HISTORIC AND DESIGN REVIEW COMMISSION

June 15, 2016

Agenda Item No: 22

HDRC CASE NO:	**2016-220**
ADDRESS:	201 DELAWARE
LEGAL DESCRIPTION:	NCB 3004 BLK 2 LOT 1
ZONING:	R6 H
CITY COUNCIL DIST.:	1
DISTRICT:	Lavaca Historic District
APPLICANT:	Gustavo Mendoza/Smartworld Energy Inc
OWNER:	Michael and Ariana Duffy
TYPE OF WORK:	Installation of solar panels

REQUEST:

The applicant is requesting a Certificate of Appropriateness for approval to install 24 solar panels on the west and east slopes of the hipped roof.

APPLICABLE CITATIONS:

Historic Design Guidelines, Chapter 3, Guidelines for Additions

6. Designing for Energy Efficiency

C. SOLAR COLLECTORS
i. Location—Locate solar collectors on side or rear roof pitch of the primary historic structure to the maximum extent feasible to minimize visibility from the public right-of-way while maximizing solar access. Alternatively, locate solar collectors on a garage or outbuilding or consider a ground-mount system where solar access to the primary structure is limited.
ii. Mounting (sloped roof surfaces)—Mount solar collectors flush with the surface of a sloped roof. Select collectors that are similar in color to the roof surface to reduce visibility.
iii. Mounting (flat roof surfaces)—Mount solar collectors flush with the surface of a flat roof to the maximum extent feasible. Where solar access limitations preclude a flush mount, locate panels towards the rear of the roof where visibility from the public right-of-way will be minimized.

FINDINGS:

a. The Lavaca Historic District was designated June 10th, 2004.
b. The applicant submitted a request for solar panels at 201 Delaware, heard by the HDRC on April 20, 2016. The commission denied the request for 20 solar panels to be installed on the slope facing Staffel Street and four to be installed on the pitch facing the interior of the lot.
c. The applicant has proposed to install 24 solar panels on the standing seam metal roof of the primary structure. 11 panels will be installed on the slope facing the interior of the lot and 13 panels will be installed on the slope facing Staffel Street. According to the Guidelines for Additions 6.C., installations should be in locations that minimize visibility from the public right-of-way.
d. Staff visited the site on April 13, 2016, and found that house is on a corner lot interior to the historic district and that the panels will be highly visible from the public right-of-way on the front and side. Staff also found that since the panels are mounted on a hipped roof, the solar panels are more visible than they might be on a different roof form. This is not consistent with the Guidelines.
e. The current request has seven less panels facing the street than the previous request. While the current proposal is more consistent with the Guidelines, the Guidelines are clear that panels should not negatively impact the right-of-way.
f. The applicant is proposing to mount the panels flush with the pitched roof. This is consistent with Guidelines for Additions 6.C.ii, which states solar collectors should be flush with the roof surface.

RECOMMENDATION:

Staff recommends denial based on findings a through f.

CASE MANAGER:

Lauren Sage

N

Flex Viewer

Powered by ArcGIS Server

Printed:Apr 13, 2016

Michael Duffey
201 Delaware St
San Antonio TX 78210

Solar PV Installation

Elevations view
Modules are not visible.

From SE of house

From Front of House

From rear of House

smartworld ENERGY INC.
Smart People...Smart Ideas...SmartWorld
www.smartworldenergy.com

6.24 KW
Solar PV System

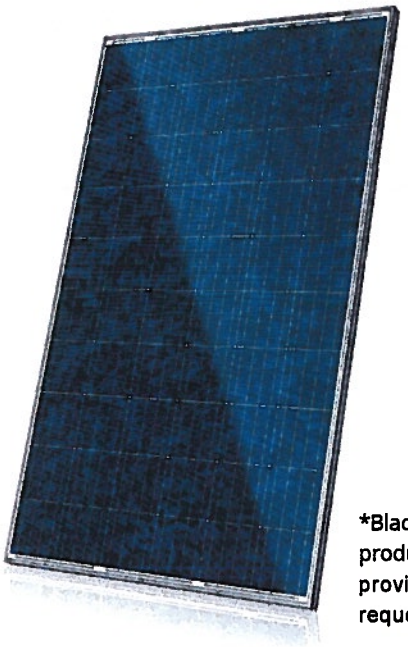
Michael and Ariana Duffey
201 Delaware St
San Antonio TX 78210

201 DELAWARE ST

CanadianSolar

QUARTECH
CS6P-260| 265P

Canadian Solar's new Quartech modules have significantly raised the standard of module efficiency in the solar industry. They introduced innovative four busbar cell technology, which demonstrates higher power output and higher system reliability. Worldwide, our customers have embraced this next generation of modules for their excellent performance, superior reliability and enhanced value.



