

62040 1N6609
1N6610
1N6611

**JAN QUALIFIED, HI-BRITE
HERMETIC LED INDICATORS**

Mii
**OPTOELECTRONIC PRODUCTS
DIVISION**

REVISED 5/3/01

Features:

- Sunlight viewable
- Hermetically sealed
- Choice of colors (Red, Yellow, Green)
- Panel Mount versions with wire wrappable leads
- Designed for Hi-Reliability applications

Applications:

- P.C. Board Fault Indicator
- Logic Status Indicator
- Binary Data Display
- Power supply on/off indicator
- Wide viewing angle requirements

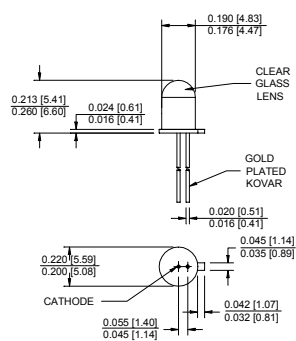
DESCRIPTION

The **1N6609**, **1N6610** and **1N6611** series indicators are hermetically sealed in TO-46 packages with a clear glass lens which provides improved viewability in bright sunlight. The 1N6609 (red) and 1N6610 (yellow) indicators utilize a high efficiency GaAsP on GaP LED, while the 1N6611 (green) indicator utilizes a GaP on GaP LED. Panel mount versions with wire wrap leads are available including necessary hardware. All versions are available in standard, JAN or JANTX screened.

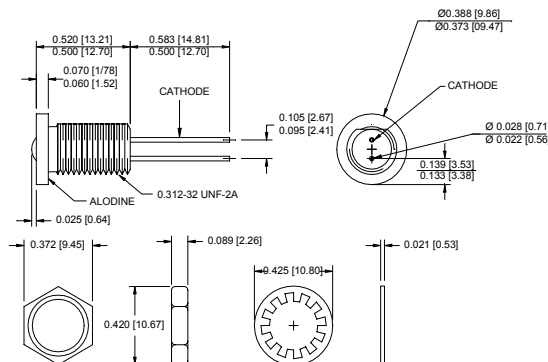
ABSOLUTE MAXIMUM RATINGS

Storage Temperature..... -65°C to +100°C
Operating Temperature -55°C to +100°C
Reverse Voltage 5Vdc
Power Dissipation (Derate at the rate of 2.4 mW/°C above 50°C) 120mW
Forward Current-Continuous 35mA
Lead Soldering Temperature (1/16" (1.6mm) from case for 10 seconds) 260°C
Maximum Mounting Torque..... 25in•lbs

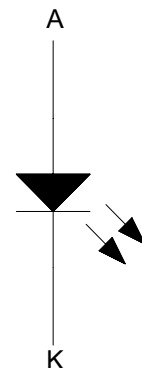
Indicator Dimensions



Panel Mount Dimensions



Schematic Diagram



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

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ELECTRICAL CHARACTERISTICS $T_A=25^\circ\text{C}$

PART NUMBER	COLOR	TEST CONDITION	PARAMETER LIMITS			
		I_F mA	PEAK λ TYP.	$I_{V1\theta} = 0^\circ$ MIN.	V_F MAX.	C MAX.
1N6609 M19500/519	RED	20	635	20 mcd	3V	100pF
1N6610 M19500/520	YELLOW	20	585	20 mcd	3V	100pF
1N6611 M19500/521	GREEN	20	570	20 mcd	3V	100pF

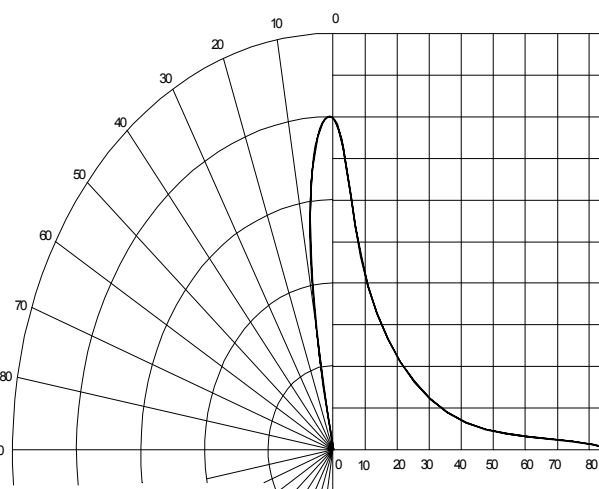
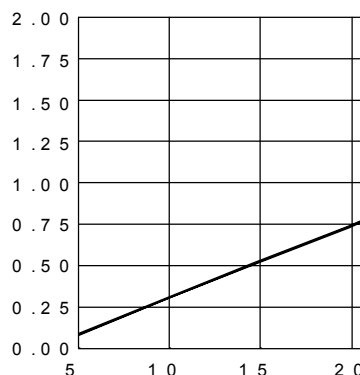
RED/YELLOW

I_F - Forward Current - mA
Relative Luminous Intensity
vs
Forward Current
(Normalized at 20mA)

GREEN

I_F - Forward Current - mA
Relative Luminous Intensity
vs
Forward Current
(Normalized at 25mA)

Relative Luminous Intensity vs. Angular Displacement



RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Forward Current	I_F	20	35	mA
Operating Temperature	T_A	-55	+100	$^\circ\text{C}$

SELECTION GUIDE

PART NUMBER	PART DESCRIPTION	CONTROLLING MIL DOCUMENT
JAN or JANTX1N6609	TO-46 LED Indicator	MIL-PRF-19500/519A
JAN or JANTXM19500/519H	Panel Mount Version, LED Indicator	MIL-PRF-19500/519A
JAN or JANTX1N6610	TO-46 LED Indicator	MIL-PRF-19500/520A
JAN or JANTXM19500/520H	Panel Mount Version, LED Indicator	MIL-PRF-19500/520A
JAN or JANTX1N6611	TO-46 LED Indicator	MIL-PRF-19500/521A
JAN or JANTXM19500/521H	Panel Mount Version, LED Indicator	MIL-PRF-19500/521A

NOTE:

1. JAN Quality level is designated by adding -03 to part #.
2. JANTX Quality level is designated by adding -04 to part #.