

## EF1A Series

### Hazardous locations: Oil & Gas, Water Treatment, Chemical Plants, Painting Booths

With UL Class I, Zone 1 and Type 4X ratings, the EF1A series can be used in hazardous locations, making it well-suited to handle applications in oil & gas industries, water treatment, chemical plants, painting booths and more. This design also allows for increased mounting versatility with mounting options including adjustable, fixed angle, or no mounting bracket. And with major international certifications, EF1A can even be used in applications worldwide.

- Hazardous location LED flood lights (Class I, Zone 1 and Zone 2)
- Heavy-duty aluminum housing with reinforced glass lens
- Narrow-angle and wide-angle beam models available
- Clear or translucent lenses
- Available with adjustable, fixed angle or no mounting bracket
- Four conduit sizes available
- Type 4X (IP67) without switch
- Type 3S (IP65) with switch
- IP65 (with switch)



#### LED Optical Specifications

| Lens Type<br>Collecting Lens (Optical Dispersion)       | Clear      |         | Diffused |         |
|---------------------------------------------------------|------------|---------|----------|---------|
|                                                         | With       | Without | With     | Without |
| Number of LEDs                                          | 16         |         |          |         |
| Illumination Color                                      | Cool White |         |          |         |
| Color Temperature (typ.)                                | 5700K      |         |          |         |
| Total Luminous Flux (typ.)                              | 960lm      |         |          |         |
| Reference Illuminance (typ.)<br>At 1.0m directory below | 1100lx     | 450lx   | 205lx    | 175lx   |

#### Certifications and Compliances

| NEC and CEC                                 | IEC and ATEX (94/9/EC)                                                   |
|---------------------------------------------|--------------------------------------------------------------------------|
| Cl. I, Zone 1, Groups IIB                   | Zones 1 & 21 and 2 & 22                                                  |
| UL: Class I, Zone 1, AEx d IIB T4 Gb        | ATEX: II 2G Ex d IIB T4 Gb<br>II 2D Ex tb IIIC T 130°C Db IP67 (or IP65) |
| c-UL: Ex d IIB T4 Gb X                      | IECEx: Ex d IIB T4 Gb<br>Ex tb IIIC T 130°C Db IP67 (or IP65)            |
| Certificate/file number:<br>UL/c-UL E353024 | Certificate numbers: DEMKO 14 ATEX 1208667X<br>IECEx UL 14.0048X         |

#### General Specifications

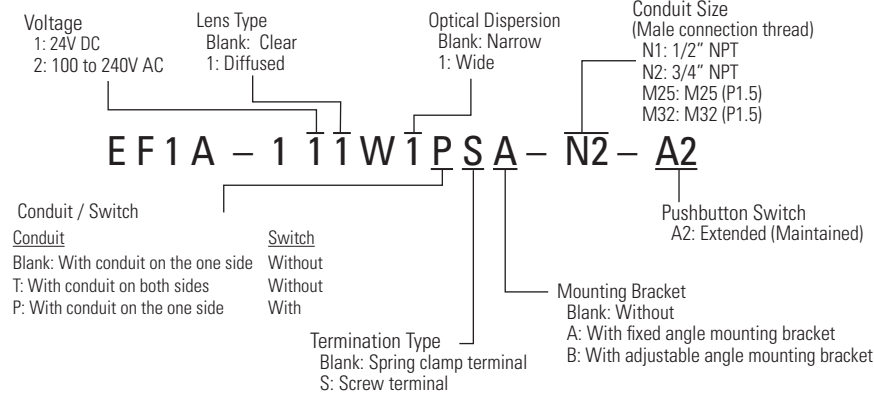
| Model                                | EF1A -11                                                                                                                  | EF1A -12                     |
|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Rated Voltage                        | 24V DC                                                                                                                    | 100 to 240V AC               |
| Voltage Range                        | 21.6 to 26.4V DC                                                                                                          | 90 to 264V AC                |
| Rated Power (Typ.)                   | 17W (at rated voltage)                                                                                                    | 19W (at rated voltage)       |
| Dielectric Strength                  | 500V AC 1 minute input - FG                                                                                               | 2000V AC 1 minute input - FG |
| Insulation Resistance                | 100MΩ minimum (500V DC megger) input - FG                                                                                 |                              |
| Vibration Resistance (damage limits) | Frequency 5 to 55Hz, amplitude 0.5mm                                                                                      |                              |
| Shock Resistance (damage limits)     | 1000m/s <sup>2</sup>                                                                                                      |                              |
| Operating Temperature                | -20 to +50°C (no freezing)                                                                                                |                              |
| Operating Humidity                   | 45 to 85% RH (no condensation)                                                                                            |                              |
| Storage Temperature                  | -35 to +70°C (no freezing)                                                                                                |                              |
| Life <sup>1</sup>                    | Over 50,000 hours (The illumination duration in which the brightness maintains a minimum of 70% of initial value at 25°C) |                              |
| Material                             | Housing: aluminum, Front panel: stainless steel, Mounting bracket: stainless steel<br>Lens: reinforced glass              |                              |
| Weight (approx.)                     | 2.9Kg (without mounting bracket), 3.1Kg (with mounting bracket)                                                           |                              |

