

PV-ezRack Trapezoidal

The most simple and cost-effective industrial roof mounting system

Clenergy's PV-ezRack Trapezoidal is a roof mounting solution suitable for most trapezoid metal sheet roofing, the whole system only contains 4 different components. One of these components is our module clamp, this incorporates our innovative z-module which makes the clamp quick to locate and for very fast installation of the modules. PV-ezRack Trapezoidal is the most advantageous and cost-effective solution for trapezoidal sheet.



Specifications

Function	Mounting PV modules to trapezoidal roofs
Trapezoidal sheet classification	Steel/Aluminium from 0.4mm to 1.5mm thickness
Roof Pitch	5-45°
Maximum Building Height	20m
Module Type	Suitable for all PV Modules from 28mm to 57mm deep
Watertight	Pre-assembled EVA seal
Module Orientation	Landscape
Standards	DIN 1055
Material	Anodised aluminium
Weight	58 grams
Warranty	10 years

Key Benefits

Easy and fast Installation

Short mounting times of only two minutes per module is achieved as only four different components are used per module fixing:

- U-Profile base; lightweight and replacing the need for rails.
- Stainless steel self-drilling screws; no pilot hole or fixing template required.
- Clenergy's standard End and Intermediate clamps; using our unique z module for fast module mounting.
- Lightweight space saving design

Optimum multi-purpose design

- 20mm base makes it suitable for all trapezoidal profiles
- Suitable for top sheets of 0.4mm to 1.5mm.
- Suitable for composite, built up and single skin industrial roof designs.
- Suitable for the high wind uplift associated in particular with low pitch roofs.
- Suitable for all module heights from 28mm to 57mm
- 32mm high for optimum cooling of modules.

Outstanding performance

Components are anodized aluminium, aluminium or stainless steel to prevent corrosion and ensure long term effectiveness. Clenergy provides a **10-year product warranty**.

**MOUNTING
SCREWS
REVISED AS
ATTACHED**

Key Components



U-Support

Designed to mount PV modules in combination with Cleenergy's standard module clamps.



EJOT sharp point Screw JF3-5.5x25

For metal top sheets from 0.4mm to 0.63mm.



SFS self-drilling Screw SFS-SX3-S16-6.0 X 29

For metal top sheets greater than 0.63mm.

Assembly Illustration



Distributor Contact:



The revolutionary new Clenergy Trapezoidal screw ER-U-S5.5 X 25-S12

Clenergy has worked closely with a world leading screw manufacturer to develop our innovating new Trapezoidal stitching screw.

Our requirements were consistent and improved performance, to eliminate the need to specify different screws for different sheet thickness and to suit the most common roof applications.

The new screw sets new benchmarks for fixing our PV ezTrapezoidal on single skin, multi skin or composite panel roof design. The new screw improves our pull-out advantage against our competitive products across the board from 0.4mm gauge to a maximum of 2 x 0.88mm.

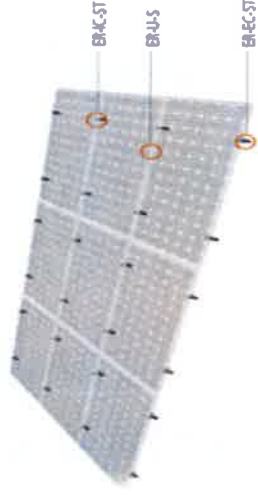


Features

- Grade A2 stainless steel
- Torx T25 domed head
- Stainless steel sealing washer
- Twin thread
- Assymmetric thread
- Sharp point screw geometry

Benefits

- 10 year warranty
- With drive tool easy and consistent application every time
- Watertight
- Faster drive
- Improved pull-out
- No swarf / debris



Pull-out performance 0.4mm gauge steel	
Mean average per screw	1.1 KN
Resistance per U-Support with 3 screws	3.3 KN
Resistance per module with 4 U-Supports	13.2 KN
Resistance per m ² applying a safety factor of 2	4.05 kPa
Pull-out performance 0.5mm gauge steel	
Mean average per screw	1.29 KN
Resistance per U-Support with 3 screws	3.87 KN
Resistance per module with 4 U-Supports	15.5 KN
Resistance per m ² applying a safety factor of 2	4.75 kPa
Pull-out performance 0.7mm gauge steel	
Mean average per screw	1.7 KN
Resistance per U-Support with 3 screws	5.1 KN
Resistance per module with 4 U-Supports	20.4 KN
Resistance per m ² applying a safety factor of 2	6.26 kPa





KuPower

HIGH EFFICIENCY POLY MODULE

CS3K-290 | 295 | 300 | 305P
(1000 V / 1500 V)

With Canadian Solar's industry leading poly cell technology and the innovative LIC (Low Internal Current) module technology, we are now able to offer our global customers high power poly modules up to 305 W.

