



FONROCHE
lighting AMERICA

Autonomous Solar

Street Light

SMARTLIGHT SINGLE ROADFOCUS RFS



Project:

Notes:

| | | | | | | | | | | | | | | | | | | | |
|---------|------|------|----|-------|--------------|--------|------|--------------|-----------------|------------|---|---|---|---|---|---|---|---|---|
| [| - | - | - | - |] | [| - | - |] | - | - | - | - | - | - | - | - | - | - |
| Fixture | Temp | Type | HS | Solar | Power Center | Option | Pole | Color (Pole) | Color (Fixture) | Tilt Panel | | | | | | | | | |

The Most Reliable Solar Lighting in the World

We keep our solutions simple with Smartlight—one proven, powerful solar light that meets a wide range of needs. Its unique black solar panel looks elegant, day or night. No hanging wires or bulky battery box. No solar panel that looks like a high school science project. We use powerful components and smart controls to provide all the energy you need in a sleek package, so you can count on all-night lighting all year around.

175,000

SmartLight Systems Installed Worldwide

365

Nights of Lighting per Year Guaranteed

5 Years

Warranty, Including the Battery With No Pro-Rating

\$0

Zero Trenching Cost, Zero Electric Bills and Zero Maintenance for 10 Years

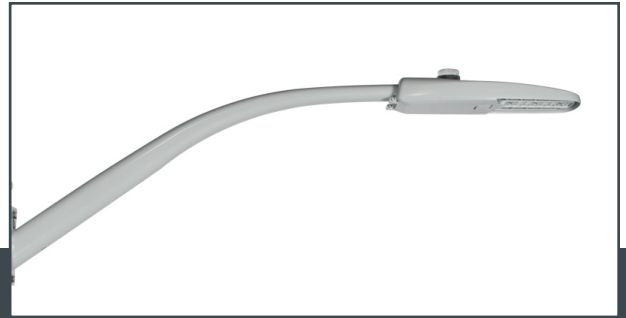


RFS SmartLight

Single RFS



| LUMINAIRE PRODUCT CODE | | COLOR TEMP | DISTRIBUTION | COLOR | HOUSE SIDE SHIELD OPTION | | WEIGHT LBS | | EPA Ft² | | |
|--|--|--|-----------------------|---|----------------------------|--|------------|---------------------------|---------|------|-------|
| RFS-35W16LED | | 2.7K, 3K,4K | R2M,R2S,R3M,R3S,T4,T5 | BK-Black | HS (16LED) | | 9.4 | | 0.52 | | |
| RFS-72W32LED | | 2.7K, 3K,4K | R2M,R2S,R3M,R3S,T4,T5 | BK-Black | 2 HS (32LED) | | 9.4 | | 0.52 | | |
| Custom | | | | | | | | | | | |
| SOLAR MODULE ASSEMBLY PRODUCT CODE / DESCRIPTION | | | | | DIMENSIONS SOLAR MODULE | | | MODULE FRAME & BACK SHEET | | | |
| P160F | | 160W PolyCrystalline Solar Module with Steel Mount - Tilt Adjustment (0,10,25 or 45 Degree) Mount Galvanized and Powder Coated. IEC 61730-1:2019 and IEC 61215-2:2017 Includes Hydrophobic Coating | | | 43.31 x 33.46 x 1.57 | | | Black | | | |
| P270F | | 270W PolyCrystalline Solar Module with Steel Mount - Tilt Adjustment (0,10,25 or 45 Degree) Mount Galvanized and Powder Coated IEC 61730-1:2019 and IEC 61215-2:2017 Includes Hydrophobic Coating | | | 66.93 x 40.55 x 1.81 | | | Black | | | |
| P305F | | 305W PolyCrystalline Solar Module with Steel Mount - Tilt Adjustment (0,10,25 or 45 Degree) Mount Galvanized and Powder Coated IEC 61730-1:2019 and IEC 61215-2:2017 Includes Hydrophobic Coating | | | 66.93 x 42.13 x 1.57 | | | Black | | | |
| Heavy Duty Mount Adder (Required with 45 degree tilt) | | | | | | | | | | | |
