



# Certificate of Compliance

**Certificate:** 70131735

**Master Contract:** 266909

**Project:** 80090260

**Date Issued:** 2021-07-14

**Issued To:** Unirac  
1411 Broadway NE  
Albuquerque, New Mexico, 87102  
United States

**Attention:** Klaus Nicolaedis

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.*

**Issued by:** Michael Hoffnagle  
Michael Hoffnagle



## **PRODUCTS**

CLASS - C531302 - POWER SUPPLIES- PHOTOVOLTAICS- PV Racking

CLASS - C531382 - POWER SUPPLIES- PHOTOVOLTAICS PV Racking and clamping systems-Certified to US Standards

Models:	SM	-	SOLARMOUNT Flush-to-Roof is an extruded aluminum rail PV racking system that is installed parallel to the roof in landscape or portrait orientations.
	ULA	-	Unirac Large Array is a ground mount system using the SolarMount (SM) platform for the bonding and grounding of PV modules.

## **Solarmount**



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The system listed is designed to provide bonding/grounding, and mechanical stability for photovoltaic modules. The system is secured to the roof with the L-Foot components through the roofing material to building structure. Modules are secured to the racking system with stainless steel or aluminum mid clamps and Aluminum end clamps. The modules are bonded to the racking system with the stainless-steel bonding mid clamps with piercing points. The system is grounded with 10 AWG copper wire to bonding/grounding lugs. Fire ratings of Class A with Type 1, 2, 3, 10, 19, 22 or 25 for steep slope. Tested at 5” interstitial gap which allows installation at any stand-off height.

The grounding of the system is intended to comply with the latest edition of the National Electrical Code, to include NEC 250 & 690. Local codes compliance is required, in addition to national codes. All grounding/bonding connections are to be torqued in accordance with the Installation Manual and the settings used during the certification testing for the current edition of the project report.

The system may employ optimizers/micro-inverters and used for grounding when installed per installation instructions.

UL 2703 Mechanical Load ratings:

Downward Design Load (lb/ft <sup>2</sup> )	113.5
Upward Design Load (lb/ft <sup>2</sup> )	50.7
Down-Slope Load (lb/ft <sup>2</sup> )	16.13

Test Loads:

Downward Load (lb/ft <sup>2</sup> )	170.20
Upward Load (lb/ft <sup>2</sup> )	76.07
Down-Slope Load (lb/ft <sup>2</sup> )	24.2

### Unirac Large Array

ULA is a ground mount system using the SolarMount (SM) platform for the bonding and grounding of PV modules. ULA aluminum components merge with SM rails and installer-supplied steel pipe. The SM rail system is secured to the horizontal Pipe using the Rail Bracket components. The Rear and Front cap secures the horizontal Pipe to the vertical Pipe. The Front cap is also used to secure the Cross brace. A Slider is attached to the vertical Pipe to secure the Cross brace. The SM rails, caps, slider, rail brackets, and cross braces materials are 6105-T5 aluminum extrusion. Fasteners materials are 304 stainless steel. Horizontal and vertical pipe materials meet the minimum requirements of ASTM A53 for galvanized steel pipe in 2” and 3” diameter.

The mechanical load ratings from the SM test data will be applied to the ULA model.

Fire Testing is not applicable due to being a ground mount system.



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Models:	RM 5 South	-	South facing, low -slope, ballasted roof-mount PV racking system
	RM DT	-	East-West facing, low -slope, ballasted roof-mount PV racking system

### RM 5 South and RMDT

The systems listed are designed to provide bonding/grounding, and mechanical stability for photovoltaic modules. The system employs galvanized steel bays, ballasted with ASTM C1491 concrete blocks. Modules are secured to the racking system with stainless steel end and mid clamps. Where applicable, the system may employ fire skirts and/or wind deflectors made from 18 gauge G180 steel. The modules are bonded to the racking system with anodization-piercing clamps. The system is grounded with 10 AWG copper wire to bonding/grounding lugs.

The system may employ bay-mounted or module mounted optimizers/micro-inverters.

Both models are identical in terms of construction material, module clamps, bonding/grounding, and performance rating with the exception of the tilt angle and direction of the systems.

