

CERTIFICATE OF APPROPRIATENESS APPLICATION FORM



PLANNING &
DEVELOPMENT
DEPARTMENT

PROPERTY

Address 1125 Tulane Houston, TX 77008

Historic District / Landmark Houston Heights

HCAD # 0202010000044

Subdivision _____

Lot LT 7

Block _____

DESIGNATION TYPE

- Landmark Contributing
 Protected Landmark Noncontributing
 Archaeological Site Vacant

PROPOSED ACTION

- Alteration or Addition Relocation
 Restoration Demolition
 New Construction Excavation

DOCUMENTS

- Application checklist for each proposed action and all applicable documentation listed within are attached

OWNER

Name Janeice Weinand, Kevin Cullen

Company _____

Mailing Address 448 W. 19th #184
Houston TX 77008

Phone _____

Email _____

Signature *Janeice Weinand*

Date 8/4/15

APPLICANT (if other than owner)

Name _____

Company _____

Mailing Address _____

Phone _____

Email _____

Signature _____

Date _____

ACKNOWLEDGEMENT OF RESPONSIBILITY

Requirements: A complete application includes all applicable information requested on checklists to provide a complete and accurate description of existing and proposed conditions. Preliminary review meeting or site visit with staff may be necessary to process the application. Owner contact information and signature is required. Late or incomplete applications will not be considered.

Deed Restrictions: You have verified that the work does not violate applicable deed restrictions.

Public Records: If attached materials are protected by copyright law, you grant the City of Houston, its officers, agencies, departments, and employees, non-exclusive rights to reproduce, distribute and publish copyrighted materials before the Houston Archaeological and Historical Commission, the Planning Commission, City Council, and other City of Houston commissions, agencies, and departments, on a City of Houston website, or other public forum for the purposes of application for a Certificate of Appropriateness or building permit, and other educational and not for profit purposes. You hereby represent that you possess the requisite permission or rights being conveyed here to the City.

Compliance: If granted, you agree to comply with all conditions of the COA. Revisions to approved work require staff review and may require a new application and HAHC approval. Failure to comply with the COA may result in project delays, fines or other penalties.

Planner: _____

Application received: ___ / ___ / ___ Application complete: ___ / ___ / ___

CERTIFICATE OF APPROPRIATENESS APPLICATION INSTRUCTIONS



PLANNING &
DEVELOPMENT
DEPARTMENT

Well in advance of the COA application deadline contact staff to discuss your project, application requirements, and, if necessary, to make an appointment to meet with staff for a project consultation. Visit the Historic Preservation Web Manual for historic district profiles, project guidance and forms. www.houstontx.gov/HistoricPreservationManual

Historic Preservation Office	832.393.6556	historicpreservation@houstontx.gov
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SUBMISSION INSTRUCTIONS

To submit application to Planning Department:

- email documents to historicpreservation@houstontx.gov (attachments must be less than 10MB)
- send a Dropbox shared folder invitation to historicpreservation@houstontx.gov, or
- contact staff to set up an appointment to drop off a disc or flash drive.

MEETING SCHEDULE

- Applications are due **22 calendar days** in advance of the HAHC meeting by **12 PM (noon)** on the deadline date. Exception: revisions to items deferred or denied at the previous HAHC meeting are due 15 days in advance of the scheduled meeting.
- Application deadlines are firm. All materials must be submitted by the deadline to be considered at the following HAHC meeting. Designs must be final at time of application; revisions will not be accepted after the deadline.
- HAHC will not accept new material or redesigns presented at the HAHC meeting. Deferral until the following month's meeting may be necessary in such cases to allow for adequate review by staff and commissioners.
- HAHC monthly meetings are held at 3:00 PM at City Hall Annex, 900 Bagby Street, City Council Chambers, Public Level.

2015 Meeting Dates (Thursdays unless noted otherwise)	COA Application Deadlines	Demolition / Relocation Posted Sign Deadlines
January 29	January 7	January 19
February 26	February 4	February 16
March 26	March 4	March 16
April 23	April 1	April 13
May 21	April 29	May 11
June 18	May 27	June 8
July 22 (Wednesday)	June 30	July 12
August 27	August 5	August 17
September 24	September 2	September 14
October 22	September 30	October 12
November 19	October 28	November 9
December 16 (Wednesday)	November 24	December 6

CERTIFICATE OF APPROPRIATENESS APPLICATION PART I – GENERAL FORM



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DEFINITIONS

Addition: any expansion to an existing building, structure or object.