| HW-MC | | Heavy Duty Mount Galvanized with Marine Powder Coat Upgrade | | | | | | | | | |
| POWER 365 ASSEMBLY PRODUCT CODE / DESCRIPTION | | | | BATTERIES | | | | | | | |
| 1P | | Power 365 Power Center with 312 Wh NiMH Battery Capacity -IP65 | | Chemistry | | Nickel Metal Hydride | | | | | |
| 2P | | Power 365 Power Center with 624 Wh NiMH Battery Capacity-IP65 | | Operating Temperature | | -40°C to +70°C | | | | | |
| 3P | | Power 365 Power Center with 936 Wh NiMH Battery Capacity-IP65 | | Warranty | | 5 Year Full Replacement | | | | | |
| 4P | | Power 365 Power Center with 1248 Wh NiMH Battery Capacity-IP65 | | Certifications | | EN 550 14-1 ; EN 55014-2 ; EN 61000-6-2 ; EN 61000-6-3 | | | | | |
| Controller | | | | TOTAL TOP OF POLE ASSEMBLY - PANEL, MOUNTING, 365 POWER CENTER Weight (Pounds) EPA (Sq.Ft.) Solar Assembly 1P 2P 3P 4P 10° Tilt 25° Tilt 45° Tilt | | | | | | | |
| Battery Management System (BMS) | | | | | | | | | | | |
| Anti-Black Out Control | | | | | | | | | | | |
| 3-Level Programmable Lighting Profiles | | | | | | | | | | | |
| System Warranty and Certification | | | | | | | | | | | |
| System Warranty | | 5 Years | | P160F-T1-HW-MC | 102.73 | 113.31 | 123.89 | 134.48 | 2.67 | 3.89 | 7.45 |
| Solar Performance Warranty | | 25 Years | | P270F-T3-HW-MC | 120.37 | 130.95 | 141.53 | 152.12 | 4.48 | 7.24 | 13.93 |
| System Certification | | CE | | P305F-T4-HW-MC | 120.37 | 130.95 | 141.53 | 152.12 | 4.48 | 7.38 | 14.36 |
| POLE SELECTED BASED ON PROJECT CONDITIONS | | | | MOUNTING HEIGHT | | | | | | | |
| PRODUCT CODE / DESCRIPTION | | | NOMINAL HEIGHT | 2’ ARM | | | | 6’ ARM | | | |
| 14Ft. Round Tapered Pole-Anchor Base | | | 14’ | 15’3” | | | | 15’8” | | | |
| 20Ft. Round Tapered Pole-Anchor Base | | | 20’ | 21’3” | | | | 21’8” | | | |
| 25Ft. Round Tapered Pole-Anchor Base | | | 25’ | 26’3” | | | | 26’8” | | | |
| 14Ft. Round Tapered Pole-Direct Burial | | | 14’ | 15’3” | | | | 15’8” | | | |
| 20Ft. Round Tapered Pole-Direct Burial | | | 20’ | 21’3” | | | | 21’8” | | | |
| 25Ft. Round Tapered Pole-Direct Burial | | | 25’ | 26’3” | | | | 26’8” | | | |
| CST - Pole | | | | | | | | | | | |
| | | | | | | | | | | | |
| [- - -]-[-]- - | | | | | | | | | | | |



Road Focus Small

The versatile Road Focus has a sleek, unobtrusive design that is at home in all types of environments. With three color temperature choices, six light distribution patterns, zero uplight and optional shielding, it is a great solution for pathways, bike paths, streets, general area lighting and parking lots. The luminaire's superior optics allow you to get the most out of your solar lighting systems by using your lumens exactly where you need them. Optional house side shields protect neighboring properties.

Project:

Notes:

