

# LED INDICATOR

## SOLID FRONT WATERTIGHT PANEL SEAL



### Model ML2030

Designed for use where a watertight panel seal is required for system performance. Can be used as a function indicator on aircraft avionics systems, test equipment, medical equipment, machine tools, and wherever severe environmental conditions are present.

#### FEATURES

- O-ring panel seal
- Dual finish case
- Low power use
- Performs in severe environments
- Rugged construction

#### MECHANICAL SPECIFICATIONS

**Case:** Aluminum, black anodized front bezel with conductive clear chromate body.

**Mounting:** Front panel mount with 5/16"-32 nut and lock washer.

**Seal:** Environmentally sealed case. MIL-DTL-3661, Para. 4.6.11.1

**O-ring:** Fluorosilicone rubber

ML2030E



#### ENVIRONMENTAL SPECIFICATIONS

**Vibration:** .06" D.A. or 20 Gs Peak, whichever is less, 10Hz to 2kHz, MIL STD 202, Method 204, Test Condition D

**Shock:** 100 Gs MIL STD 202, Method 213, Test Condition I

**Moisture Resistance (Humidity):** MIL STD 202, Method 106

**Barometric Pressure (Reduced):** 100,000 ft., MIL STD 202, Method 105, Test Condition D

**Reliability:** 3 x 10<sup>6</sup> hours min. MTBF @ 25°C

**Salt Atmosphere (Corrosion):** MIL STD 202, Method 101, Test Condition B

#### ELECTRO-OPTICAL CHARACTERISTIC SPECIFICATIONS

Absolute Maximum Ratings @Temp = 25°C			
Color	Red	Yellow	Green
Forward Voltage (VDC)	1.9	2.0	2.1
DC Forward Current (mA DC) ①	30	20	30
Reverse Voltage (VDC) @ I <sub>R</sub> = 100 µA	5	5	5
Power Dissipation (mW)	135	85	135
Luminous Intensity (mcd) typical @ I <sub>F</sub> = 10 mA	Non-diffused	50	70
	Diffused	12	12
Dominant Wave Length (nm) typical	626	585	569
Viewing Angle (2 Ø <sup>1/2</sup> ) typical	Non-diffused	35°	24°
	Diffused	60°	60°
Operating Temperature (°C)	-55 to +100	-55 to +100	-20 to +100
Storage Temperature (°C)	-55 to +100	-55 to +100	-55 to +100
Lead Soldering Temperature	260°C for 5 seconds		

**Notes:** ① For red and green, derate linearly from 50°C @ 0.5 mA/°C. For yellow derate linearly from 50°C @ 0.2 mA/°C

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### ORDERING INFORMATION

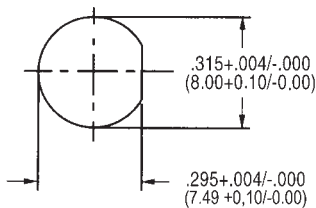
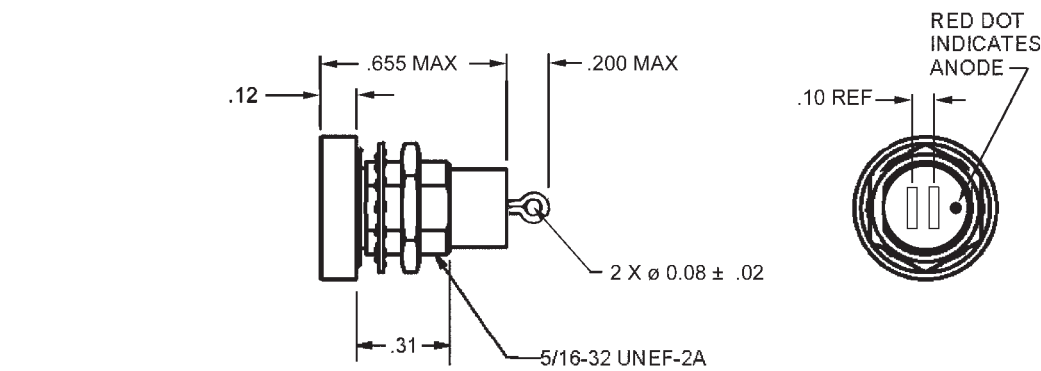
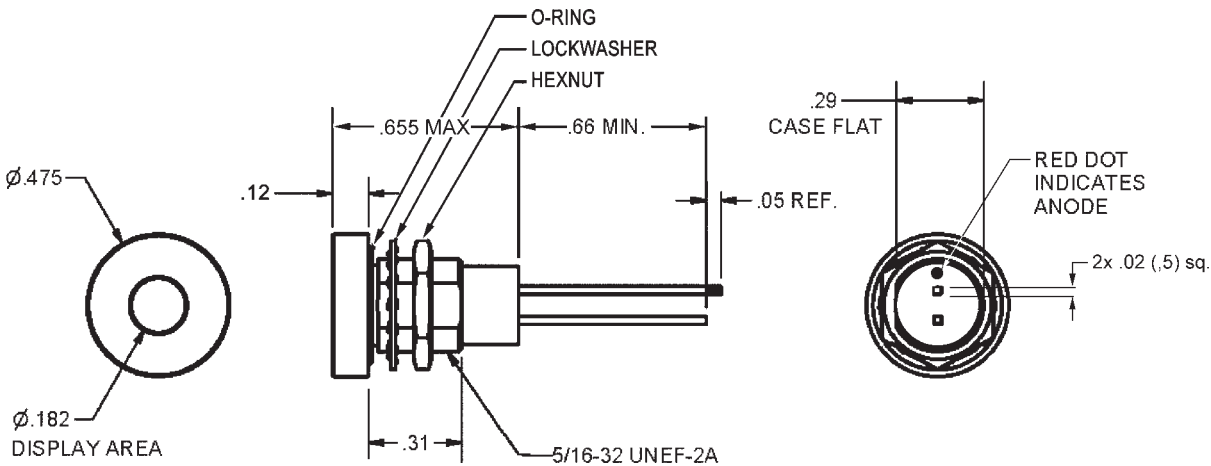
When ordering, show basic part number first, LED color, lens type, and terminal style. If this part requires customization, a special factory assigned modification number will be assigned to the end of the ordering number. Consult the factory for special configurations.

Example: Basic model with EMI screen, a red LED, a diffused lens, and looped terminals would be ML2030E-R-D-LT.

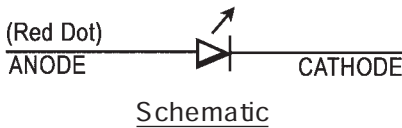
ML2030E - R - D - LT - ( )

Standard factory options are designated by "-Sxxx"

Basic Model Number	EMI Screen	LED Color	Lens Type	Terminal Style
ML2030		R Red	ND Non-diffused	ST Straight Leads
	E Screen	Y Yellow	D Diffused	LT Loop Terminals
		G Green		



Recommended Mounting Hole



NOTE:  
 $\phi .475$  AND FRONT SURFACE OF FLANGE IS BLACK ANODIZED.  
ALL OTHER SURFACES ARE CLEAR CHROMATE.

ML2030

NOTE: Dimensions in ( ) are mm. Tolerances: Decimals:  $\pm .010$  (0.25)  
Fractions:  $\pm 1/64$  Mounting Torque: 10-12 in. lbs.

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