Mechanical ratings for both models:

<b>Downward Design Load (lb/ft<sup>2</sup>)</b>	36
<b>Upward Design Load (lb/ft<sup>2</sup>)</b>	16.7
<b>Down-Slope Load (lb/ft<sup>2</sup>)</b>	5

Model	GFT	-	Ground Fixed Tilt is a Roll-Formed Steel and extruded aluminum rail PV racking system that is ground mounted in portrait orientation.
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### Ground Fixed Tilt

The racking system listed is designed to provide bonding/grounding, and mechanical stability for photovoltaic modules. Racking system is secured to the ground with roll-formed steel piles. Modules are secured to the racking system with stainless steel or aluminum mid clamps and Aluminum end clamps. The modules are bonded to the racking system with bonding mid clamps with piercing points. The system is grounded with 10 AWG copper wire to bonding/grounding lugs.



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The grounding of the system is intended to comply with the latest edition of the National Electrical Code, to include NEC 250 & 690. Local codes compliance is required, in addition to national codes. All grounding/bonding connections are to be torqued in accordance with the Installation Manual and the settings used during the certification testing for the current edition of the project report.

The mechanical load ratings from the SM test data will be applied to the GFT model.

Fire Testing is not applicable due to being a ground mount system.

Mechanical ratings:

<b>Downward Design Load (lb/ft<sup>2</sup>)</b>	113.5
<b>Upward Design Load (lb/ft<sup>2</sup>)</b>	50.7
<b>Down-Slope Load (lb/ft<sup>2</sup>)</b>	16.13

### **Conditions of Acceptability:**

Installation is subject to acceptance of the local inspection authorities having jurisdiction. The certification of these products relates only to the methods of installation, bonding, and grounding as outlined in the Installation Manual for each product.

### **APPLICABLE REQUIREMENTS**

- UL 2703-1st Edition - Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.
- LTR AE-001-2012 - List of Technical Requirements for Photovoltaic Module and Panel racking Systems

### **MARKINGS**

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) may be required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.



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### **SM and ULA markings**

The following markings appear on the rail by adhesive label:

1. Submitter's name and/or CSA Master Contract number "266909";
2. Model designation;
3. Manufacturing date;
4. System fire class rating/designation of information location in Installation Manual;
5. Design load rating/designation of information location in Installation Manual;

The following markings appear on the Mid clamp by stamping:

1. Submitter's name and/or CSA Master Contract number "266909";
2. CSA mark
3. Mil ID for factory location

### **Nameplate adhesive label material approval information:**

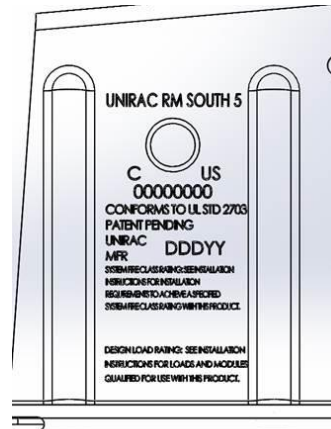
SATO AMERICA INC, SF401 DuraMark Polyester, MH48415 - Printing Materials – Component, UL 969-Marking and Labeling Systems

### **RM 5 South and RMDT markings**

The following markings appear on the ballast bay by permanent stamping:

1. Submitter's name and/or CSA Master Contract number "266909";
2. Model designation;
3. Manufacturing date;
4. System fire class rating/designation of information location in Installation Manual;
5. Design load rating/designation of information location in Installation Manual;

UNIRAC RM SOUTH 5  
CONFORMS TO UL STD 2703  
PATENT PENDING  
UNIRAC MFR DDDYY



SYSTEM FIRE CLASS RATING: SEE INSTALLATION INSTRUCTIONS FOR INSTALLATION REQUIREMENTS TO ACHIEVE A SPECIFIED SYSTEM FIRE CLASS RATING WITH THIS PRODUCT.

DESIGN LOAD RATING: SEE INSTALLATION INSTRUCTIONS FOR LOADS AND MODULES QUALIFIED FOR USE WITH THIS PRODUCT.

**Nameplate adhesive label material approval information:**

Markings applied via permanent stamping to bay.

**GFT markings**

The following markings appear on the rail by adhesive label:

1. Submitter's name;
2. Model designation;
3. Manufacturing date;
4. Design load rating/designation of information location in Installation Manual;

The following markings appear on the Mid-clamp by stamping:

4. Submitter's name and/or CSA Master Contract number "266909";
5. CSA mark
6. Mil ID for factory location

**Nameplate adhesive label material approval information:**

SATO AMERICA INC, SF401 DuraMark Polyester, MH48415 - Printing Materials – Component, UL 969-Marking and Labeling Systems