

## 2-Piece Standoff Technical Datasheet

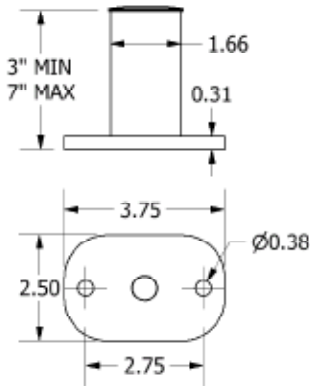
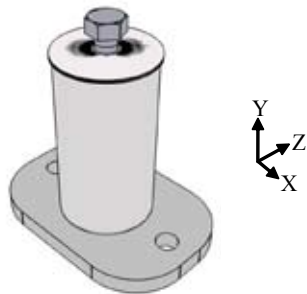
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|   |   |
|---|---|
| 2-Piece Aluminum Standoffs . . . . .                                      | 1 |
| 2-Piece Aluminum Standoff with SolarMount-I 1-flange connection . . . . . | 2 |
| 2-Piece Aluminum Standoff with L-foot connection . . . . .                | 2 |

### Standoffs

#### 2-Piece Aluminum Standoffs

Part No. 310503, 310504, 310506, 310507, 310553, 310554, 310556, 310557, 310603, 310604, 310606, 310607, 310653, 310654, 310656, 310657



Dimensions specified in inches unless noted

#### Standoff and Base Material:

- One of the following extruded aluminum alloys: 6005-T5, 6105-T5, 6061-T6
- Ultimate tensile: 38 ksi; Yeild: 35 ksi
- Clear or Dark anodized

#### Weight:

- 3" Standoff (as shown): 0.522 pounds (237 g)
- Add 0.086 pounds per inch (39 g/ inch)

Allowable and design loads are valid for a Unirac 2-piece aluminum standoff

Attach with zinc plated carbon steel or stainless steel fasteners

Resistance and safety factors are determined according to Part 1A section 9 of the 2005 Aluminum Design Manual

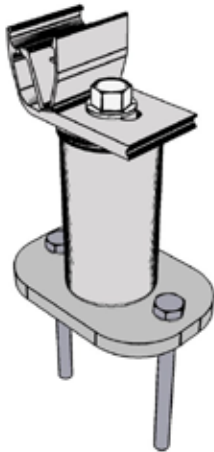
**NOTE: Loads are given for the standoff only. Check load limits for lag screw or other attachment method.**

| Applied Load Direction      | Average Ultimate Load lbs (N) | Allowable Load lbs (N) | Safety Factor, W | Design Load lbs (N) | Resistance Factor, F |
|-----------------------------|-------------------------------|------------------------|------------------|---------------------|----------------------|
| Tension/Compression, Y±     | 3266 (14528)                  | 1089 (4844)            | 3.00             | 1633 (7264)         | 0.500                |
| ∪Z Bending, Applied Moment* | 559 ft lbs (758 Nm)           | 250 ft lbs (339 Nm)    | 2.24             | 378 ft lbs (512 Nm) | 0.676                |

\*Example: If the module is mounted 6" (0.5 ft) from the base of the standoff, the allowable side load is 250 ft\*lbs/ 0.5 ft = 500 lbs

## 2-Piece Aluminum Standoff with SolarMount-I 1-flange connection

Part No. 05013C, 05014C, 05016C, 05017C



Reference the SolarMount-I series datasheet for 1-flange connection specifications.

### For the 1-flange connection to standoff:

- Use included 1 3/4" EPDM washer between the 1-flange connection and standoff
- Assemble with included 300 series stainless steel 5/8"-16 flanged hex head screw
- Use anti-seize and tighten to 30 ft-lbs of torque

Allowable and design loads are valid when components are assembled according to authorized Unirac documents.

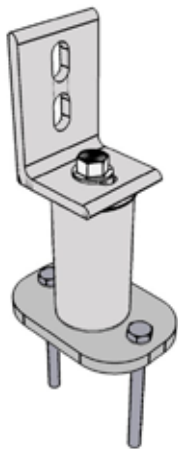
1-Flange connections are compatible with SolarMount-I series beams.

Resistance factors and allowable loads are determined according to part 1A section 9 of the 2005 Aluminum Design Manual.

**NOTE: Loads are for the connection and standoff only. Check load limits for the lag screw or other attachment method.**

| Applied Load Direction           | Average Ultimate lbs (N) | Allowable Load lbs (N) | Safety Factor, FS | Design Loads lbs (N) | Resistance Factor, $\Phi$ |
|----------------------------------|--------------------------|------------------------|-------------------|----------------------|---------------------------|
| Tension, Y+                      | 1415 (6294)              | 635 (2825)             | 2.23              | 960 (4270)           | 0.679                     |
| Compression, Y-                  | 1949 (8670)              | 873 (3883)             | 2.23              | 1320 (5872)          | 0.677                     |
| Transverse, X-, downhill         | 635 (2825)               | 313 (1392)             | 2.03              | 473 (2104)           | 0.745                     |
| Transverse, X+, uphill           | 42 (187)                 | 20 (89)                | 2.15              | 30 (133)             | 0.705                     |
| $\cup$ Z Bending, Applied Moment | 559 ft lbs (758 Nm)      | 250 ft lbs (339 Nm)    | 2.24              | 378 ft lbs (512 Nm)  | 0.676                     |

## 2-Piece Aluminum Standoff with L-foot connection



Reference the SolarMount datasheet for L-foot specifications.

### For the L-foot to standoff connection:

- Use included 1 3/4" EPDM washer between the L-foot and standoff
- Assemble with included 300 series stainless steel 5/8"-16 flanged hex head screw
- Use anti-seize and tighten to 30 ft-lbs of torque

Allowable and design loads are valid when components are assembled according to authorized Unirac documents.

L-feet are compatible with SolarMount, SolarMount Heavy Duty, and SunFrame rails.

Resistance factors and allowable loads are determined according to part 1A section 9 of the 2005 Aluminum Design Manual.

**NOTE: Loads are for the connection and standoff only. Check load limits for the lag screw or other attachment method.**

| Applied Load Direction           | Average Ultimate lbs (N) | Allowable Load lbs (N) | Safety Factor, FS | Design Loads lbs (N) | Resistance Factor, $\Phi$ |
|----------------------------------|--------------------------|------------------------|-------------------|----------------------|---------------------------|
| Tension, Y+                      | 1859 (8269)              | 707 (3144)             | 2.63              | 1069 (4755)          | 0.575                     |
| Compression, Y-                  | 3258 (14492)             | 1325 (5893)            | 2.46              | 2004 (8913)          | 0.615                     |
| Sliding, Z $\pm$                 | 1766 (7856)              | 755 (3356)             | 2.34              | 1141 (5077)          | 0.646                     |
| Transverse, X $\pm$              | 486 (2162)               | 213 (949)              | 2.28              | 323 (1436)           | 0.664                     |
| $\cup$ Z Bending, Applied Moment | 559 ft lbs (758 Nm)      | 250 ft lbs (339 Nm)    | 2.24              | 378 ft lbs (512 Nm)  | 0.676                     |