Alteration: any change to the exterior of a building or structure, including adding, moving, removing or replacing an exterior feature.

Demolition: an act or process that destroys in whole, or a majority of, any building, structure, object or site.

Excavation: to expose, uncover, or remove by digging, cutting or hollowing out.

Exterior Feature: an element of the architectural character and the general arrangement of the external portion of a building, structure or object, including building materials.

Mandatory Repair: a repair of a building or structure that is necessary to comply with Article IX, Ch. 10, Houston Code of Ordinances, as evidenced by an order of the hearing official or the building and standards commission or by a citation.

New Construction: the erection of a new building, structure, or object, on a lot, site, or other property.

Relocation: any change in the location of a building, structure, or object.

Restoration: accurately recovering the form and detail of a building, structure, object, or site and its setting as it appeared at a particular period of time by means of the removal of later work, or by the replacement of missing earlier work, or both.

To be completed by
PLANNING STAFF:

Application received by:
Accepted as complete by:

Date:

Date:



Mr. and Mrs. Kevin Cullen

1125 Tulane

Houston, TX 77008

Orientation: 180 deg

Tilt: 22 deg

2.4 kW DC STC

(28) SW280 Black Mono Modules

(1) SMA SB7000TL-22 Inverter

Reviewed and Approved By:

Michael JP Novak

NABCEP # 032611-237

A handwritten signature in black ink, appearing to read 'Michael JP Novak', written over a white background.

SUNNY BOY 3000TL-US / 3800TL-US / 4000TL-US / 5000TL-US / 6000TL-US / 7000TL-US / 7700TL-US



SB 3000TL-US-22 / 3800TL-US-22 / 4000TL-US-22 / 5000TL-US-22 / 6000TL-US-22 / 7000TL-US-22 / 7700TL-US-22



**THE WORLD'S ONLY
SECURE POWER SUPPLY**



OUTLET NOT INCLUDED

Certified

- UL 1741 and 1699B compliant
- Integrated AFCI meets the requirements of NEC 2011 690.11

Innovative

- Secure Power Supply provides daytime power during grid outages

Powerful

- 97.6% maximum efficiency
- Wide input voltage range
- Shade management with OptiTrac Global Peak MPP tracking

Flexible

- Two MPP trackers provide numerous design options
- Extended operating temperature range

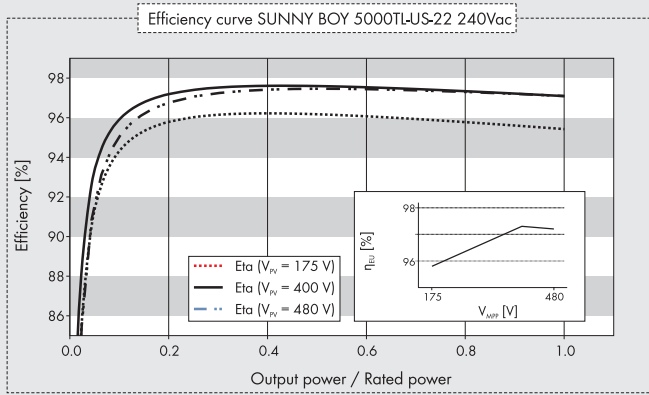
SUNNY BOY 3000TL-US / 3800TL-US / 4000TL-US / 5000TL-US / 6000TL-US / 7000TL-US / 7700TL-US

Setting new heights in residential inverter performance

The Sunny Boy 3000TL-US/3800TL-US/4000TL-US/5000TL-US/6000TL-US/7000TL-US/7700TL-US represents the next step in performance for UL certified inverters. Its transformerless design means high efficiency and reduced weight. Maximum power production is derived from wide input voltage and operating temperature ranges. Multiple MPP trackers and OptiTrac™ Global Peak mitigate the effect of shade and allow for installation at challenging sites. The unique Secure Power Supply feature provides daytime power in the event of a grid outage. High performance, flexible design and innovative features make the Sunny Boy TL-US series the first choice among solar professionals.



