

Leslie Rosas

Assignment 5

Solar Panel Research

Team 1: Ontario

- Brand: Eclipsall Energy Corporation
- Quantity: 60 multi-crystalline PV cells
- Model: Eclipsall NRG60M
- Max system voltage: 250W-270W
- Size: 1663 x 997 x 42mm

Team 2: Alberta (USING IN MY DESIGN)

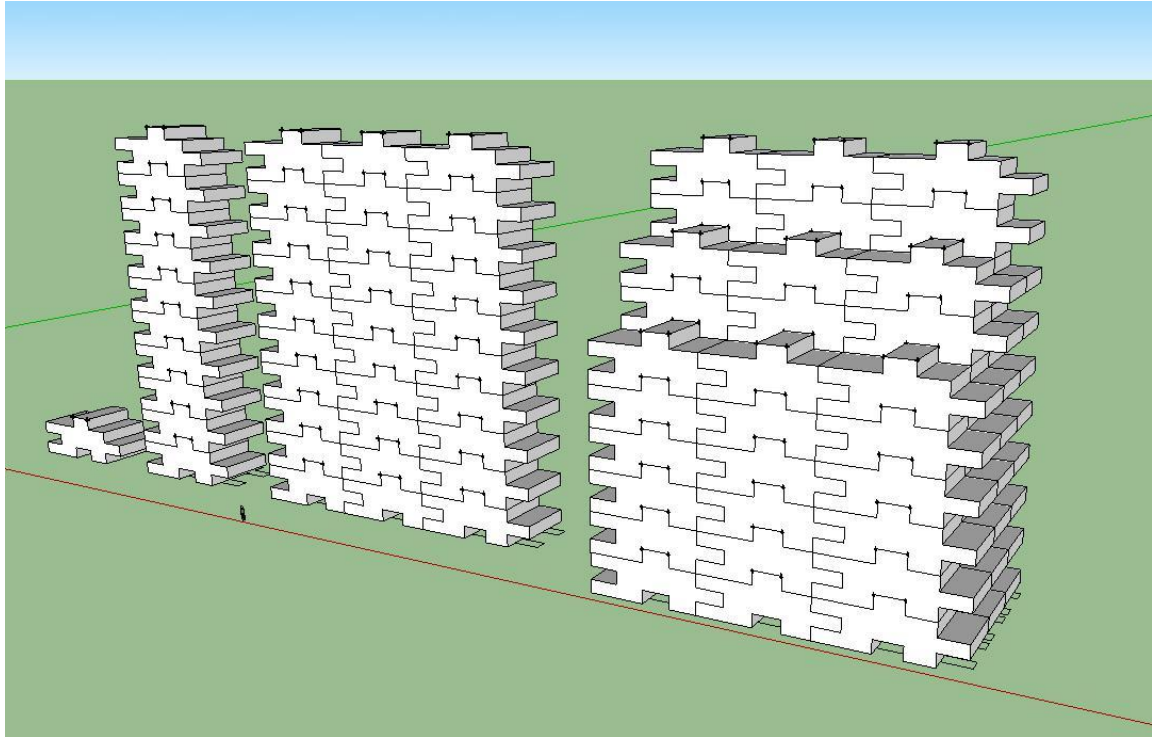
- Brand: Canadian Solar
- Quantity-40 Polycrystalline Solar Panels
- Model: CS6 P-250/255P
- Max system voltage: 250W-270W
- Size:(64.5 x 38.7 x 1.57in)

