



FIXTURE D

Gardco PowerForm LED floodlights provide over 1,500W HID replacement while significantly reducing energy and maintenance costs. PowerForm features a modular housing design available in four different sizes for a range of commercial, retail, industrial, airport, and other outdoor floodlighting applications. PowerForm is available with multiple lumen packages delivering approximately 42,300 to 138,600 lumens.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Lumens: _____ Qty: _____
 Notes: _____

Ordering guide

example: PFF-184L-900-NW-G2-YK-SP-120-PCB-F1-BZ

| Prefix | Number of LEDs | Drive Current | Color Temperature | Mounting | Distribution | Voltage |
|----------------------------|--|---|---|---|--|--|
| PFF | | | | | | |
| PFF PowerForm flood | 138L 138 LEDs (3 modules) 184L 184 LEDs (4 modules) 230L 230 LEDs (5 modules) 276L⁶ 276 LEDs (6 modules) | 700 700mA 900 900mA 1A 1 Amp 1.2A^{6,10} 1.2 Amp | WW-G2 Warm White 3000K, 70 CRI Generation 2 NW-G2 Neutral White 4000K, 70 CRI Generation 2 | SF Slip Fitter Mount (fits on 2-3/8" O.D. tenon, wires through slip fitter) YK Yoke Mount (9" or 2.74m cord exits luminaire) | A33 Asymmetric 33° Flood (NEMA 6x5) RM Rectangular Medium Flood (NEMA 7x4) SP Spot (12° round) (NEMA 2x2) AIRP Airport Apron Flood (NEMA 7x5) | 120 120V 208 208V 240 240V 277 277V 347 347V 480 480V UNV 120-277V HVU 347-480V |
| | Note: 46 LEDs per module | | | | | |

| Options | | | | | | |
|--|---|--|--|---|--|--|
| Dimming Controls ^{1,2} | Fusing | Surge Protection | Other Options ² | Side Rails | Finish | |
| none leave blank (0-10V dimming driver standard) DD^{1,2,3,8} 0-10V dimming external wires (controls by others) FAWS^{1,2,8,10} Field Adjustable Wattage Selector | none leave blank Fusing F1⁷ Single (120, 277, 347VAC) F2⁷ Double (208, 240, 480VAC) F3⁷ Canadian Double Pole (208, 240, 480VAC) Pole Mount Fusing FP1⁷ Single (120, 277, 347VAC) FP2⁷ Double (208, 240, 480VAC) FP3⁷ Canadian Double Pole (208, 240, 480VAC) | blank Surge Protector 10kV / 10kA (standard) SP2 Surge Protector 20kV / 10kA (option) | none leave blank PCB^{2,8,9} Photocontrol Button TLRD7^{2,4} Twist Lock Receptacle 7-pin TLRPC^{2,4,7,9} Twist Lock 5-pin Receptacle w/ 3-pin Photocell | blank standard anodized, no finish PSR Painted Side Rails, painted same finish to match luminaire finish | BK Black WH White BZ Bronze DGY Dark Gray MGY Medium Gray RAL⁵ Optional Color (specify optional color or RAL) CC⁵ Custom Color (must supply color chip, requires factory quote) | |

- Choose only 1 of the following Dimming Controls options: either DD or FAWS.
- 0-10V dimming driver standard.
- Luminaire has 0-10V dimming wires exiting the luminaire for dimming controls by others.
- TLRD7 and TLRPC max aiming angle 45°. TLRD7 works with 3, 5 or 7 pin NEMA photocell/dimming, use of photocell (by others) or shorting cap (by others) is required to ensure proper illumination.
- Must contact factory prior to ordering - these items are ETO Specials.
- 276L with 1.2A only available as ETO Special - must contact factory prior to ordering.
- Must specify specific input voltage, not available with UNV or HVU.
- PCB can be used with DD and FAWS.
- PCB and TLRPC available in 120V, 208V, 240V, or 277V only.
- FAWS not available with 1.2A (switch has lower current limit).

Connected lighting

Interact City connector node provides the plug and play wireless communications technology to connect your floodlight to the Interact City lighting management system.



| Accessory Ordering Code | Description |
|-------------------------|--|
| LLC | Interact City cellular technology connector node |

Contact Signify for additional support when connected lighting or additional services are desired.
 For more details visit: <https://www.interact-lighting.com/en-us/what-is-possible/interact-city>



PFF PowerForm

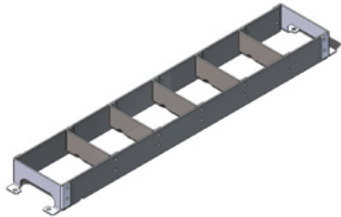
Floodlight

PowerForm Accessories¹ (ordered separately, field installed, specify finish at placeholder F)

Shielding Accessories

Glare shield (black finish)

| | |
|------------|----------------------|
| GS-PFF-138 | 138 LEDs (3 modules) |
| GS-PFF-184 | 184 LEDs (4 modules) |
| GS-PFF-230 | 230 LEDs (5 modules) |
| GS-PFF-276 | 276 LEDs (6 modules) |



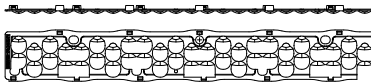
GS louvered glare shields are ordered as an accessory only and can be used with A33, RM, and AIRP optics; can not be used with SP optics due to fit restriction - if required, must contact factory prior to ordering since it is an ETO Special.