Technical data	Sunny Boy 3000TL-US		Sunny Boy 3800TL-US		Sunny Boy 4000TL-US	
	208 V AC	240 V AC	208 V AC	240 V AC	208 V AC	240 V AC
Input (DC)						
Max. usable DC power (@ cos φ = 1)	3200 W		4200 W		4200 W	
Max. DC voltage	600 V		600 V		600 V	
Rated MPPT voltage range	175 – 480 V		175 – 480 V		175 – 480 V	
MPPT operating voltage range	125 – 500 V		125 – 500 V		125 – 500 V	
Min. DC voltage / start voltage	125 V / 150 V		125 V / 150 V		125 V / 150 V	
Max. operating input current / per MPP tracker	18 A / 15 A		24 A / 15 A		24 A / 15 A	
Number of MPP trackers / strings per MPP tracker			2 / 2			
Output (AC)						
AC nominal power	3000 W		3330 W	3840 W	4000 W	
Max. AC apparent power	3000 VA		3330 VA	3840 VA	4000 VA	
Nominal AC voltage / adjustable	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●
AC voltage range	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V	183 – 229 V	211 – 264 V
AC grid frequency; range	60 Hz / 59.3 – 60.5 Hz		60 Hz / 59.3 – 60.5 Hz		60 Hz / 59.3 – 60.5 Hz	
Max. output current	15 A		16 A		20 A	
Power factor (cos φ)	1		1		1	
Output phases / line connections	1 / 2		1 / 2		1 / 2	
Harmonics	< 4%		< 4%		< 4%	
Efficiency						
Max. efficiency	97.2%	97.6%	97.2%	97.5%	97.2%	97.5%
CEC efficiency	96.5%	96.5%	96.5%	97.0%	96.5%	97.0%
Protection devices						
DC disconnection device			●			
DC reverse-polarity protection			●			
Ground fault monitoring / Grid monitoring			● / ●			
AC short circuit protection			●			
All-pole sensitive residual current monitoring unit			●			
Arc fault circuit interrupter (AFCI) compliant to UL 1699B			●			
Protection class / overvoltage category			1 / IV			
General data						
Dimensions (W / H / D) in mm (in)			490 / 519 / 185 (19.3 / 20.5 / 7.3)			
DC Disconnect dimensions (W / H / D) in mm (in)			187 / 297 / 190 (7.4 / 11.7 / 7.5)			
Packing dimensions (W / H / D) in mm (in)			617 / 597 / 266 (24.3 / 23.5 / 10.5)			
DC Disconnect packing dimensions (W / H / D) in mm (in)			370 / 240 / 280 (14.6 / 9.4 / 11.0)			
Weight / DC Disconnect weight			24 kg (53 lb) / 3.5 kg (8 lb)			
Packing weight / DC Disconnect packing weight			27 kg (60 lb) / 3.5 kg (8 lb)			
Operating temperature range			-40 °C ... +60 °C (-40 °F ... +140 °F)			
Noise emission (typical)	≤ 25 dB(A)		< 25 dB(A)		< 25 dB(A)	
Internal consumption at night	< 1 W		< 1 W		< 1 W	
Topology	Transformerless		Transformerless		Transformerless	
Cooling	Convection		Convection		Convection	
Electronics protection rating	NEMA 3R		NEMA 3R		NEMA 3R	
Features						
Secure Power Supply	●		●		●	
Display: graphic	●		●		●	
Interfaces: RS485 / Speedwire/Webconnect	○/○		○/○		○/○	
Warranty: 10 / 15 / 20 years	●/○/○		●/○/○		●/○/○	
Certificates and permits (more available on request)	UL 1741, UL 1998, UL 1699B, IEEE1547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1					
NOTE: US inverters ship with gray lids						
Type designation	SB 3000TL-US-22		SB 3800TL-US-22		SB 4000TL-US-22	