Team 3: Stanford

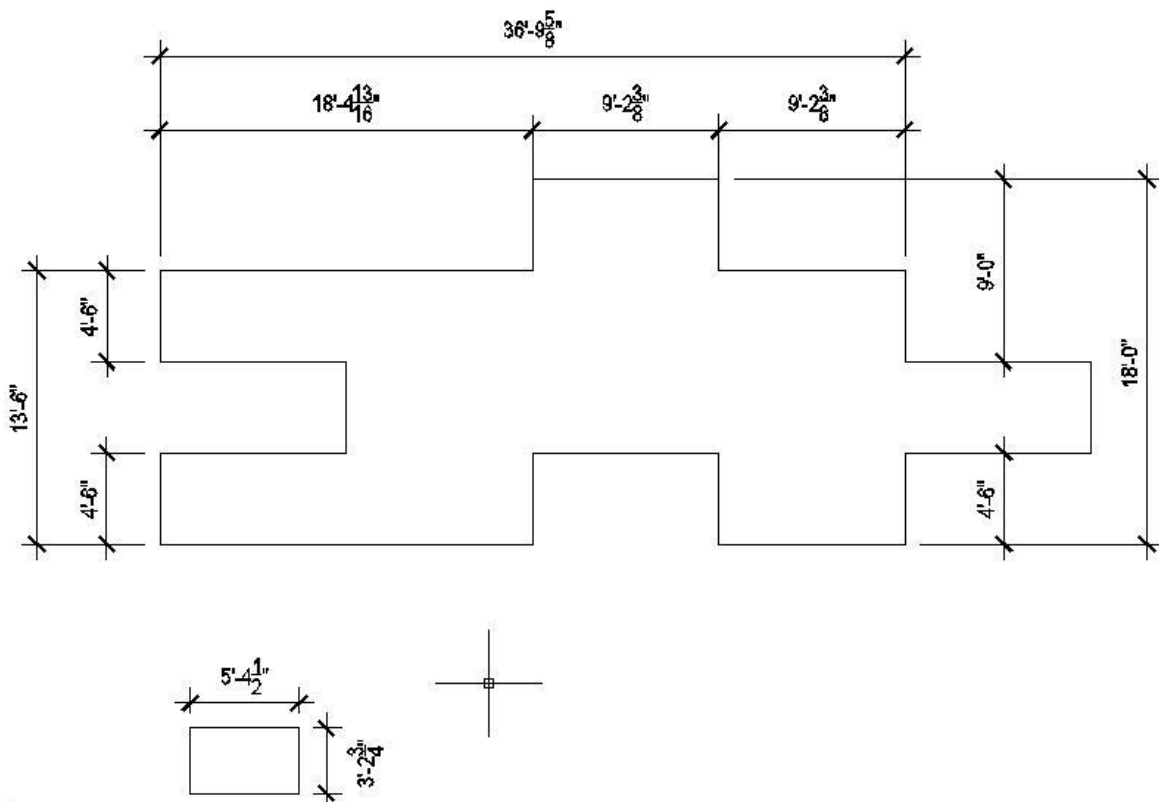
- Brand: Stion Corporation, 6321 San Ignacio Ave, San Jose, CA 95119
- Size: 23.9" x 65.2" x 1.4"
- Max system voltage: 600v
- Total: 48 panels

Team 4: Norwich

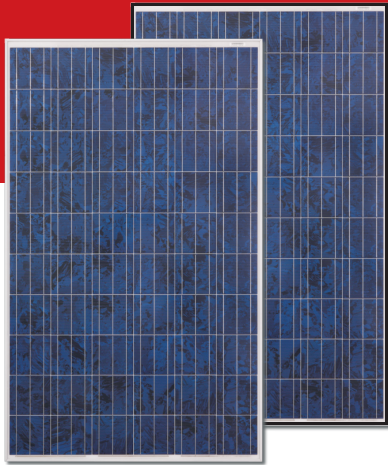
- Brand: Solo power, San Jose, CA
- Model: SoloPanel Model SP1
- Size: 86.1" x 15.7" x .1"
- Total: 30 panels



UNITS STACKED (10, 30, 48)



UNIT DIMENSIONS



*Black frame product is optional

CS6P-250 | 255P

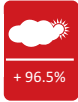
THE BEST IN CLASS

Canadian Solar's modules are the best in class in terms of power output and long term reliability. Our meticulous product design and stringent quality control ensure our modules deliver a higher PV energy yield in live PV system as well as in PVsyst's system simulation. Our in-house PV testing facilities guarantee all module component materials meet the highest quality standards possible.