Glare shields are aluminum sheet metal louvers painted in a smooth black power coat finish. Each set includes a mounting kit that fastens to the front face of the LED light engine and includes stainless steel hardware.

One glare shield attaches to each 46 LED module. The total number of glare shields is determined by total number of modules per luminaire where required.

Internal house side shield

| | |
|-------------|----------------------|
| HIS-PFF-138 | 138 LEDs (3 modules) |
| HIS-PFF-184 | 184 LEDs (4 modules) |
| HIS-PFF-230 | 230 LEDs (5 modules) |
| HIS-PFF-276 | 276 LEDs (6 modules) |



HIS internal house side shields are ordered as an accessory only and can be used with A33 and RM optics; can not be used with SP or AIRP optics due to fit restriction.

Internal shields are injection molded black polymer that snap fit on each 46 LED module. The total number of internal shields is determined by the total number of modules per luminaire where required.

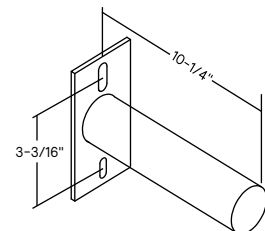
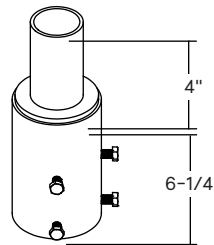
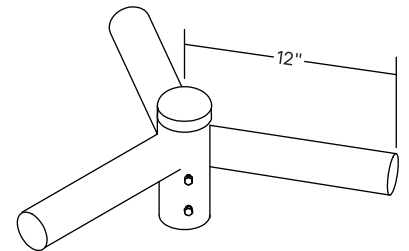
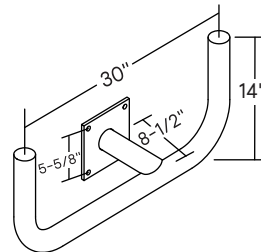
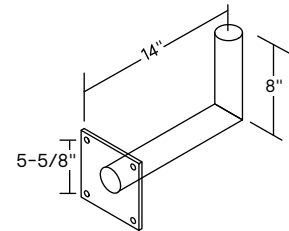
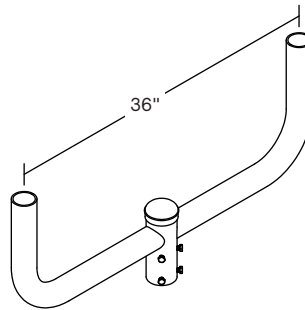
Mounting Accessories

For wall and pole brackets, bullhorns, etc. see <https://www.signify.com/en-us/products/outdoor-luminaires/poles-brackets/site-and-area-brackets/bull-horn-brackets#downloads> for details.

Exception: All UPS Upsweep - contact factory to confirm compatibility.

Exception: SBRKT-SAB-NA-4-WA-(F) Side Angle Flat bracket cannot be used with any PFF versions due to only single mounting hole that is too small for required mounting bolts.

Exception: PFF-276L 6 module version cannot be used with any brackets, etc. due to its weight - too heavy.



1. Consult Signify to confirm whether specific accessories are BAA-compliant.

Examples shown are not to scale - see SBRKT spec sheet for all available brackets

PFF PowerForm

Floodlight

LED Wattage and Lumen Values – 3000K

| Ordering Code | Total LEDs | Module Qty | LED Current (mA) | Color Temp. | Average System Watts | A33 | | RM | | SP | | AIRP | |
|---------------------|------------|------------|------------------|-------------|----------------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|
| | | | | | | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) |
| PFF-138L-700-WW-G2 | 138 | 3 | 700 | 3000 | 289 | 43,048 | 149 | 42,433 | 147 | 43,619 | 151 | 42,284 | 146 |
| PFF-138L-900-WW-G2 | 138 | 3 | 900 | 3000 | 397 | 51,974 | 131 | 51,231 | 129 | 52,663 | 133 | 51,051 | 128 |
| PFF-138L-1A-WW-G2 | 138 | 3 | 1050 | 3000 | 455 | 58,940 | 130 | 58,098 | 128 | 59,721 | 131 | 57,894 | 127 |
| PFF-138L-1.2A-WW-G2 | 138 | 3 | 1200 | 3000 | 511 | 65,101 | 127 | 64,170 | 126 | 65,962 | 129 | 62,793 | 123 |
| PFF-184L-700-WW-G2 | 184 | 4 | 700 | 3000 | 386 | 57,398 | 149 | 56,577 | 147 | 58,159 | 151 | 56,379 | 146 |
| PFF-184L-900-WW-G2 | 184 | 4 | 900 | 3000 | 530 | 69,299 | 131 | 68,308 | 129 | 70,217 | 133 | 68,068 | 128 |
| PFF-184L-1A-WW-G2 | 184 | 4 | 1050 | 3000 | 606 | 78,587 | 130 | 77,463 | 128 | 79,628 | 131 | 77,191 | 127 |
| PFF-184L-1.2A-WW-G2 | 184 | 4 | 1200 | 3000 | 681 | 86,801 | 127 | 85,559 | 126 | 87,950 | 129 | 83,724 | 123 |
| PFF-230L-700-WW-G2 | 230 | 5 | 700 | 3000 | 482 | 71,747 | 149 | 70,722 | 147 | 72,698 | 151 | 70,474 | 146 |
| PFF-230L-900-WW-G2 | 230 | 5 | 900 | 3000 | 662 | 86,623 | 131 | 85,385 | 129 | 87,771 | 133 | 85,085 | 128 |
| PFF-230L-1A-WW-G2 | 230 | 5 | 1050 | 3000 | 758 | 98,234 | 130 | 96,829 | 128 | 99,534 | 131 | 96,489 | 127 |
| PFF-230L-1.2A-WW-G2 | 230 | 5 | 1200 | 3000 | 852 | 108,500 | 127 | 106,949 | 126 | 109,937 | 129 | 106,574 | 125 |
| PFF-276L-700-WW-G2 | 276 | 6 | 700 | 3000 | 579 | 86,097 | 149 | 84,866 | 147 | 87,237 | 151 | 84,568 | 146 |
| PFF-276L-900-WW-G2 | 276 | 6 | 900 | 3000 | 795 | 103,948 | 131 | 102,462 | 129 | 105,325 | 133 | 103,975 | 131 |
| PFF-276L-1A-WW-G2 | 276 | 6 | 1050 | 3000 | 909 | 117,880 | 130 | 116,194 | 128 | 119,442 | 131 | 117,911 | 130 |
| PFF-276L-1.2A-WW-G2 | 276 | 6 | 1200 | 3000 | 1022 | 130,200 | 127 | 128,338 | 126 | 131,924 | 129 | 127,888 | 125 |