*Black frame product can be provided upon request.

NEW TECHNOLOGY

- Reduces cell series resistance
- Reduces stress between cell interconnectors
- Improves module conversion efficiency
- Improves product reliability

KEY FEATURES

Higher energy yield
- Outstanding performance at low irradiance
- Maximum energy yield at low NOCT
- Improved energy production through reduced cell series resistance

Increased system reliability
- Long-term system reliability with IP67 junction box
- Enhanced system reliability in extreme temperature environment with special cell level stress release technology

Extra value to customers
- Positive power tolerance up to 5 W
- Stronger 40 mm robust frame to hold snow load up to 5400 Pa and wind load up to 2400 Pa
- Anti-glare project evaluation
- Salt mist, ammonia and blowing sand resistance apply to seaside, farm and desert environments

25 years insurance-backed warranty
non-cancelable, immediate warranty insurance
linear power output warranty

10 years product warranty on materials and workmanship

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

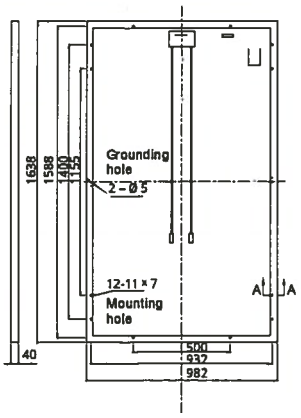
IEC 61215/IEC 61730: VDE/MCS/CE / JET/SII/CEC AU/INMETRO/CQC
UL 1703 / IEC 61215 performance: CEC listed (US) / FSEC (US Florida)
UL 1703: CSA / IEC 61701 ED2: VDE / IEC 62716: VDE / IEC 60068-2-68: SGS
PV CYCLE (EU) / UNI 9177 Reaction to Fire: Class 1

CANADIAN SOLAR INC. is committed to providing high quality solar products, solar system solutions and services to customers around the world. As a leading manufacturer of solar modules and PV project developer with about 10 GW of premium quality modules deployed around the world since 2001, Canadian Solar Inc. (NASDAQ: CSIQ) is one of the most bankable solar companies worldwide.

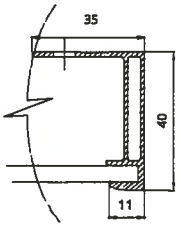
CANADIAN SOLAR INC.
545 Speedvale Avenue West, Guelph, Ontario N1K 1E6, Canada, www.canadiansolar.com, support@canadiansolar.com

MODULE / ENGINEERING DRAWING (mm)

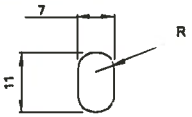
Rear View



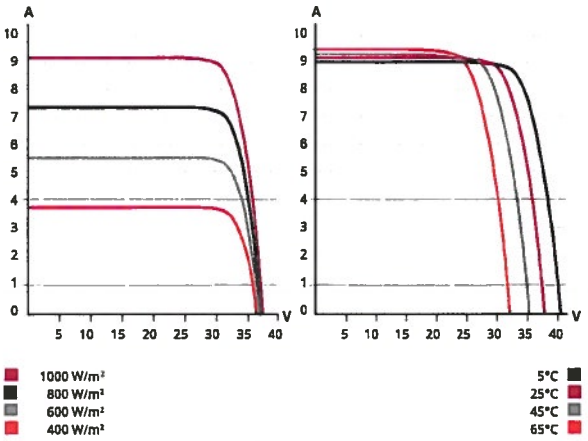
Frame Cross Section A-A



Mounting Hole



CS6P-260P / I-V CURVES



ELECTRICAL DATA / STC*

Electrical Data CS6P	260P	265P
Nominal Max. Power (Pmax)	260 W	265 W
Opt. Operating Voltage (Vmp)	30.4 V	30.6 V
Opt. Operating Current (Imp)	8.56 A	8.66 A
Open Circuit Voltage (Voc)	37.5 V	37.7 V
Short Circuit Current (Isc)	9.12 A	9.23 A
Module Efficiency	16.16%	16.47%
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 (IEC61730)	
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/m², spectrum AM 1.5 and cell temperature of 25°C.