## Part Numbers

| Rated Voltage  | Optical Dispersion | Lens Type ①                             | Conduit Entry ②                                                        | Termination Type ③                                   | Conduit Size ④                                                   | Pushbutton Switch ⑤                               | Mounting Bracket                         | Part No.          |
|----------------|--------------------|-----------------------------------------|------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------|------------------------------------------|-------------------|
| 100 to 240V AC | Narrow             | Blank: Clear glass<br>1: Diffused glass | Blank: One Side<br>T: Both Sides<br>P: One Side (Another Side Switch)* | Blank: Spring Clamp<br>Terminal<br>S: Screw Terminal | N1: 1/2"NPT<br>N2: 3/4"NPT<br>M25: M25 (P1.5)<br>M32: M32 (P1.5) | Empty: Without pushbutton switch - type 4x (IP67) | Without (4-M6 screw on the back of EF1A) | EF1A-12①W②③-④-⑤   |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Fixed angle)                       | EF1A-12①W②③A-④-⑤  |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Adjustable angle)                  | EF1A-12①W②③B-④-⑤  |
|                | Wide               |                                         |                                                                        |                                                      |                                                                  |                                                   | Without (4-M6 screw on the back of EF1A) | EF1A-12①W1②③-④-⑤  |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Fixed angle)                       | EF1A-12①W1②③A-④-⑤ |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Adjustable angle)                  | EF1A-12①W1②③B-④-⑤ |
| 24V DC         | Narrow             |                                         |                                                                        |                                                      | (Male connection thread)                                         | A2: With pushbutton switch - type 3S (IP65)       | Without (4-M6 screw on the back of EF1A) | EF1A-11①W②③-④-⑤   |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Fixed angle)                       | EF1A-11①W②③A-④-⑤  |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Adjustable angle)                  | EF1A-11①W②③B-④-⑤  |
|                | Wide               |                                         |                                                                        |                                                      |                                                                  |                                                   | Without (4-M6 screw on the back of EF1A) | EF1A-11①W1②③-④-⑤  |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Fixed angle)                       | EF1A-11①W1②③A-④-⑤ |
|                |                    |                                         |                                                                        |                                                      |                                                                  |                                                   | With (Adjustable angle)                  | EF1A-11①W1②③B-④-⑤ |

\* End of Part No. is marked A2 (pushbutton switch)