LED Wattage and Lumen Values – 4000K

| Ordering Code | Total LEDs | Module Qty | LED Current (mA) | Color Temp. | Average System Watts | A33 | | RM | | SP | | AIRP | |
|---------------------|------------|------------|------------------|-------------|----------------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|
| | | | | | | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) |
| PFF-138L-700-NW-G2 | 138 | 3 | 700 | 4000 | 289 | 45,219 | 156 | 44,573 | 154 | 45,818 | 158 | 44,416 | 154 |
| PFF-138L-900-NW-G2 | 138 | 3 | 900 | 4000 | 397 | 54,595 | 137 | 53,814 | 135 | 55,318 | 139 | 53,625 | 135 |
| PFF-138L-1A-NW-G2 | 138 | 3 | 1050 | 4000 | 455 | 61,912 | 136 | 61,027 | 134 | 62,732 | 138 | 60,813 | 134 |
| PFF-138L-1.2A-NW-G2 | 138 | 3 | 1200 | 4000 | 511 | 68,383 | 134 | 67,405 | 132 | 69,288 | 136 | 65,959 | 129 |
| PFF-184L-700-NW-G2 | 184 | 4 | 700 | 4000 | 386 | 60,292 | 156 | 59,430 | 154 | 61,091 | 158 | 59,222 | 154 |
| PFF-184L-900-NW-G2 | 184 | 4 | 900 | 4000 | 530 | 72,793 | 137 | 71,752 | 135 | 73,757 | 139 | 71,500 | 135 |
| PFF-184L-1A-NW-G2 | 184 | 4 | 1050 | 4000 | 606 | 82,549 | 136 | 81,369 | 134 | 83,643 | 138 | 81,083 | 134 |
| PFF-184L-1.2A-NW-G2 | 184 | 4 | 1200 | 4000 | 681 | 91,177 | 134 | 89,873 | 132 | 92,384 | 136 | 87,945 | 129 |
| PFF-230L-700-NW-G2 | 230 | 5 | 700 | 4000 | 482 | 75,365 | 156 | 74,288 | 154 | 76,363 | 158 | 74,027 | 154 |
| PFF-230L-900-NW-G2 | 230 | 5 | 900 | 4000 | 662 | 90,991 | 137 | 89,690 | 135 | 92,196 | 139 | 89,375 | 135 |
| PFF-230L-1A-NW-G2 | 230 | 5 | 1050 | 4000 | 758 | 103,187 | 136 | 101,711 | 134 | 104,553 | 138 | 101,354 | 134 |
| PFF-230L-1.2A-NW-G2 | 230 | 5 | 1200 | 4000 | 852 | 113,971 | 134 | 112,341 | 132 | 115,480 | 136 | 111,947 | 131 |
| PFF-276L-700-NW-G2 | 276 | 6 | 700 | 4000 | 579 | 90,438 | 156 | 89,145 | 154 | 91,636 | 158 | 88,832 | 154 |
| PFF-276L-900-NW-G2 | 276 | 6 | 900 | 4000 | 795 | 109,189 | 137 | 107,628 | 135 | 110,635 | 139 | 109,217 | 137 |
| PFF-276L-1A-NW-G2 | 276 | 6 | 1050 | 4000 | 909 | 123,824 | 136 | 122,053 | 134 | 125,464 | 138 | 123,856 | 136 |
| PFF-276L-1.2A-NW-G2 | 276 | 6 | 1200 | 4000 | 1022 | 136,765 | 134 | 134,809 | 132 | 138,576 | 136 | 134,336 | 131 |

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires. Contact factory for configurations not shown.