ELECTRICAL DATA / NOCT*

Electrical Data CS6P	260P	265P
Nominal Max. Power (Pmax)	189 W	192 W
Opt. Operating Voltage (Vmp)	27.7 V	27.9 V
Opt. Operating Current (Imp)	6.80 V	6.88 A
Open Circuit Voltage (Voc)	34.5 V	34.7 V
Short Circuit Current (Isc)	7.39 A	7.48 A

* Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/m², spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

PERFORMANCE AT LOW IRRADIANCE

Industry leading performance at low irradiation, average +96.5% relative efficiency from an irradiance of 1000 W/m² to 200 W/m² (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.

MODULE / MECHANICAL DATA

Specification	Data
Cell Type	Poly-crystalline, 6 inch
Cell Arrangement	60 (6×10)
Dimensions	1638×982×40 mm (64.5×38.7×1.57 in)
Weight	18 kg (39.7 lbs)
Front Cover	3.2 mm tempered glass
Frame Material	Anodized aluminium alloy
J-Box	IP67, 3 diodes
Cable	4 mm² (IEC) or 4 mm² & 12AWG 1000 V (UL), 1000 mm (39.4 in) (650 mm (25.6 in) is optional)
Connectors	Friends PV2a (IEC), Friends PV2b (IEC / UL)
Standard Packaging	26 pieces, 515 kg (1135.4 lbs) (quantity & weight per pallet)
Module Pieces per Container	728 pieces (40' HQ)

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°

PARTNER SECTION

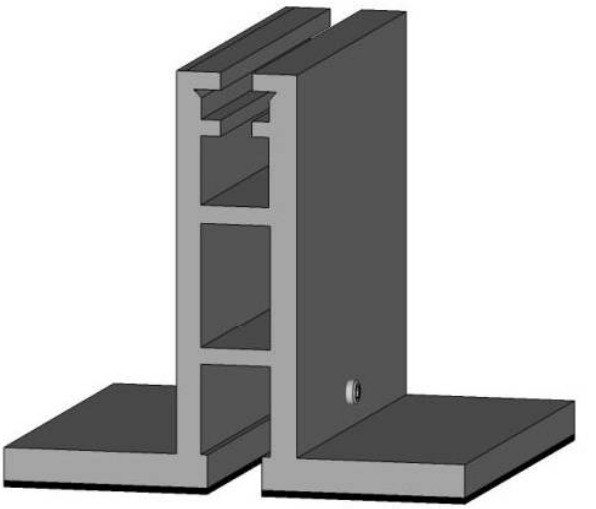
Scan this QR-code to discover solar projects built with this module