## Part Number Structure (use for interpreting part numbers only)



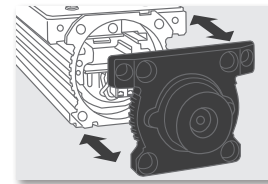
## Termination Type



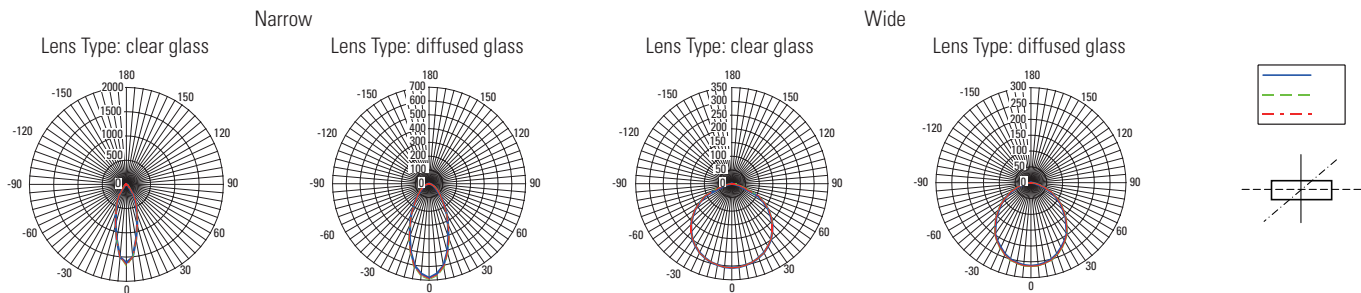
Spring clamp terminal



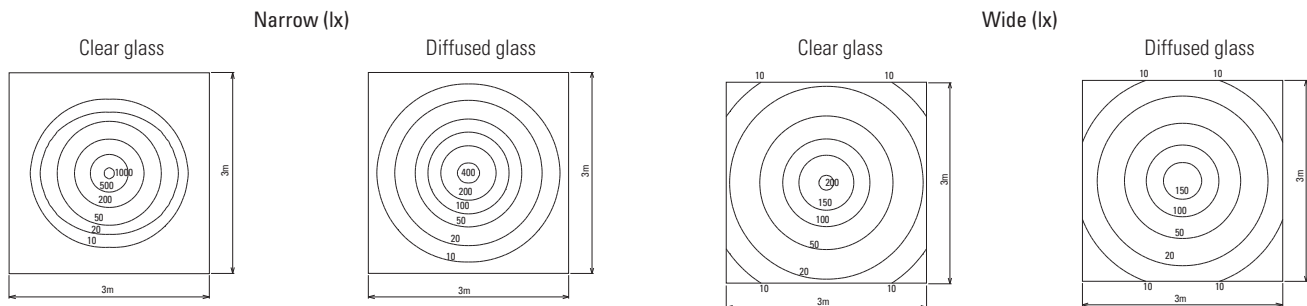
Screw terminal



## Optical Dispersion (cd/1000lm)

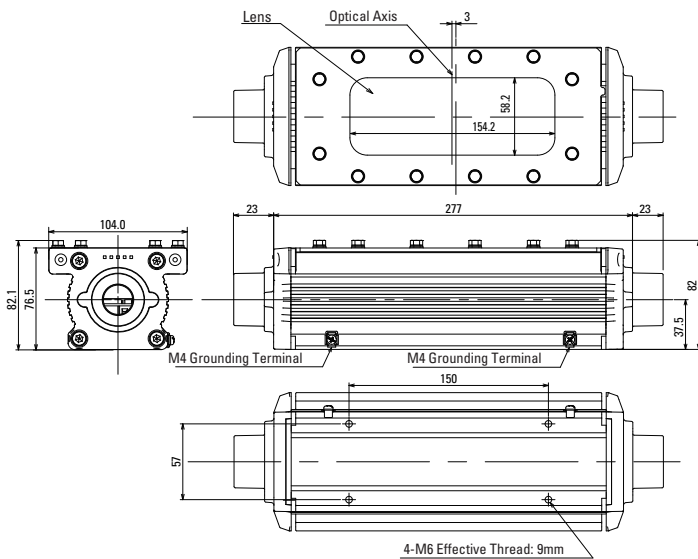


## Illuminance Distribution (at 1.0m)

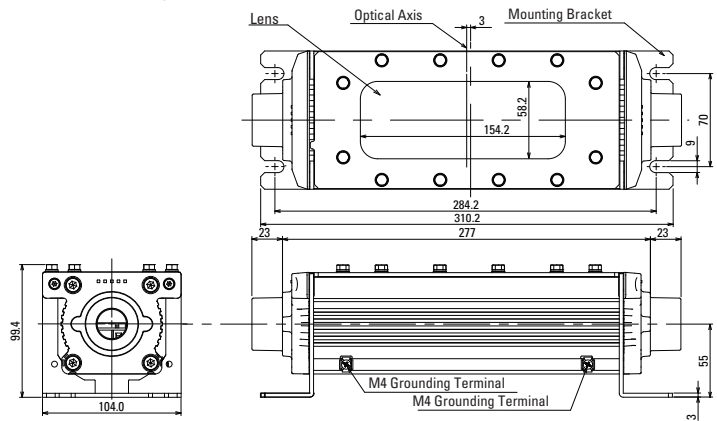


## Dimensions

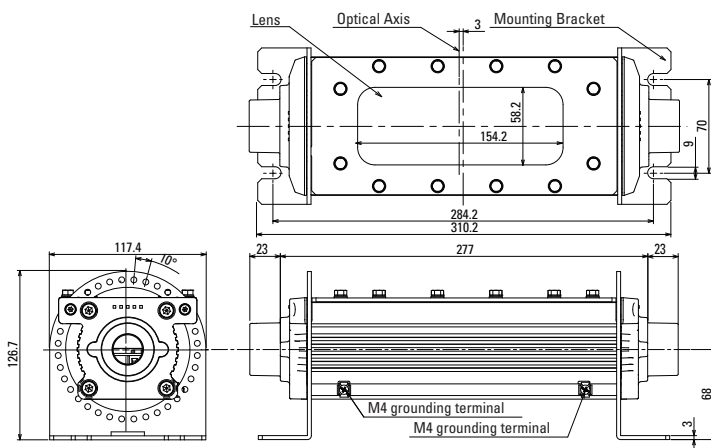
1) Direct mounting



2) With fixed mounting bracket

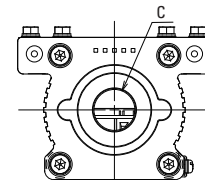
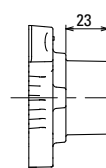


3) With angle adjustable bracket

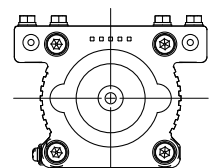


(4) Dimension of conduit entry and ON/OFF switch and end cover

Conduit entry or End cover



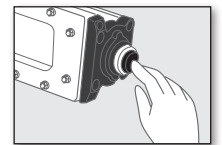
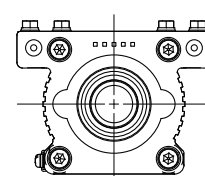
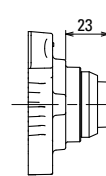
Conduit Entry Cover



End Cover

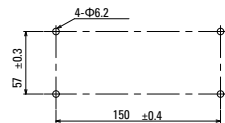
| Conduit entry size | C        |
|--------------------|----------|
| N1                 | 1/2" NPT |
| N2                 | 3/4" NPT |
| M25                | M25 P1.5 |
| M32                | M32 P1.5 |

With ON/OFF Switch

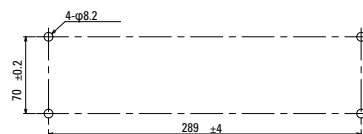


(5) Mounting hole layout

1) Direct mounting

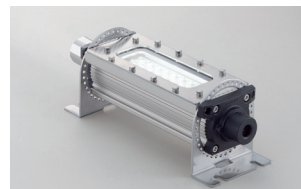