Accessories



Speedwire/Webconnect interface
SWDM-US-10



RS485 interface
DM-485CB-US-10



Fan kit for SB 3000/3800/
4000/5000TL-US-22
FANKIT02-10

● Standard feature ○ Optional feature – Not available
Data at nominal conditions

Sunny Boy 5000TL-US		Sunny Boy 6000TL-US		Sunny Boy 7000TL-US		Sunny Boy 7700TL-US	
208 V AC	240 V AC	208 V AC	240 V AC	208 V AC	240 V AC	208 V AC	240 V AC
5300 W		6300 W		7300 W		8000 W	
600 V		600 V		600 V		600 V	
175 - 480 V		210 - 480 V		245 - 480 V		270 - 480 V	
125 - 500 V		125 - 500 V		125 - 500 V		125 - 500 V	
125 V / 150 V		125 V / 150 V		125 V / 150 V		125 V / 150 V	
30 A / 15 A		30 A / 15 A		30 A / 18 A		30 A / 18 A	

2 / 2

4550 W	5000 W	5200 W	6000 W	6000 W	7000 W	6650 W	7680 W
4550 VA	5000 VA	5200 VA	6000 VA	6000 VA	7000 VA	6650 VA	7680 VA
208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●	208 V / ●	240 V / ●
183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V	183 - 229 V	211 - 264 V
60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz		60 Hz / 59.3 - 60.5 Hz	
22 A		25 A		29.2 A		32 A	
1		1		1		1	
1 / 2		1 / 2		1 / 2		1 / 2	
< 4%		< 4%		< 4%		< 4%	

97.2%	97.6%	97.0%	97.4%	96.8%	96.8%	96.8%	97.3%
96.5%	97.0%	96.5%	97.0%	96.5%	96.5%	96.5%	96.5%

I / IV

490 / 519 / 185 (19.3 / 20.5 / 7.3)			
187 / 297 / 190 (7.4 / 11.7 / 7.5)			
617 / 597 / 266 (24.3 / 23.5 / 10.5)			
370 / 240 / 280 (14.6 / 9.4 / 11.0)			
24 kg (53 lb) / 3.5 kg (8 lb)			
27 kg (60 lb) / 3.5 kg (8 lb)			
-40 °C ... +60 °C (-40 °F ... +140 °F)			
< 29 dB(A)	< 29 dB(A)	< 29 dB(A)	< 29 dB(A)
< 1 W	< 1 W	< 1 W	< 1 W
Transformerless	Transformerless	Transformerless	Transformerless
Convection	Fan	Fan	Fan
NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R

●	●	●	●
○/○	○/○	○/○	○/○
●/○/○	●/○/○	●/○/○	●/○/○

UL 1741, UL 1998, UL 1699B, IEEEl547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1

SB 5000TL-US-22	SB 6000TL-US-22	SB 7000TL-US-22	SB 7700TL-US-22
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More efficient



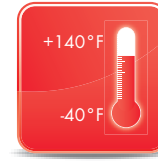
Shade management



Easier



Secure Power Supply



Broad temperature range



Flexible communications

A NEW GENERATION OF INNOVATION

THE SUNNY BOY TL-US RESIDENTIAL SERIES HAS YET AGAIN REDEFINED THE CATEGORY.

Transformerless design

The Sunny Boy 3000TL-US / 3800TL-US / 4000TL-US / 5000TL-US / 6000TL-US / 7000TL-US / 7700TL-US are transformerless inverters, which means owners and installers benefit from high efficiency and lower weight. A wide input voltage range also means the inverters will produce high amounts of power under a number of conditions.

Additionally, transformerless inverters have been shown to be among the safest string inverters on the market. An industry first, the TL-US series has been tested to UL 1741 and UL 1699B and is in compliance with the arc fault requirements of NEC 2011.

Increased energy production

OptiTrac™ Global Peak, SMA's shade-tolerant MPP tracking algorithm, quickly adjusts to changes in solar irradiation, which mitigates the effects of shade and results in higher total power output. And, with two MPP trackers, the TL-US series can ably handle complex roofs with multiple orientations or string lengths.

An extended operating temperature range of -40 °F to +140 °F ensures power is produced

in all types of climates and for longer periods of time than with most traditional string inverters.

Secure Power Supply

One of many unique features of the TL-US residential series is its innovative Secure Power Supply. With most grid-tied inverters, when the grid goes down, so does the solar-powered home. SMA's solution provides daytime energy to a dedicated power outlet during prolonged grid outages, providing homeowners with access to power as long as the sun shines.

Simple installation

As a transformerless inverter, the TL-US residential series is lighter in weight than its transformer-based counterparts, making it easier to lift and transport. A new wall mounting plate features anti-theft security and makes hanging the inverter quick and easy. A simplified DC wiring concept allows the DC disconnect to be used as a wire raceway, saving labor and materials.

