




**DOUBLE-GLASS MODULE**


# DIAMOND CS6X-310/315/320P-FG

Canadian Solar's Diamond CS6X-P-FG module is a 72 cell double-glass module. By replacing the traditional polymer backsheet with heat-strengthened glass, the Diamond module has a lower annual power degradation than a traditional module and better protection against the elements, making it more reliable and durable during its lifetime.


**KEY FEATURES**

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**Anti-PID module**


  - Anti-PID cell technology
  - Anti-PID encapsulation technology
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**Lower annual power degradation & more system power yield over lifetime**


  - First year annual degradation 2.5%, each subsequent year 0.5%
  - 85.5% power output at year 25
  - 83% power output at year 30
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**Better fire protecting performance**

  - Fire class A certified according to fire test IEC 61730-2 / MST 23
  - Certified for fire type 3 according to UL 1703
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**Designed for high voltage systems of up to 1500 V<sub>DC</sub>, saving BoS costs**
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**Sea/waterside PV system installation**

  - Glass backside blocks moisture permeability
  - No module-level corrosion
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**5400 Pa snow load, 2400 Pa wind load**

**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 CERTIFICATES\***

- IEC 61215 / IEC 61730: VDE / CE
- UL 1703: CSA / 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.

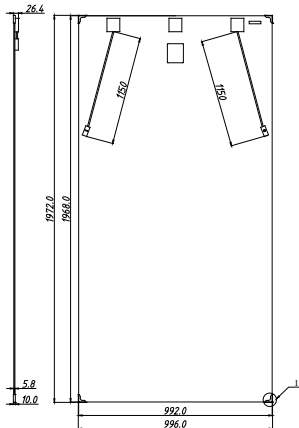
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**CANADIAN SOLAR INC.**

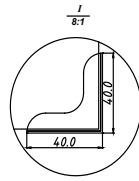
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## MODULE / ENGINEERING DRAWING (mm)

### Rear View



### Corner Protector Detail



## ELECTRICAL DATA / STC\*

Electrical Data CS6X	310P-FG	315P-FG	320P-FG
Nominal Max. Power (Pmax)	310 W	315 W	320 W
Opt. Operating Voltage (Vmp)	36.4 V	36.6 V	36.8 V
Opt. Operating Current (Imp)	8.52 A	8.61 A	8.69 A
Open Circuit Voltage (Voc)	44.9 V	45.1 V	45.3 V
Short Circuit Current (Isc)	9.08 A	9.18 A	9.26 A
Module Efficiency	15.88%	16.14%	16.39%
Operating Temperature	-40°C ~ +85°C		
Max. System Voltage	1500 (IEC) or 1000 V (UL)		
Module Fire Performance	Type 3 (UL 1703) or CLASS A (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 CS6X	310P-FG	315P-FG	320P-FG
Nominal Max. Power (Pmax)	225 W	228 W	232 W
Opt. Operating Voltage (Vmp)	33.2 V	33.4 V	33.6 V
Opt. Operating Current (Imp)	6.77 A	6.84 A	6.91 A
Open Circuit Voltage (Voc)	41.3 V	41.5 V	41.6 V
Short Circuit Current (Isc)	7.36 A	7.44 A	7.50 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.

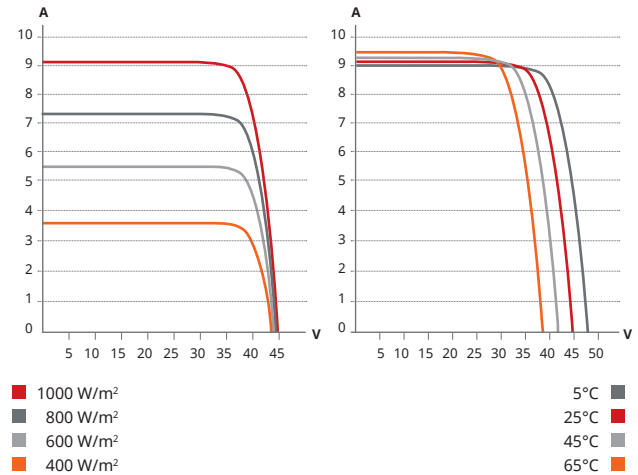
## PERFORMANCE AT LOW IRRADIANCE

Industry leading performance at low irradiation, average 96.0% 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.

## CS6X-310P-FG / I-V CURVES



## MODULE / MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline, 6 inch
Cell Arrangement	72 (6 × 12)
Dimensions	1968×992×5.8mm (77.5×39.1×0.23 in) without J-Box and corner protector
(Incl. corner protector)	1972×996×10 mm (77.6×39.2×0.39 in) without J-Box
Weight	27.5 kg (60.6 lbs)
Front Cover	2.5 mm heat strengthened glass
Back Glass	2.5 mm heat strengthened glass
Frame	Frameless
J-Box	Split J-Box, IP67, 3 diodes
Cable	4 mm <sup>2</sup> (IEC) or 4 mm <sup>2</sup> & 12 AWG 1000 V (UL)
Cable Length	1150 mm (45.3 in), 500 mm (19.7 in) (+) and 350 mm (13.8 in) (-) is optional for portrait installation*
Connectors	Amphenol H4 UTX (IEC), Renhe 05-6 (UL)
Standard Packaging	30 pieces
Module Pieces per Container	660 pieces (40' HQ)

\* The application of this short length cable can only be used in portrait installation (clamping mounting method) systems in which the distance between modules should be less than or equal to 50 mm. In the event the distance between the PV modules to be installed is more than 50 mm, please make sure to consult our technical team for evaluation and advice.

## 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