2) With mounting bracket/angle adjustable bracket



(6) Attachments

- Instruction Manual.....1
- Hexagon Wrench (3).....1 (only with bracket)
- Hexagon Wrench (5).....1



With angle adjustable bracket

# Mouser Electronics

Authorized Distributor

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## IDEC:

[EF1A-121W1A-N2](#) [EF1A-111W1-M32](#) [EF1A-11W1PSB-M32-A2](#) [EF1A-121W1TA-M25](#) [EF1A-12W1PCB-N2-A2](#)  
[EF1A-12WCB-M32](#) [EF1A-121W1TS-N1](#) [EF1A-121WP-N2-A2](#) [EF1A-11WPSA-M25-A2](#) [EF1A-12WCA-N1](#) [EF1A-](#)  
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[EF1A-12W1PS-N1-A2](#) [EF1A-12WPCA-M25-A2](#) [EF1A-121W1TC-M25](#) [EF1A-111WTCA-M32](#) [EF1A-12W1PSB-N2-A2](#)  
[EF1A-121WSA-N2](#) [EF1A-111W1-M25](#) [EF1A-121WB-N1](#) [EF1A-111W1PB-M32-A2](#) [EF1A-121WTC-M32](#) [EF1A-](#)  
[12W1SB-M25](#) [EF1A-111WTS-M25](#) [EF1A-121W1PB-M25-A2](#) [EF1A-111WTC-M25](#) [EF1A-11WTSB-N2](#) [EF1A-111WB-](#)  
[M32](#) [EF1A-121WB-N2](#) [EF1A-121W1TSA-N1](#) [EF1A-121W1CB-M25](#) [EF1A-121WTA-M32](#) [EF1A-11W1TSA-M25](#)  
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[M32](#) [EF1A-121W1PB-M32-A2](#) [EF1A-121WTS-N2](#) [EF1A-111W1P-N2-A2](#) [EF1A-11WS-N2](#) [EF1A-121WPA-M25-A2](#)  
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