Field Adjustable Wattage Selector (FAWS) Multiplier Chart

| FAWS Position | Typical Lumens and System Wattage Multiplier | |
|---------------|--|-----------|
| | 138L/184L | 230L/276L |
| 1 | 10% | 15% |
| 2 | 20% | 35% |
| 3 | 30% | 45% |
| 4 | 40% | 60% |
| 5 | 45% | 70% |
| 6 | 55% | 85% |
| 7 | 60% | 100% |
| 8 | 70% | 100% |
| 9 | 80% | 100% |
| 10 | 100% | 100% |

Note: Actual performance may vary due to LED and driver tolerances

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Floodlight

LED Wattage and Lumen Values – 3000K with glare shield

| Ordering Code | Total LEDs | Module Qty | LED Current (mA) | Color Temp. | Average System Watts | A33-GS | | RM-GS | | AIRP-GS | |
|------------------------|------------|------------|------------------|-------------|----------------------|--------------|----------------|--------------|----------------|--------------|----------------|
| | | | | | | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) |
| PFF-138L-700-WW-G2-GS | 138 | 3 | 700 | 3000 | 289 | 33,280 | 115 | 32,884 | 114 | 22,022 | 76 |
| PFF-138L-900-WW-G2-GS | 138 | 3 | 900 | 3000 | 397 | 40,180 | 101 | 39,701 | 100 | 26,587 | 67 |
| PFF-138L-1A-WW-G2-GS | 138 | 3 | 1050 | 3000 | 455 | 45,566 | 100 | 45,023 | 99 | 30,151 | 66 |
| PFF-138L-1.2A-WW-G2-GS | 138 | 3 | 1200 | 3000 | 511 | 49,421 | 97 | 48,833 | 96 | 32,702 | 64 |
| PFF-184L-700-WW-G2-GS | 184 | 4 | 700 | 3000 | 386 | 44,374 | 115 | 43,844 | 114 | 29,363 | 76 |
| PFF-184L-900-WW-G2-GS | 184 | 4 | 900 | 3000 | 530 | 53,574 | 101 | 52,935 | 100 | 35,450 | 67 |
| PFF-184L-1A-WW-G2-GS | 184 | 4 | 1050 | 3000 | 606 | 60,754 | 100 | 60,030 | 99 | 40,201 | 66 |
| PFF-184L-1.2A-WW-G2-GS | 184 | 4 | 1200 | 3000 | 681 | 65,895 | 97 | 65,110 | 96 | 43,604 | 64 |
| PFF-230L-700-WW-G2-GS | 230 | 5 | 700 | 3000 | 482 | 55,466 | 115 | 54,806 | 114 | 36,702 | 76 |
| PFF-230L-900-WW-G2-GS | 230 | 5 | 900 | 3000 | 662 | 66,967 | 101 | 66,169 | 100 | 44,313 | 67 |
| PFF-230L-1A-WW-G2-GS | 230 | 5 | 1050 | 3000 | 758 | 75,942 | 100 | 75,038 | 99 | 50,251 | 66 |
| PFF-230L-1.2A-WW-G2-GS | 230 | 5 | 1200 | 3000 | 852 | 83,879 | 98 | 82,880 | 97 | 55,504 | 65 |
| PFF-276L-700-WW-G2-GS | 276 | 6 | 700 | 3000 | 579 | 66,560 | 115 | 65,767 | 114 | 44,043 | 76 |
| PFF-276L-900-WW-G2-GS | 276 | 6 | 900 | 3000 | 795 | 81,834 | 103 | 80,859 | 102 | 54,150 | 68 |
| PFF-276L-1A-WW-G2-GS | 276 | 6 | 1050 | 3000 | 909 | 92,802 | 102 | 91,697 | 101 | 61,408 | 68 |
| PFF-276L-1.2A-WW-G2-GS | 276 | 6 | 1200 | 3000 | 1022 | 100,655 | 98 | 99,456 | 97 | 66,604 | 65 |

LED Wattage and Lumen Values – 4000K with glare shield

| Ordering Code | Total LEDs | Module Qty | LED Current (mA) | Color Temp. | Average System Watts | A33-GS | | RM-GS | | AIRP-GS | |
|------------------------|------------|------------|------------------|-------------|----------------------|--------------|----------------|--------------|----------------|--------------|----------------|
| | | | | | | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) | Lumen Output | Efficacy (LPW) |
| PFF-138L-700-NW-G2-GS | 138 | 3 | 700 | 4000 | 289 | 34,958 | 121 | 34,542 | 119 | 23,132 | 80 |
| PFF-138L-900-NW-G2-GS | 138 | 3 | 900 | 4000 | 397 | 42,206 | 106 | 41,703 | 105 | 27,928 | 70 |
| PFF-138L-1A-NW-G2-GS | 138 | 3 | 1050 | 4000 | 455 | 47,863 | 105 | 47,293 | 104 | 31,671 | 70 |
| PFF-138L-1.2A-NW-G2-GS | 138 | 3 | 1200 | 4000 | 511 | 51,913 | 102 | 51,295 | 100 | 34,351 | 67 |
| PFF-184L-700-NW-G2-GS | 184 | 4 | 700 | 4000 | 386 | 46,611 | 121 | 46,055 | 119 | 30,843 | 80 |
| PFF-184L-900-NW-G2-GS | 184 | 4 | 900 | 4000 | 530 | 56,275 | 106 | 55,604 | 105 | 37,237 | 70 |
| PFF-184L-1A-NW-G2-GS | 184 | 4 | 1050 | 4000 | 606 | 63,817 | 105 | 63,057 | 104 | 42,228 | 70 |
| PFF-184L-1.2A-NW-G2-GS | 184 | 4 | 1200 | 4000 | 681 | 69,217 | 102 | 68,393 | 100 | 45,802 | 67 |
| PFF-230L-700-NW-G2-GS | 230 | 5 | 700 | 4000 | 482 | 58,263 | 121 | 57,569 | 119 | 38,553 | 80 |
| PFF-230L-900-NW-G2-GS | 230 | 5 | 900 | 4000 | 662 | 70,343 | 106 | 69,505 | 105 | 46,547 | 70 |
| PFF-230L-1A-NW-G2-GS | 230 | 5 | 1050 | 4000 | 758 | 79,771 | 105 | 78,821 | 104 | 52,785 | 70 |
| PFF-230L-1.2A-NW-G2-GS | 230 | 5 | 1200 | 4000 | 852 | 88,108 | 103 | 87,059 | 102 | 58,302 | 68 |
| PFF-276L-700-NW-G2-GS | 276 | 6 | 700 | 4000 | 579 | 69,916 | 121 | 69,083 | 119 | 46,264 | 80 |
| PFF-276L-900-NW-G2-GS | 276 | 6 | 900 | 4000 | 795 | 85,960 | 108 | 84,936 | 107 | 56,880 | 72 |
| PFF-276L-1A-NW-G2-GS | 276 | 6 | 1050 | 4000 | 909 | 97,481 | 107 | 96,320 | 106 | 64,504 | 71 |
| PFF-276L-1.2A-NW-G2-GS | 276 | 6 | 1200 | 4000 | 1022 | 105,730 | 103 | 104,471 | 102 | 69,962 | 68 |