Lumen Values

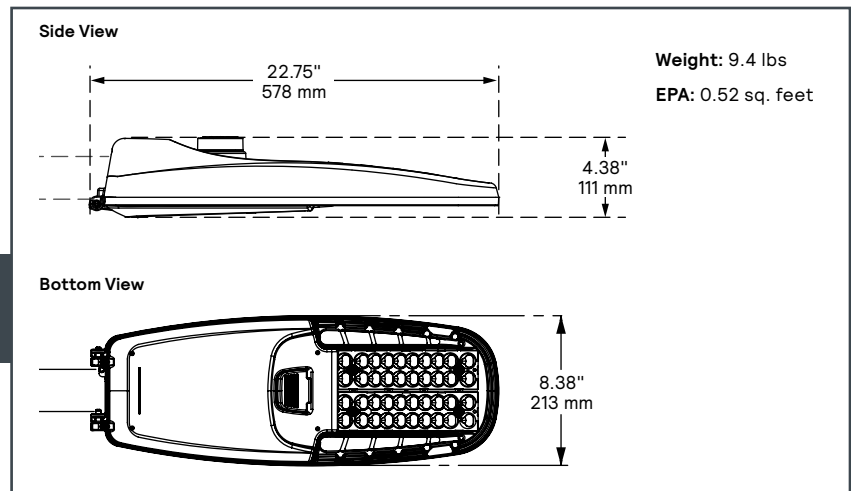
| Ordering Code | Color Temp. | Type R2M | | | Type R2S | | | Type R3M | | | Type R2S | | | Type 4 | | | Type 5 | | |
|---------------|-------------|--------------|----------------|--------------|--------------|----------------|--------------|--------------|----------------|--------------|--------------|----------------|--------------|--------------|----------------|--------------|--------------|----------------|--------------|
| | | Lumen Output | Efficacy (LPW) | BUG Rating | Lumen Output | Efficacy (LPW) | BUG Rating | Lumen Output | Efficacy (LPW) | BUG Rating | Lumen Output | Efficacy (LPW) | BUG Rating | Lumen Output | Efficacy (LPW) | BUG Rating | Lumen Output | Efficacy (LPW) | BUG Rating |
| RFS-35W16LED | 4000 | 4,810 | 127 | B1- U0-G1 | 5,007 | 132 | B1- U0-G1 | 4,795 | 126 | B1- U0-G1 | 4,859 | 128 | B1- U0-G1 | 4,772 | 126 | B1- U0-G1 | 4,964 | 131 | B1- U0-G1 |
| RFS-72W32LED | 4000 | 9,408 | 129 | B2- U0-G2 | 9,794 | 134 | B2- U0-G2 | 9,379 | 128 | B2- U0-G2 | 9,505 | 130 | B2- U0-G2 | 9,336 | 128 | B2- U0-G2 | 9,711 | 133 | B2- U0-G2 |
| RFS-35W16LED | 3000 | 4,512 | 119 | B1- U0-G1 | 4,697 | 124 | B1- U0-G1 | 4,498 | 118 | B1- U0-G1 | 4,558 | 120 | B1- U0-G1 | 4,477 | 118 | B1- U0-G1 | 4,657 | 123 | B3- U0-G1 |
| RFS-72W32LED | 3000 | 8,826 | 121 | B2- U0-G2 | 9,188 | 126 | B2- U0-G1 | 8,799 | 121 | B2- U0-G2 | 8,917 | 122 | B1- U0-G2 | 8,758 | 120 | B2- U0-G2 | 9,110 | 125 | B3- U0-G2 |
| RFS-35W16LED | 2700 | 4,138 | 109 | B1- U0-G1 | 4,307 | 113 | B1- U0-G1 | 4,125 | 109 | B1- U0-G1 | 4,180 | 110 | B1- U0-G1 | 4,105 | 108 | B1- U0-G1 | 4,271 | 112 | B3- U0-G1 |
| RFS-72W32LED | 2700 | 8,094 | 111 | B2- U0-G2 | 8,426 | 115 | B2- U0-G1 | 8,069 | 111 | B2- U0-G2 | 8,177 | 112 | B1- U0-G2 | 8,031 | 110 | B2- U0-G2 | 8,354 | 114 | B3- U0-G2 |

Ordering Guide

| Model | CCT | Distribution | Finish | Options |
|--------------|------|--------------------|------------|-------------------------------|
| RFS-35W16LED | 4K | TR2S Type 2 Short | BK Black | HS House Side Shield (16LED) |
| RFS-72W32LED | 3K | TR2M Type 2 Medium | DBZ Bronze | 2HS House Side Shield (32LED) |
| | 2.7K | TR3S Type 3 Short | WH White | |
| | | TR3M Type 3 Medium | | |
| | | T4 Type 4 | | |
| | | T5 Type 5 | | |

