating Temperature (NMOT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

#### **TEMPERATURE CHARACTERISTICS**

Specification	Data
Temperature Coefficient (Pmax)	-0.39 % /°C
Temperature Coefficient (Voc)	-0.29 % /°C
Temperature Coefficient (Isc)	0.05 % /°C
Nominal Module Operating Temperature (NMOT)	43 ± 2 °C

#### PERFORMANCE AT LOW IRRADIANCE

Outstanding performance at low irradiance, with an average relative efficiency of 96.5 % for irradiances between 200 W/m<sup>2</sup> and 1000 W/m<sup>2</sup> (AM 1.5, 25°C).

information described herein at any time without further notice.

#### \* The specifications and key features contained in this datasheet may deviate slightly from our actual products due to the on-going innovation and product enhancement. Canadian Solar Inc. reserves the right to make necessary adjustment to the

#### **PARTNER SECTION**





# Limited Warranty Statement Photovoltaic Module Products

#### Limited Warranty - 6 Year Repair, Replacement or Refund

Subject to the exclusions contained below, Canadian Solar Inc. (Canadian Solar) warrants to the buyer that the modules shall be free in all material respects from defects in materials and workmanship under normal application, installation, use and service conditions as specified in Canadian Solar's standard product documentation. The duration of this limited warranty is 72 months from the date of delivery by Canadian Solar.

Claims under the warranty can only be accepted if the buyer can provide the proof that the malfunctioning or non-conformity of module results exclusively from material defects in materials and/or workmanship under normal application, installation, use and service conditions specified in Canadian Solar's standard product documentation. If the product fails to conform to this warranty, Canadian Solar will, at its option, either repair or replace the product, or refund a reasonable, pro-rated portion of the purchase price as set forth below.

#### **Limited Warranty – Limited Remedy**

If, within twenty-five (25) years from the date of delivery to the original purchaser, any module under normal application, installation, use and service conditions, as specified in Canadian Solar's standard product documentation, has a power output less than 80% of the minimum power specified in writing in Canadian Solar's applicable product documentation at time of delivery, as measured at Canadian Solar in both cases, then, provided that such loss in power is determined by Canadian Solar (at its sole discretion) to be due exclusively to defects in materials or workmanship, Canadian Solar will compensate for such loss in power by either providing to the buyer additional modules to make up the total wattage loss, at a cost pro-rated for the time in service of the faulty module, or by repairing or replacing the module, at the option of Canadian Solar, as set forth below.

If, within ten (10) years from the date of delivery to the original purchaser, any module under normal application, installation, use and service conditions, as specified in Canadian Solar's standard product documentation, has a power output less than 90% of the minimum power specified in writing in Canadian Solar's applicable product documentation at time of delivery, as measured at Canadian Solar in both cases, then, provided that such loss in power is determined by Canadian Solar (at its sole discretion) to be due exclusively to defects in materials or workmanship, Canadian Solar will compensate for such loss in power by either providing to the buyer additional modules to make up the total wattage loss, at a cost pro-rated for the time in service of the faulty module, or by repairing or replacing the module, at the option of Canadian Solar, as set forth below.

#### **Exceptions**

The limited warranties set forth herein DO NOT apply to any module which, in Canadian Solar's sole judgment, has been subjected to use in marine applications or in tropical or equatorial



environment, normal wear and tear, misuse, neglect or accident, or which has been damaged through abuse, alteration, improper installation or application, unauthorized service or modification, or negligence in use, storage, transportation or handling, or has been repaired, or in any way tampered with, or resulting from any power failure surges, lightning, flood, fire, accidental breakage, vandalism, acts of war, natural disaster, or other events outside Canadian Solar's control. The limited warranties do not cover any transportation costs for return of modules, or for reshipment of any repaired or replaced module, or cost associated with installation, removal or reinstallation of modules. In addition, the limited warranties do not apply to any cosmetic change in appearance stemming from the normal wear and tear over time of product materials. Warranty claims will not apply if the type or serial number of the applicable product has been altered, removed or made illegible.

#### **Claim Verification and Remediation Process**

If the buyer believes that it has a justified claim covered by the limited warranties set forth above, then the buyer agrees to comply with the following return material authorization ("RMA") process.

The buyer must submit such claim in writing to Canadian Solar within the applicable warranty period specified above to the following address, or such future address as Canadian Solar may provide from time to time: Customer Service Department, Canadian Solar Inc., 199 Lushan Road, Suzhou New District Jiangsu, China, 215129.

Such notice should enclose evidence of the date of delivery of the applicable product and the basis for the buyer's claim.