PRODUCT | KEY FEATURES



Excellent module efficiency
up to 15.85%



Outstanding performance at low irradiance
above 96.5%



Positive power tolerance
up to 5w



High PTC rating
up to 91.04%



Self-cleaning & anti-glaring
module surface available



IP67 junction box available
long-term weather endurance

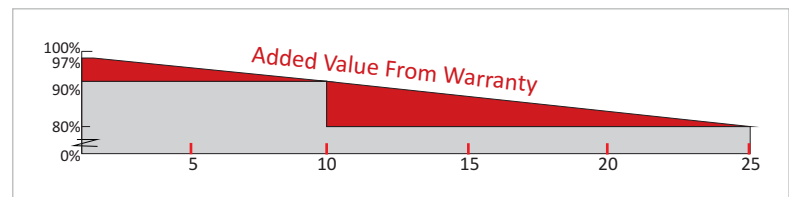


Heavy snow load
up to 5400pa



Salt mist, ammonia and blowing sand
resistance, apply to seaside, farm and
desert environment

PRODUCT | WARRANTY & INSURANCE



25 Year Industry leading linear power output warranty
10 Year Product warranty on materials and workmanship



Canadian Solar provides 100% non-cancellable, immediate warranty
insurance

PRODUCT & MANAGEMENT SYSTEM | CERTIFICATES

IEC 61215 / IEC 61730: VDE/TUV/CE/MCS/JET/KEMCO/SII/CEC AU/ INMETRO/CQC/CGC
UL 1703 / IEC 61215 performance: CEC listed (US) / FSEC (US Florida)
UL 1703: CSA | IEC 61701 ED2: VDE | IEC 62716: TUV | IEC60068-2-68: SGS
PV CYCLE | UNI9177 Reaction to Fire: Class 1

ISO9001: 2008 | Quality management system
ISOTS16949:2009 | The automotive industry quality management system
ISO14001:2004 | Standards for environmental management system
QCO80000:2012 | The certificate for hazardous substances process management
OHSAS18001:2007 | International standards for occupational health and safety

*Please contact your sales representative for the entire list of certificates applicable to your products

CANADIAN SOLAR INC.

Founded in 2001 in Canada, Canadian Solar Inc., (NASDAQ:CSIQ) is one of the world's largest and foremost solar power companies. As a leading manufacturer of solar modules and PV project developer with about 6 GW of premium quality modules deployed around the world in the past 12 years, Canadian Solar is one of the most bankable solar companies in Europe, USA, Japan and China. Canadian Solar operates in six continents with customers in over 70 countries and regions. Canadian Solar is committed to providing high quality solar products, solar system solutions and services to customers around the world.



ELECTRICAL DATA | STC

Electrical Data	CS6P-250P	CS6P-255P
Nominal Maximum Power (Pmax)	250W	255W
Optimum Operating Voltage (Vmp)	30.1V	30.2V
Optimum Operating Current (Imp)	8.30A	8.43A
Open Circuit Voltage (Voc)	37.2V	37.4V
Short Circuit Current (Isc)	8.87A	9.00A
Module Efficiency	15.54%	15.85%
Operating Temperature	-40°C~+85°C	
Maximum System Voltage	1000V (IEC) / 1000V (UL) / 600V (UL)	
Maximum Series Fuse Rating	15A	
Application Classification	Class A	
Power Tolerance	0 ~ +5W	

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

ELECTRICAL DATA | NOCT

Electrical Data	CS6P-250P	CS6P-255P
Nominal Maximum Power (Pmax)	181W	185W
Optimum Operating Voltage (Vmp)	27.5V	27.5V
Optimum Operating Current (Imp)	6.60A	6.71A
Open Circuit Voltage (Voc)	34.2V	34.4V
Short Circuit Current (Isc)	7.19A	7.29A

*Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C.