Values from photometric tests performed in accordance with IESNA LM-79 and are representative of the configurations shown. Actual performance may vary due to installation and environmental variables, LED and driver tolerances, and field measurement considerations. It is highly recommended to confirm performance with a photometric layout.

NOTE: Some data may be scaled based on tests of similar (but not identical) luminaires.

Predicted Lumen Depreciation Data

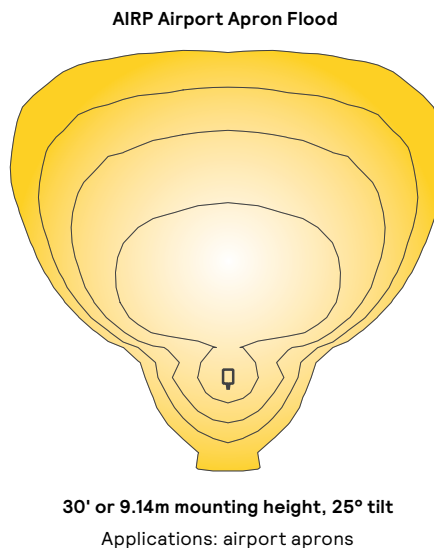
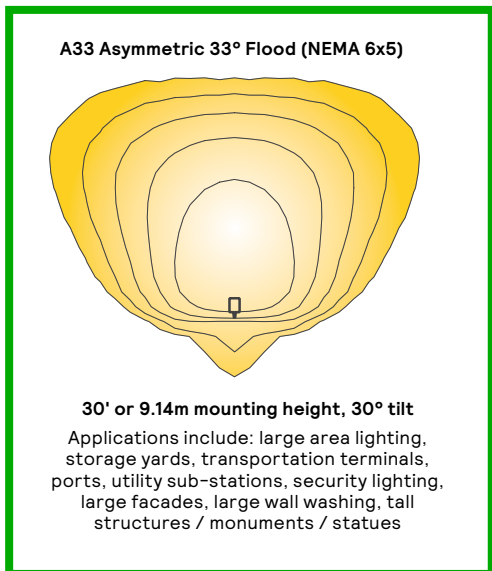
| Ambient Temperature (°C) | Driver Current | Calculated L70 hours | L70 per TM-21 | Lumen Maintenance % @ 60,000 hours |
|--------------------------|----------------|----------------------|---------------|------------------------------------|
| 25°C | up to 1200 mA | >100,000 | >60,000 | 98% |

Predicted performance derived from LED manufacturer's data and engineering design estimates, based on IESNA LM-80 methodology. Actual experience may vary due to field application conditions. L70 is the predicted time when LED performance depreciates to 70% of initial lumen output. Calculated per IESNA TM21-11. Published L70 hours limited to 6 times actual LED test hours.

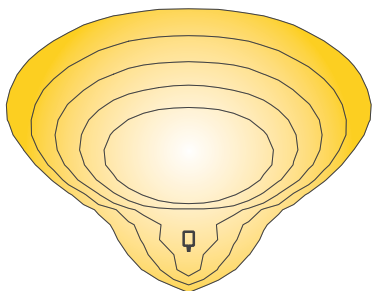
PFF PowerForm

Floodlight

Optical Distribution Diagrams

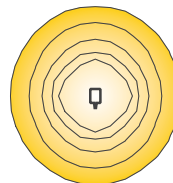


RM Rectangular Medium Flood (NEMA 7x4)



30' or 9.14m setback, 50° tilt
Applications include: building entrances and exits, security lighting, perimeter fences, checkpoints and inspection stations, large and wide wall grazing, large signs