The 3800TL-US and 7700TL-US models allow installers to maximize system size and energy production for customers with 100 A and 200 A service panels.

Leading monitoring and control solutions

The new TL-US residential line features more than high performance and a large graphic display. The monitoring and control options provide users with an outstanding degree of flexibility. Multiple communication options allow for a highly controllable inverter and one that can be monitored on Sunny Portal from anywhere on the planet via an Internet connection. Whether communicating through RS485, or SMA's new plug-and-play WebConnect, installers can find an optimal solution to their monitoring needs.

Wide Power Class Range

Whether you're looking for a model to maximize a 100 A service panel or trying to meet the needs of a larger residential PV system, the Sunny Boy TL-US with Secure Power Supply has you covered. Its wide range of power classes—from 3 to 7.7 kW—offers customers the right size for virtually any residential application. The TL-US series is not only the smartest inverter on the planet, it's also the most flexible.

Sunmodule[®] Plus

SW 280 MONO BLACK



TUV Power controlled:
Lowest measuring tolerance in industry



Every component is tested to meet
3 times IEC requirements



Designed to withstand heavy
accumulations of snow and ice



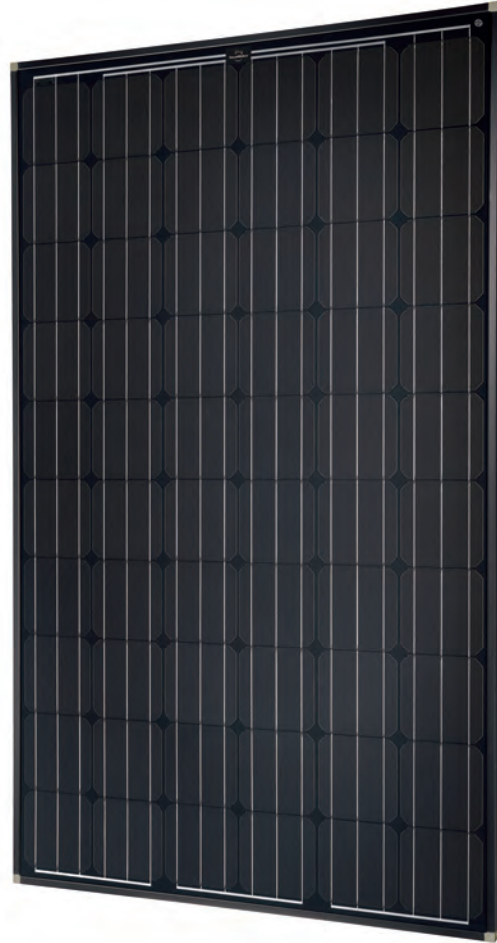
Sunmodule Plus:
Positive performance tolerance



25-year linear performance warranty
and 10-year product warranty



Glass with anti-reflective coating



World-class quality

Fully-automated production lines and seamless monitoring of the process and material ensure the quality that the company sets as its benchmark for its sites worldwide.

SolarWorld Plus-Sorting

Plus-Sorting guarantees highest system efficiency. SolarWorld only delivers modules that have greater than or equal to the nameplate rated power.

25-year linear performance guarantee and extension of product warranty to 10 years

SolarWorld guarantees a maximum performance digression of 0.7% p.a. in the course of 25 years, a significant added value compared to the two-phase warranties common in the industry. In addition, SolarWorld is offering a product warranty, which has been extended to 10 years.*

*in accordance with the applicable SolarWorld Limited Warranty at purchase.
www.solarworld.com/warranty



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic Inspection
- Blowing sand resistant