MODULE | MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline 156 x 156mm
Cell Arrangement	60 (6 x 10)
Dimensions	1638 x 982 x 40mm (64.5 x 38.7 x 1.57in)
Weight	18.5kg (40.8 lbs)
Front Cover	3.2mm tempered glass
Frame Material	Anodized aluminium alloy
J-BOX	IP65 or IP67, 3 diodes
Cable	4mm ² (IEC)/4mm ² &12AWG 1000V(UL1000V)/12AWG(UL600V), 1000mm
Connectors	MC4 or MC4 comparable
Standard Packaging	24pcs, 504kg (quantity and weight per pallet)
Module Pieces Per Container	672pcs (40'HQ)

TEMPERATURE CHARACTERISTICS

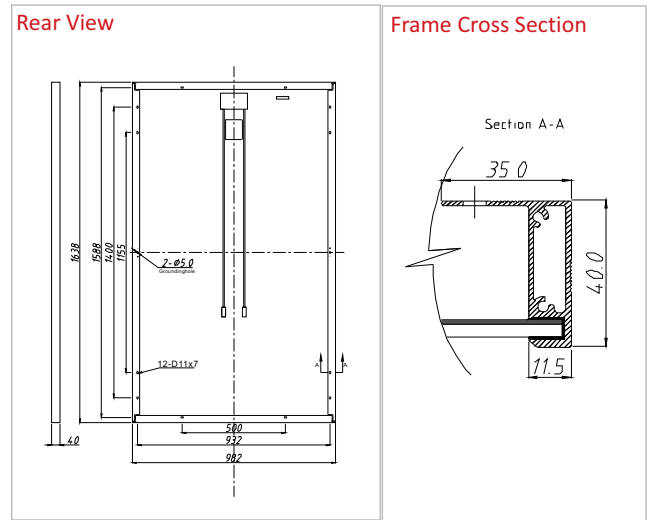
Specification	Data
Temperature Coefficient (Pmax)	-0.43%/°C
Temperature Coefficient (Voc)	-0.34 %/°C
Temperature Coefficient (Isc)	0.065 %/°C
Nominal Operating Cell Temperature	45±2°C

PERFORMANCE AT LOW IRRADIANCE

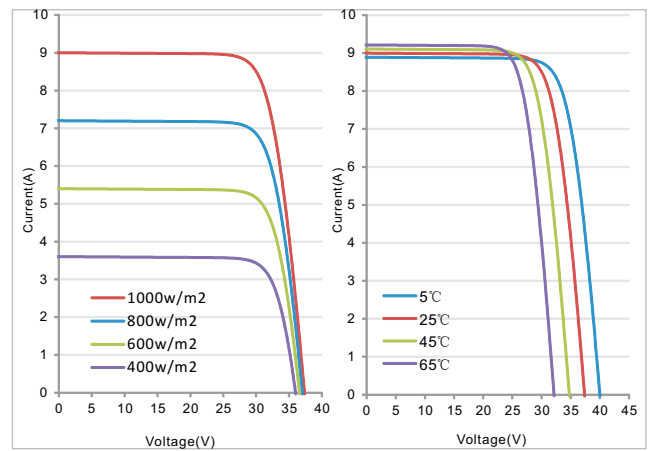
Industry leading performance at low irradiation environment, +96.5% module efficiency from an irradiance of 1000w/m² to 200w/m² (AM 1.5, 25 °C)

*The specifications made herein may deviate slightly and are not guaranteed. Due to ongoing innovation, research and product enhancement we reserve the right to make any adjustments to the information contained herein at any time without notice.. Please always obtain the most recent revision of 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.

MODULE | ENGINEERING DRAWING



CS6P-255P | I-V CURVES



Partner Section