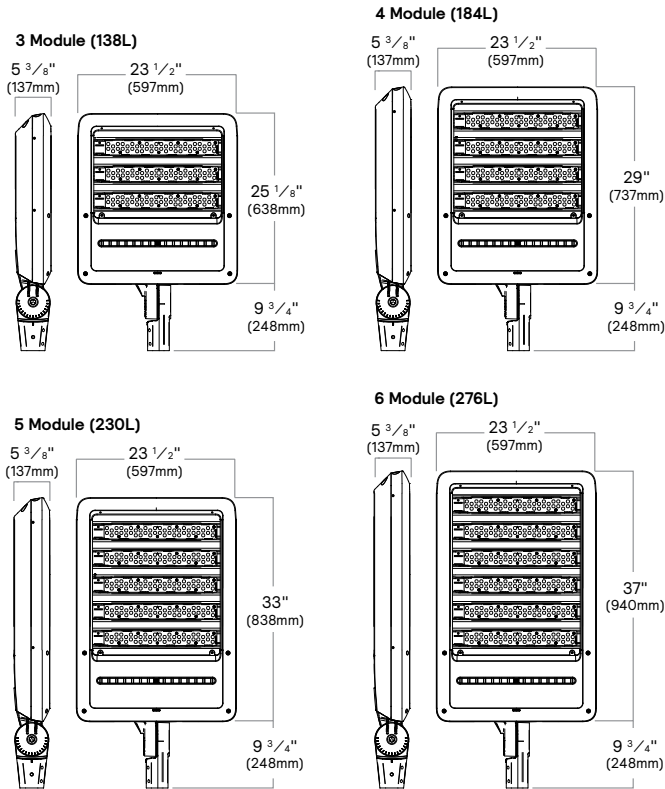
SP Spot 12° Round (NEMA 2x2)



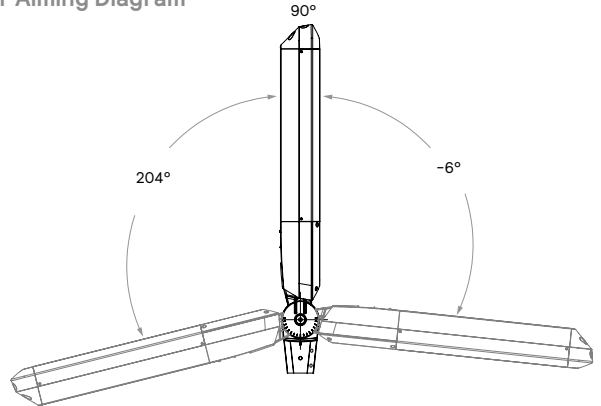
30' or 9.14m setback, 0° tilt
Applications include: spotlighting, accenting, tall columns, tall structures / monuments / statues

PFF PowerForm Floodlight

Dimensions - Slipfitter Mount (SF)



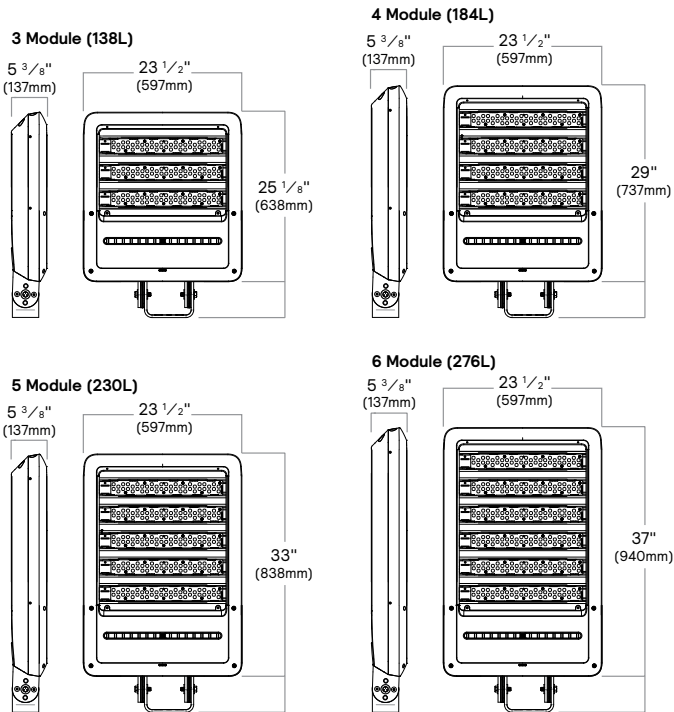
Slipfitter Aiming Diagram



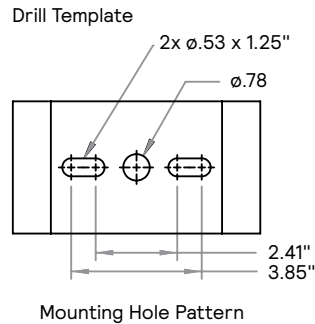
| No. of Modules | Effective Projected Area (EPA-ft ²) | | | Weight of single luminaire PFF SF |
|----------------|---|-----------------|-----------------|--------------------------------------|
| | Single: 0° Aim | Single: 45° Aim | Single: 90° Aim | |
| 3 | 0.647 | 2.311 | 3.269 | 62 lbs (28.1 kg) |
| 4 | 0.739 | 2.681 | 3.792 | 72 lbs (32.7 kg) |
| 5 | 0.836 | 3.021 | 4.273 | 81 lbs (36.7 kg) |
| 6 | 0.938 | 3.337 | 4.720 | 91 lbs (41.3 kg) |

Note: Applies to single PFF luminaire with (SF) Slipfitter mount at the following angles: 0° is horizontal to ground, 90° is perpendicular to the ground as shown in drawings.