- Ammonia resistance tested
- Periodic Inspection
- Power Controlled



Sunmodule[®] Plus SW 280 MONO BLACK



PERFORMANCE UNDER STANDARD TEST CONDITIONS (STC)*

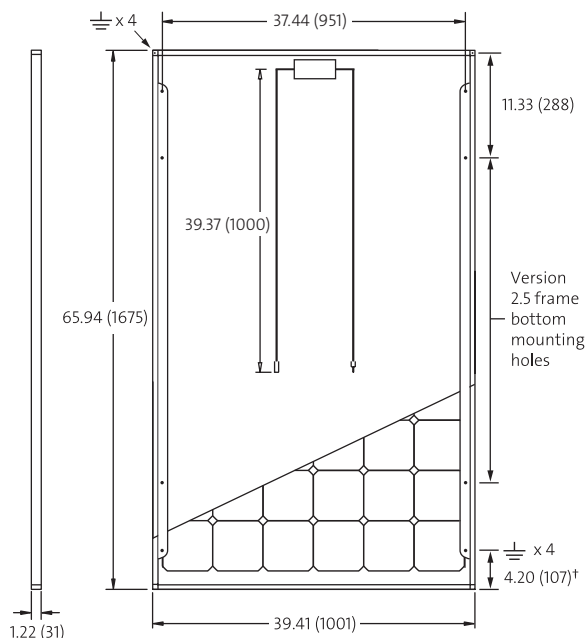
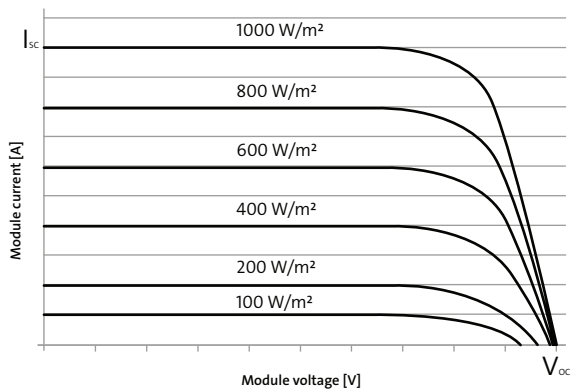
Maximum power	P_{max}	280 Wp
Open circuit voltage	V_{oc}	39.5 V
Maximum power point voltage	V_{mpp}	31.2 V
Short circuit current	I_{sc}	9.71 A
Maximum power point current	I_{mpp}	9.07 A
Module efficiency	η_m	16.7 %

*STC: 1000 W/m², 25°C, AM 1.5

1) Measuring tolerance (P_{max}) traceable to TUV Rheinland: +/- 2% (TUV Power Controlled).

THERMAL CHARACTERISTICS

NOCT	48 °C
TC I_{sc}	0.044 %/°C
TC V_{oc}	-0.31 %/°C
TC P_{mpp}	-0.43 %/°C
Operating temperature	-40°C to 85°C



PERFORMANCE AT 800 W/m², NOCT, AM 1.5

Maximum power	P_{max}	207.2 Wp
Open circuit voltage	V_{oc}	35.8 V
Maximum power point voltage	V_{mpp}	28.3 V
Short circuit current	I_{sc}	7.85 A
Maximum power point current	I_{mpp}	7.33 A

Minor reduction in efficiency under partial load conditions at 25°C: at 200 W/m², 100% (+/-2%) of the STC efficiency (1000 W/m²) is achieved.

COMPONENT MATERIALS

Cells per module	60
Cell type	Mono crystalline
Cell dimensions	6.17 in x 6.17 in (156.75 x 156.75 mm)
Front	Tempered glass (EN 12150)
Frame	Black anodized aluminum
Weight	39.5 lbs (17.9 kg)

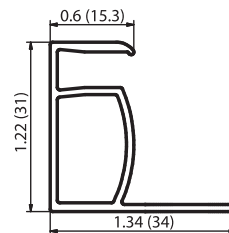
SYSTEM INTEGRATION PARAMETERS

Maximum system voltage SC II / NEC	1000 V	
Maximum reverse current	25 A	
Number of bypass diodes	3	
Design Loads*	Two rail system	113 psf downward 64 psf upward
Design Loads*	Three rail system	170 psf downward 71 psf upward
Design Loads*	Edge mounting	30 psf downward 30 psf upward

* Please refer to the Sunmodule installation instructions for the details associated with these load cases.

ADDITIONAL DATA

Power sorting ¹	-0 Wp / +5 Wp
J-Box	IP65
Module leads	PV wire per UL4703 with H4 connectors
Module type (UL 1703)	1
Glass	Low iron tempered with ARC



VERSION 2.5 FRAME

- Compatible with both "Top-Down" and "Bottom" mounting methods
- ⚡ Grounding Locations:
 - 4 corners of the frame
 - 4 locations along the length of the module in the extended flange[†]