Roadfocus Small

Specifications



Housing

Made of a low copper die cast Aluminum alloy(A360), 0.100" (2.5mm) minimum thickness. Fits on a 1.66" (42mm) O.D. (1.25" NPS), 1.9"(48mm) O.D. (1.5" NPS) or 2 3/8" (60mm) O.D. (2" NPS) by 5 1/2" (140mm) minimum long tenon. Comes with a zinc plated clamp fixed by 2 zinc plated hexagonal bolts 3/8 16 UNC for ease of installation. Provides an easy step adjustment of +/- 5° tilt in 2.5° increments. Includes integral bubble level standard (always included). A quick release, tool-less entry, single latch, hinged, removable door opens downward to provide access to electronic components and to a terminal block. Door is secured to prevent accidental dropping or disengagement. Clearance of 13" (330mm) at the rear is required to remove the door. Complete with a bird guard protecting against birds and similar intruders. Housing (including electrical compartment) rated IP54 per ANSI C136.37.

Light Engine

Composed of 4 main components: LED Module /Optical System / Heat Sink / Driver. IP66 sealed light engine equipped LEDs tested by ISO17025-2005 accredited lab in accordance with IESNA LM-80 guidelines in compliance with EPA ENERGY STAR, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

LED Module: Composed of high-performance white LEDs. Color temperature as per ANSI/NEMA bin 2700 Kelvin nominal (2725 ±145K), 3000Kelvin nominal (3045K +/- 175K) or 4000 Kelvin nominal (3985K +/- 275K), CRI 70 Min. 75 Typical. Other CCT/CRI also available, consult factory.

Optical System: Composed of high performance stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. System is rated IP66. Performance shall be tested per LM-63, LM-79, and TM-15 (IESNA) certifying its photometric performance. 0% uplight and U0 per IESNA TM-15.

Heat Sink: Built in the housing, designed to ensure high efficacy and superior cooling by natural vertical convection air flow pattern always close to LEDs and driver optimizing their efficiency and life. Product does not use any cooling device with moving parts (only passive cooling). Wide openings enable natural cleaning and removal of dirt and debris. Entire luminaire is rated for operation in ambient temperature of -40°C / -40°F up to +50°C / +122°F.

Driver: Constant Current, Dimmable driver is integrated the SmartLight Controller. High power factor of 90% min. Voltage input 24VDC. Operating temperature of -40°C / -40°F - +70°C / +158°F. MTBF – 1170.3Khrs min. MIL-HDBK-217F. EMC Compliance – EN55015 Emissions and EN61547, EN61000-4-2,3,4,6,8 Immunity.

Luminaire Useful Life

Refer to IES files for energy consumption and delivered lumens for each option. Based on ISTMT in situ thermal testing in accordance with UL1598 and UL8750, System Reliability Tool, Advance data and LED manufacturer LM-80/TM-21 data, expected to reach 100,000 + hours with >L70 lumen maintenance @ 25°C. Luminaire Useful Life accounts for LED lumen maintenance AND all of these additional factors including: LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

Hardware

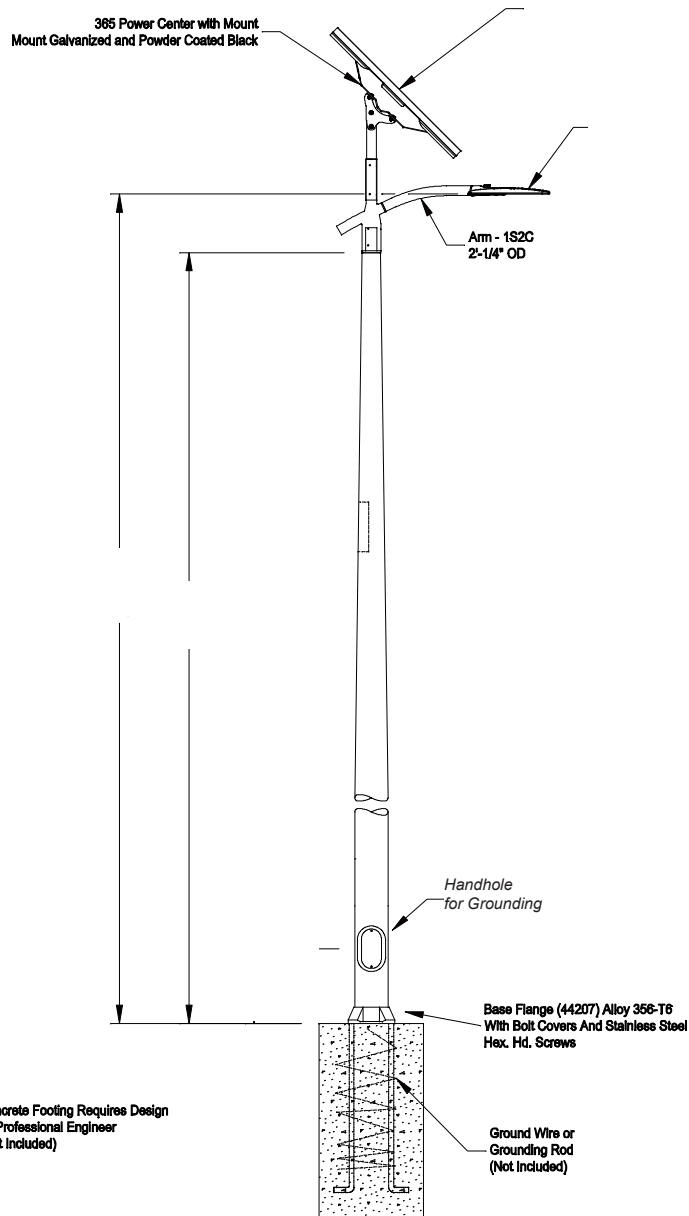
All exposed screws shall be complete with Ceramic primer seal to reduce seizing of the parts, also offers a high resistance to corrosion. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.