Dimensions - Yoke Mount (YK)



Yoke Mount Drill Template



| No. of Modules | Effective Projected Area (EPA-ft ²) | | | Weight of single luminaire PFF YK |
|----------------|---|-----------------|-----------------|--------------------------------------|
| | Single: 0° Aim | Single: 45° Aim | Single: 90° Aim | |
| 3 | 0.596 | 2.232 | 3.156 | 66 lbs (29.9 kg) |
| 4 | 0.688 | 2.601 | 3.679 | 76 lbs (34.5 kg) |
| 5 | 0.786 | 2.942 | 4.161 | 86 lbs (39 kg) |
| 6 | 0.887 | 3.257 | 4.607 | 94 lbs (42.6 kg) |

Note: Applies to single PFF luminaire with (YK) Yoke mount at the following angles: 0° is horizontal to ground, 90° is perpendicular to the ground as shown in drawings.

PFF PowerForm

Floodlight

Controls options

DD: 0-10V dimming driver with dimming wires externally accessible for connecting dimming controls by others.

PCB: Photocell button (a.k.a. button photoeye).

TLRD7*: Twist Lock Receptacle with 7 pins enabling dimming and additional functionality (by others), can be used with an Interact City node, a twistlock photoelectric cell or a shorting cap. Can also be used with Signify or third party control system. Pins 6 and 7 are capped off (not connected) unless used with SR driver - ETO Specials, contact factory. Receptacle located on top of luminaire housing.

* Use of photoelectric cell or shorting cap is required to ensure proper illumination. Note: Additional hardware will be required to utilize the additional 2 pins on this receptacle.

TLRPC*: Twist Lock Receptacle with 5 pins and includes 3 pin twistlock photoelectric cell (must specify voltage). Receptacle located on top of luminaire housing.

*Note: Maximum aiming angle is 45° with TLRD7 and TLRPC in order to maintain IP66 rating around the Twist Lock Receptacle; Light Engines and the rest of the luminaire maintain IP66 rating at all aiming angles. UL Wet Location rating is also maintained at all aiming angles. Use of photoelectric cell or shorting cap is required to ensure proper illumination. TLRD7 and TLRPC receptacle pins 4 & 5 are connected to dimming driver's dimming leads whenever no Dimming Controls are selected; if Dimming Controls are selected then receptacle pins 4 & 5 are capped off because driver's dimming leads are used with Dimming Controls.

FAWS: Field Adjustable Wattage Selector, pre-set to the highest position, can be easily switched in the field to the required position. This reduces total luminaire wattage consumption and reduces the light level - see the FAWS multiplier chart for more details.

Note: It is not recommended to use FAWS with other dimming or controls; if you do, set the switch to position 10 (maximum output) to enable the other dimming or controls. Switching FAWS to any position other than 10 will disable the other dimming or controls.

Connected Lighting

Interact City connector node provides the plug and play wireless communications technology to connect your floodlight to the Interact City lighting management system. With Interact you can remotely manage, monitor and control all city lighting, from roads and streets, to parks and plazas, and bridges from one single system. Connected lighting enables capabilities including, accurate on/off switching, dimming control, fault reporting and integration with other systems to enable condition-based lighting. Interact provides you with a robust and scalable infrastructure to further reduce energy consumption, improve operations, and turn lighting into a connected network for your smart city journey.

For more details visit: <https://www.interact-lighting.com/en-us/what-is-possible/interact-city>

Luminaire options

F1: Fusing Single (for 120, 277 or 347VAC)

F2: Fusing Double (for 208, 240 or 480VAC)

F3: Fusing Canadian Double Pole (for 208, 240 or 480VAC)

FP1: Fusing Pole Single (pole mounted near handhole, for 120, 277 or 347VAC)

FP2: Fusing Pole Double (pole mounted near handhole, for 208, 240 or 480VAC).

FP3: Fusing Pole Canadian Double Pole (pole mounted near handhole, for 208, 240 or 480VAC)

SP2: Surge Protection, 20kV/10kA. Surge protection device wired in parallel so that if it fails open the luminaire will remain lit/powerd on.

PFF PowerForm

Floodlight

Specifications

Housing

Main body castings made of a low copper die cast Aluminum alloy (A360) for a high resistance to corrosion, 0.100" (2.5mm) minimum thickness. Side rail extrusions made of corrosion resistant low copper extruded anodized aluminum alloy (Anodized 6063-T5).

Mounting

Up tilt aiming and down tilt aiming possible with all of the mounting options.

cULus Listed as suitable for mounting within 4' or 1.2m of the ground

SF: Adjustable Slip Fitter with AWG 16-3 wires (or AWG 16-5 if DD external control options are selected) exiting through the Slip Fitter. Integral splice compartment for field wiring with cULus Wet Location rated access cover with seal around entire perimeter. Slip Fitter made of low copper die cast Aluminum alloy (A360) for a high resistance to corrosion, adjustable knuckle has 4 degree aiming increments with integral interlocking teeth and bolt to secure aiming in place, integral cast-in aiming marks. Fits on a 2-3/8" O.D. tenon.

YK: Adjustable Yoke with 9' (2.74m) of AWG 16-3 SEOW cord (or AWG 16-5 if DD external control options are selected) exiting the luminaire through IP66 rated cord seal. Customer-specified length or different cord type available - must contact factory prior to ordering, this is an ETO Special. Yoke made of high strength steel, galvanized and painted for high resistance to corrosion, 5 degree aiming increments with bolts to secure aiming in place.