The KuPower poly modules with a dimension of 1675 × 992 mm, close to our 60 cell modules, have the following features:

MORE POWER



Low power loss in cell connection



Low NMOT: 42 ± 3 °C
Low temperature coefficient (Pmax): -0.37 % / °C



Better shading tolerance



High PTC rating of up to: 92.63 %

MORE RELIABLE



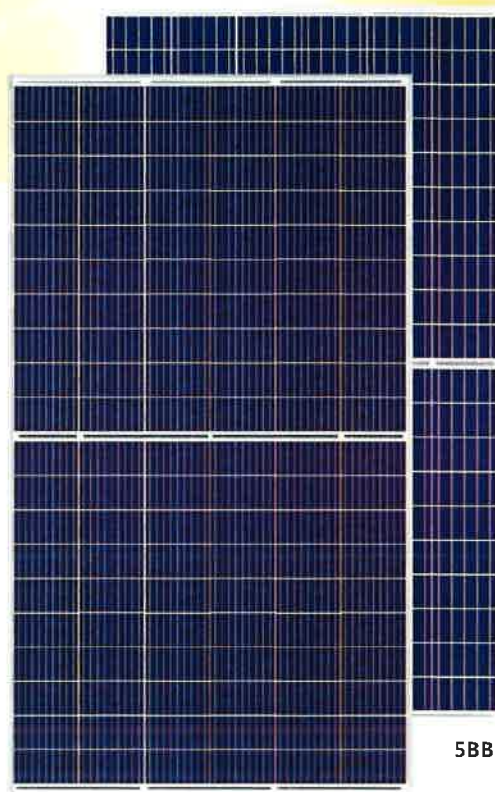
Lower hot spot temperature



Minimizes micro-cracks



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



MBB

*Black frame product can be provided upon request.

25
years

linear power output warranty

10
years

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
UL 1703: CSA



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

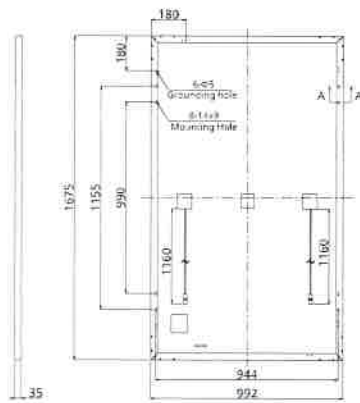
* For detailed information, please refer to Installation Manual.

CANADIAN SOLAR INC.

545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

ENGINEERING DRAWING (mm)

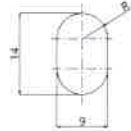
Rear View



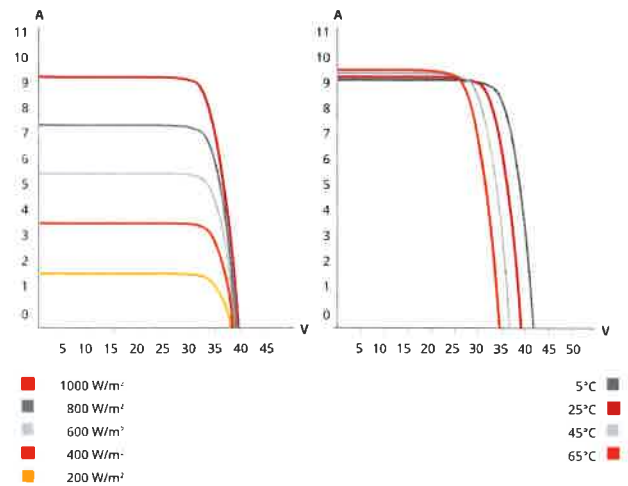
Frame Cross Section A-A



Mounting Hole



CS3K-290P / I-V CURVES



ELECTRICAL DATA | STC*

CS3K	290P	295P	300P	305P
Nominal Max. Power (Pmax)	290 W	295 W	300 W	305 W
Opt. Operating Voltage (Vmp)	32.3 V	32.5 V	32.7 V	32.9 V
Opt. Operating Current (Imp)	8.98 A	9.08 A	9.18 A	9.28 A
Open Circuit Voltage (Voc)	38.9 V	39.1 V	39.3 V	39.5 V
Short Circuit Current (Isc)	9.49 A	9.57 A	9.65 A	9.73 A
Module Efficiency	17.45%	17.75%	18.05%	18.36%
Operating Temperature	-40°C ~ +85°C			
Max. System Voltage	1500V (IEC/UL) or 1000V (IEC/UL)			
Module Fire Performance	TYPE 1 (UL 1703) or CLASS C (IEC 61730)			
Max. Series Fuse Rating	30 A			
Application Classification	Class A			
Power Tolerance	0 ~ + 5 W			

* 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, 156.75 X 78.38 mm
Cell Arrangement	120 [2 X (10 X 6)]
Dimensions	1675 X 992 X 35 mm (65.9 X 39.1 X 1.38 in)
Weight	18.5 kg (40.8 lbs)
Front Cover	3.2 mm tempered glass
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4.0 mm² (IEC), 12 AWG (UL) , 1160 mm (45.7 in)
Connector	T4 series
Per Pallet	30 pieces
Per Container (40' HQ)	840 pieces

ELECTRICAL DATA | NMOT*

CS3K	290P	295P	300P	305P
Nominal Max. Power (Pmax)	216 W	219 W	223 W	227 W
Opt. Operating Voltage (Vmp)	29.8 V	30.0 V	30.2 V	30.4 V
Opt. Operating Current (Imp)	7.22 A	7.30 A	7.38 A	7.46 A
Open Circuit Voltage (Voc)	36.5 V	36.7 V	36.8 V	37.0 V
Short Circuit Current (Isc)	7.66 A	7.72 A	7.78 A	7.85 A

* 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)	-0.37 % / °C
Temperature Coefficient (Voc)	-0.29 % / °C
Temperature Coefficient (Isc)	0.05 % / °C
Nominal Module Operating Temperature	42 ± 3°C

PARTNER SECTION



* 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 information described herein at any time without further notice.

CANADIAN SOLAR INC.

545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com