Finish

Color in accordance with the AAMA 2603 standard. Application of polyester powder coat paint (4 mils/100 microns) with ± 1 mils/24microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D2244 standard, as well as luster retention in keeping with the ASTM D523 standard and humidity proof in accordance with the ASTM D2247 standard. The surface treatment achieves a minimum of 5000 hours for salt spray resistant finish in accordance with testing performed and per ASTM B117 standard. LED products manufacturing standard Light emitting diodes (LEDs) are assembled in compliance with IEC61340-5-1 and ANSI/ESDS20.20 standards to eliminate ESD events that could decrease the useful life of the product.

Vibration Resistance

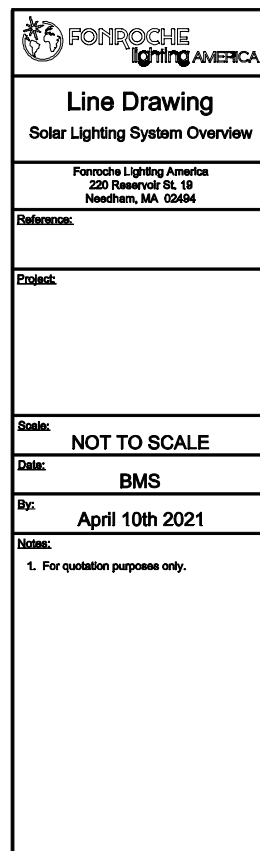
The RFS meets the ANSI C136.31-2018, American National Standard for Roadway Luminaire Vibration specifications for Bridge/over pass applications. (Tested for 3G over 100,000 cycles by independent lab).



| |
|---|
|  FONROCHE Lighting AMERICA |
| <h1>Line Drawing</h1> <h2>Solar Lighting System Overview</h2> |
| Fonroche Lighting America 220 Reservoir St. 19 Needham, MA 02464 |
| Reference: |
| Project: |
| Scale: |
| NOT TO SCALE |
| Date: |
| BMS |
| By: |
| April 13th 2021 |
| Notes: |
| 1. For quotation purposes only. |

| TOTAL TOP OF POLE ASSEMBLY - PANEL, MOUNTING, 365 POWER CENTER | | | | | | | |
|--|-----------------|--------|--------|--------|--------------|----------|----------|
| | Weight (Pounds) | | | | EPA (Sq.Ft.) | | |
| Solar Assembly | 1P | 2P | 3P | 4P | 10° Tilt | 25° Tilt | 45° Tilt |
| P160F-T1-HW-MC | 102.73 | 113.31 | 123.89 | 134.48 | 2.67 | 3.89 | 7.45 |
| P270F-T3-HW-MC | 120.37 | 130.95 | 141.53 | 152.12 | 4.48 | 7.24 | 13.93 |
| P305F-T4-HW-MC | 120.37 | 130.95 | 141.53 | 152.12 | 4.48 | 7.38 | 14.36 |





FONROCHE
lighting AMERICA