Driver/Electrical Door

Removable die cast aluminum door made of a low copper die cast aluminum alloy (A360) for a high resistance to corrosion. Provides access to electronic components/LED drivers. Door secured with two captive screws outside of gasket perimeter. Includes a lanyard to prevent accidental dropping if access is required.

IP Rating

IP66 rated driver/electrical compartment and light engines in all aiming positions including up tilt aiming per ANSI C136.37 with seals around entire perimeter of the lenses and seal around entire perimeter of the driver/electrical compartment. IP66 rating including when PCB option is installed.

Light Engine

Composed of 4 main components: Heat Sink / LED Module / Optical System / Driver. Electrical components are RoHS compliant. LEDs tested by ISO 17025-2005 accredited lab in accordance with IESNA LM-80 guidelines, extrapolations in accordance with IESNA TM-21. Metal core board ensures greater heat transfer and longer lifespan.

Heat Sinks: Heat sinks that are part of LED Modules are anodized 6063-T5 Aluminum for a high resistance to corrosion. Housing acts as heat sink for drivers, 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).

LED Module: Composed of high performance white LEDs. Color temperature as per ANSI/NEMA bin 3000K nominal (3045K +/- 175K) or 4000K nominal (3985K +/- 275K), both CRI 70 min.

Optical System: Choice of four distributions including Spot (SP), Asymmetric 33° Flood (A33), Rectangular Medium Flood (RM) distributions and a specialty distribution designed for Airport Apron (AIRP) applications featuring a wide 87° horizontal and narrow 16° vertical beam. Composed of high performance UV stabilized optical grade polymer refractor lenses to achieve desired distribution optimized to get maximum spacing, target lumens and a superior lighting uniformity. Performance shall be tested per LM-63, LM-79 and TM-15 (IESNA) certifying its photometric performance.

IK Rating: IK10 highest impact resistance rating for LED Module lenses.

Driver: High power factor of 90% min. Electronic driver, operating range 50/60 Hz. Auto adjusting universal voltage input from 120 to 277 VAC or 347 to 480 VAC rated for both application line to line or line to neutral, Class I, THD of 20% max. The current supplying the LEDs will be reduced by the driver if the driver experiences internal overheating as a protection to the LEDs and the electrical components. Output is protected from short circuits, voltage overload and current overload. Automatic recovery after correction. Standard built in driver surge protection of 2.5kV (min). Driver enables setting LED drive current to meet your specific total wattage consumption, lumen output and/or efficacy needs - ETO Specials, contact factory.

Integrated Features

Please note that these integrated features always come with this luminaire standard at no additional cost.

0-10V dimming driver included as standard, dimming leads pre-wired to Dimming Controls option except when DD external controls options are selected.

SP1: Surge protection device tested in accordance with ANSI/IEEE C62.45 per ANSI/IEEE C62.41.2 Scenario I Category C High Exposure 10kV/10kA waveforms for Line-Ground, Line-Neutral and Neutral-Ground. Enhanced surge protection device SP2 20kV/10kA available as an option. Surge protection device wired in parallel so that if it fails open the luminaire will remain lit/power on.

Wiring

#2 - #14 AWG wires from the primary circuit, located inside the housing. Due to the inrush current that occurs with electronic drivers, recommend using a time delay or slow blow fuse to avoid unnecessary and unwanted fuse blowing (false tripping) that can occur with fast acting fuses.

Hardware and Seals

All exposed screws shall be stainless and/or corrosion resistant and captive. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Finish

Five standard textured colors: white, bronze, black, dark gray and medium gray. RAL and custom color matching available - must contact factory prior to ordering, these are ETO Specials. Color in accordance with the AAMA 2604 standard. Application of polyester powder coat paint (2.5 mils/62.5 microns) with ± 1 mils/24 microns 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.

LED Products Manufacturing Standard

The electronic components sensitive to electrostatic discharge (ESD) such as light emitting diodes (LEDs) are assembled in compliance with EC61340-5-1 and ANSI/ESD S20.20 standards so as to eliminate ESD events that could decrease the useful life of the product.

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, exclusive Signify System Reliability Tool, Advance driver 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 color shift, LED life, driver life, PCB substrate, solder joints, on/off cycles, burning hours and corrosion.

Vibration Resistance

Luminaire meets the ANSI C136.31-2018 specifications, tested by independent lab over 100,000 cycles in all three axes: Bridge/Overpass for 138L 3 modules, 184L 4 modules, 230L 5 modules; Normal for 276L 6 modules.

Certifications and Compliance

cULus Listed for Canada and USA, per UL1598 and UL8750, including suitable for mounting within 4' or 1.2m of the ground. Configurations are DesignLights Consortium qualified, consult DLC QPL Qualified Products List for more details. Luminaire complies with or exceeds the following ANSI C136 standards: .2, .3, .10, .15, .21, .22, .24, .25, .31, .32, .37, .41. Entire luminaire is rated for operation in ambient temperature of -40°C (-40°F) up to +40°C (+104°F).

Limited Warranty

5-year limited warranty. See signify.com/warranties for details and restrictions.

Buy American Act of 1933 (BAA):

This product is manufactured in one of our US factories and, as of the date of this document, this product was considered a commercially available off-the-shelf (COTS) item meeting the requirements of the BAA. This BAA designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies. Prior to ordering, please visit www.signify.com/baa to view a current list of BAA-compliant products to confirm this product's current compliance.