Upon receipt of such written claim, Canadian Solar may in its sole discretion seek further verification of the buyer's claim of a breach of one of the foregoing limited warranties. Without limiting the foregoing, the Buyer will return defective products or allegedly-defective products to Canadian Solar at the Buyer's expense and in accordance with written RMA authorization and return packaging and shipping instructions from Canadian Solar. The return of any product will not be accepted by Canadian Solar unless prior written authorization has been given by Canadian Solar and Customer has complied with the packaging and shipping instructions provided by Canadian Solar.

If Canadian Solar verifies in its reasonable judgment that a product does not comply with the limited warranties set forth above, then Canadian Solar, at its sole option, will either repair the affected product and return it to the Buyer at the buyer's expense, provide a new or refurbished replacement product shipped to the buyer at the buyer's expense, or refund a reasonable pro-rata portion of the amount paid by the buyer for the affected product, taking into account the period of reduced power output or functionality for the affected product. Any repair or replacement of an affected product shall not increase the applicable warranty period.

The foregoing remedies state Canadian Solar's sole and exclusive obligation and the buyer's sole and exclusive remedy for a breach of the foregoing limited warranty.



#### **Not Independent Warranties**

The buyer has the right to pursue claims under each of the warranties set forth above; provided, however, that if claims arise under multiple limited warranties from a single incident, then if Canadian Solar remedies such incidents as set forth above, Canadian Solar shall be deemed to have resolved all applicable warranty claims arising from such incident.

#### **Disclaimers**

THE LIMITED WARRANTIES SET FORTH HEREIN ARE IN LIEU OF AND EXCLUDE ALL OTHER EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR APPLICATION, AND ALL OTHER OBLIGATIONS ON THE PART OF CANADIAN SOLAR, UNLESS SUCH OTHER WARRANTIES AND OBLIGATIONS ARE AGREED TO IN WRITING BY CANADIAN SOLAR. SOME JURISDICTIONS LIMIT OR DO NOT PERMIT DISCLAIMERS OF WARRANTY, SO THIS PROVISION MAY NOT APPLY TO THE BUYER.

#### **Limitation of Liability**

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CANADIAN SOLAR HEREBY DISCLAIMS, AND SHALL HAVE NO RESPONSIBILITY OR LIABILITY WHATSOEVER FOR, DAMAGE OR INJURY TO PERSONS OR PROPERTY OR FOR OTHER LOSS OR INJURY RESULTING FROM ANY CAUSE WHATSOEVER ARISING OUT OF OR RELATED TO ANY OF ITS PRODUCTS OR THEIR USE. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, UNDER NO CIRCUMSTANCES SHALL CANADIAN SOLAR BE LIABLE TO THE BUYER, OR TO ANY THIRD PARTY CLAIMING THROUGH OR UNDER THE BUYER, FOR ANY LOST PROFITS, LOSS OF USE, OR EQUIPMENT DOWNTIME, OR FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OF ANY KIND, HOWSOEVER ARISING, RELATED TO THE PRODUCTS, EVEN IF CANADIAN SOLAR HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, CANADIAN SOLAR' AGGREGATE LIABILITY, IF ANY, IN DAMAGES OR OTHERWISE, SHALL NOT EXCEED THE PURCHASE PRICE PAID TO CANADIAN SOLAR BY THE BUYER FOR THE PRODUCT FURNISHED THAT GAVE RISE TO THE WARRANTY CLAIM.

THE BUYER ACKNOWLEDGES THAT THE FOREGOING LIMITATIONS ON LIABILITY ARE AN ESSENTIAL ELEMENT OF THE AGREEMENT BETWEEN THE PARTIES AND THAT IN THE ABSENCE OF SUCH LIMITATIONS THE PURCHASE PRICE OF THE PRODUCTS WOULD BE SUBSTANTIALLY DIFFERENT. SOME JURISDICTIONS LIMIT OR DO NOT PERMIT DISCLAIMERS OF LIABILITY, SO THIS PROVISION MAY NOT APPLY TO THE BUYER.

SOME JURISDICTIONS DO NOT ALLOW LIMITATIONS ON THE EXCLUSION OF DAMAGES SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO THE BUYER.

#### **How to claim your Warranty**

If you feel you have a claim covered by warranty, you must immediately notify the dealer who sold you the module under claim. The dealer will advise you on how to handle the claim.



Contact Canadian Solar if you require further assistance. Warranty claims must in any event be filed within the applicable limited warranty period set forth above. Warranty claims may only be made by the original buyer or a person to whom title to the applicable product has been transferred, provided that any such transfer is undertaken in its original configuration.

Canadian Solar will not accept the return of any modules without prior written return authorization.

#### Note:

In the event of any inconsistency among different language versions of this Warranty Statement, the English version shall prevail.

For modules covered by Canadian Solar's warranty, please refer to the complete list which is published on our website at:

 $\underline{\text{http://www.canadian-solar.com/en/products/product-overview/warranted-standard-solar-modules.html}}\ ,$  as such list is updated from time to time.