Sol Attach, LLC

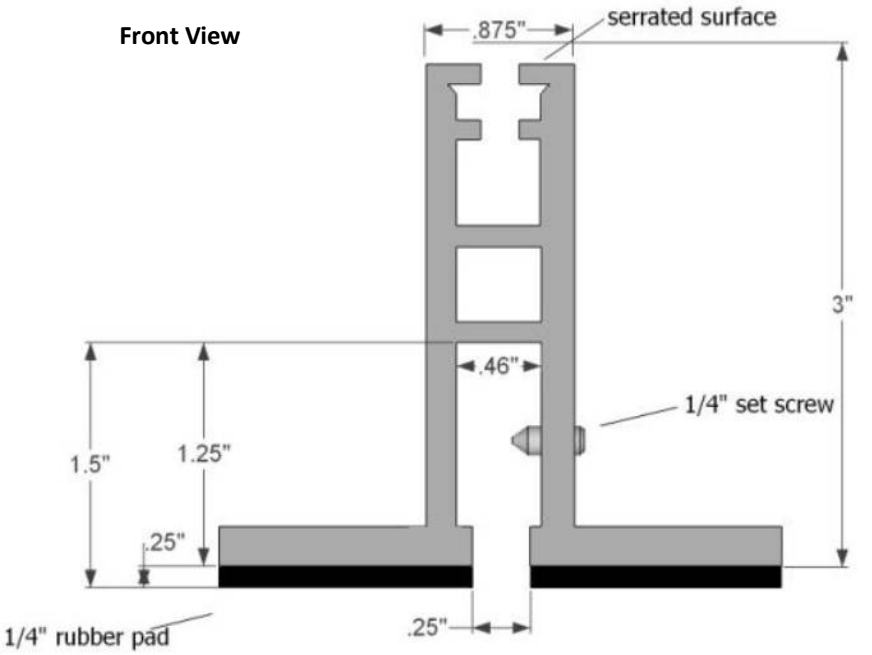
Standing seam mounting foot

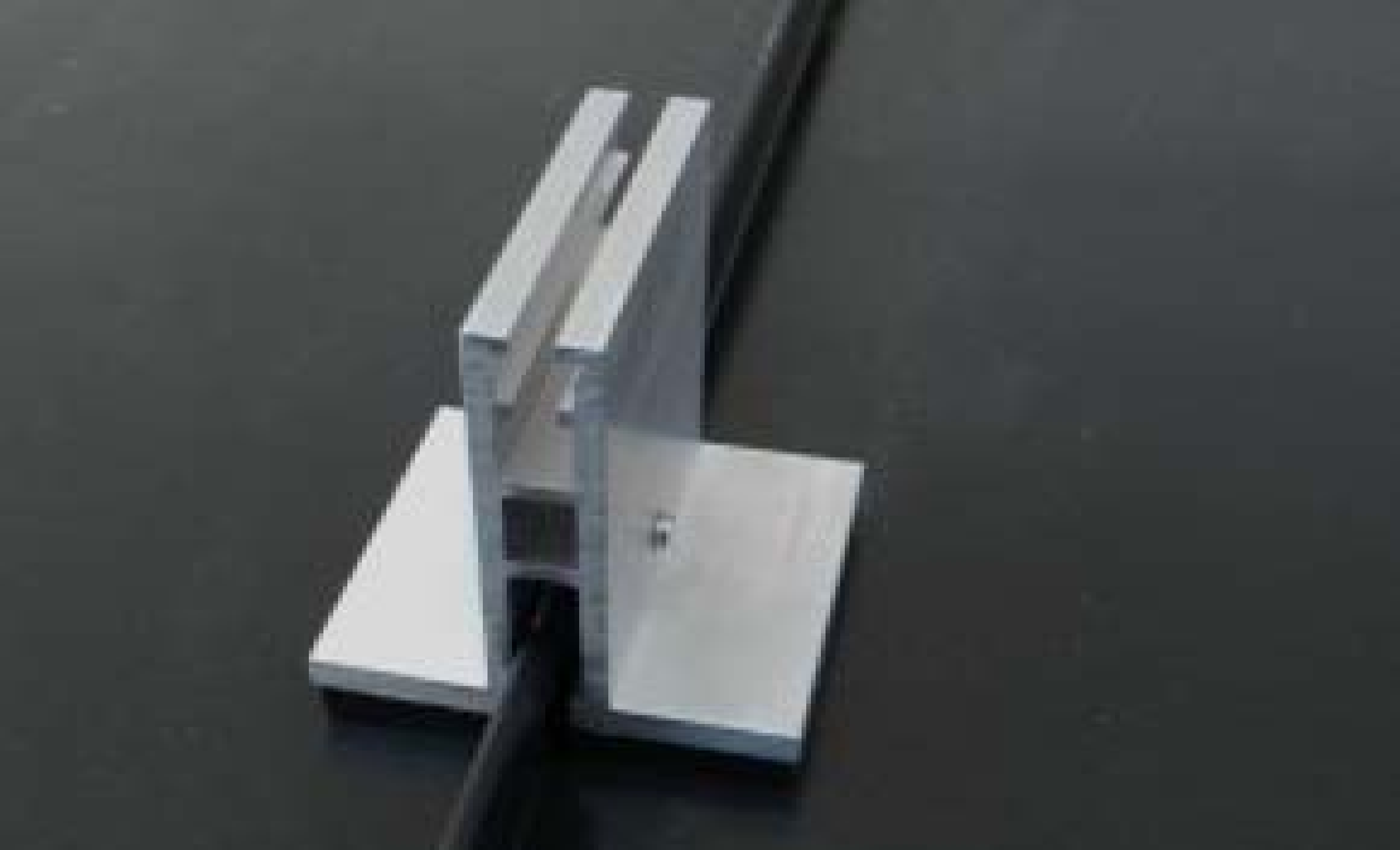
Extrusions made of 6061-T6 alloy

Patent Pending



Front View





smartworld ENERGY INC.
Smart People...Smart Ideas...SmartWorld
www.smartworldenergy.com

6.24 KW
Solar PV System

Michael and Ariana Duffey
201 Delaware St
San Antonio TX 78210

SUBMITTED FOR 4/20/16 HEARING