

**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

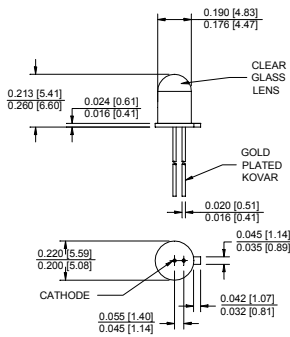
**DESCRIPTION**

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.

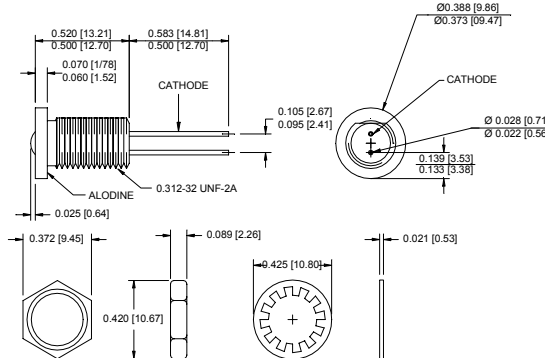
**ABSOLUTE MAXIMUM RATINGS**

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

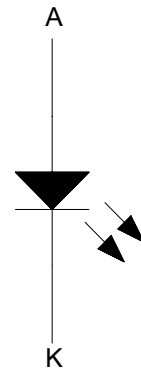
**Indicator Dimensions**



**Panel Mount Dimensions**



**Schematic Diagram**



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]

REVISED 5/3/01

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

PART NUMBER	COLOR	TEST CONDITION	PARAMETER LIMITS			
			$I_F$ mA	PEAK $\lambda$ TYP.	$I_{V1\theta = 0^{\circ}}$ MIN.	$V_F$ 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

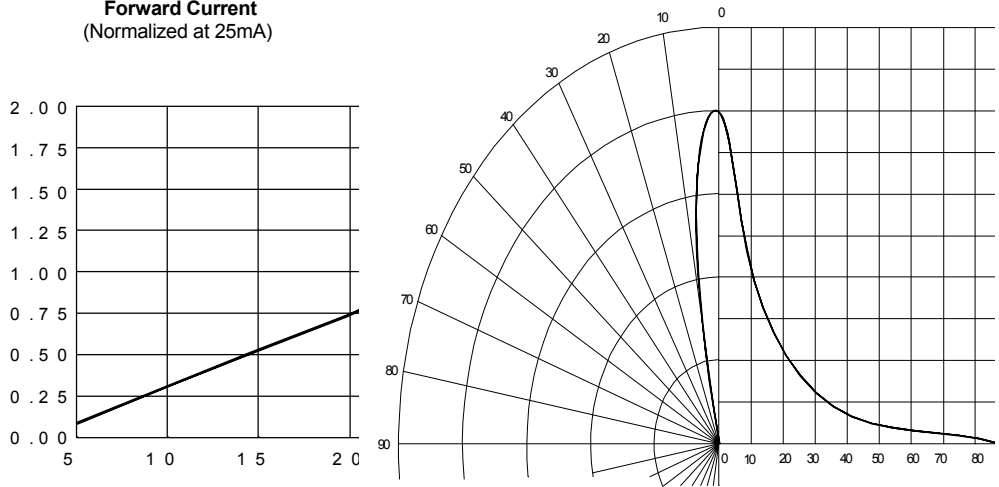
**RED/YELLOW**

$I_F$  - 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:**

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