

**66217**

**FIBER OPTIC LED IN SMA HOUSING**



04/09/2013

**Features:**

- Fiberoptic LED with internal ball lens
- Industry standard SMA style connector
- High coupled output power 60  $\mu$ W @60 mA (100 micron fiber) typical
- Data rates up to 10 MHz
- 850 nm wavelength

**Applications:**

- Short haul data Link
- Mobile Communications
- Local Area Networks

**DESCRIPTION**

The **66217** series, high speed fiber-optic LED is packaged in an industry standard SMA housing. An internal "glass ball" lens focuses the light from the die to increase light coupling for 50 to 150 micron multi-mode optical fibers. Typical coupled power is greater than -12 dbm (60  $\mu$ W) into a 100 micron fiber at 60 mA. With rise and fall times of 10 ns maximum, this part may be used in medium to high speed data transmission applications. This LED may be screened to meet specific customer requirements or to MIL-PRF-19500.

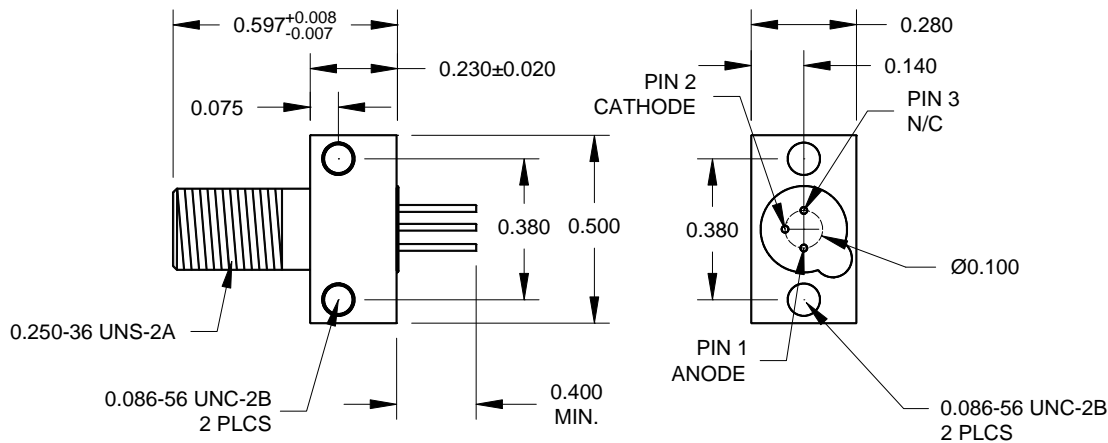
**ABSOLUTE MAXIMUM RATINGS 25°C FREE AIR TEMPERATURE UNLESS NOTED**

Reverse Voltage .....	1 Vdc
Forward Continuous Current (Note 1).....	100 mA
Transmission Rate at 100 mA I <sub>F</sub> .....	10 Mbits/s
Storage Temperature.....	-55°C to +150°C
Operating Temperature .....	-40°C to +125°C
Soldering Temperature (10 seconds, 1/16" from case).....	240°C

**NOTES:**

1. Derate linearly at 1mA/°C above 25°C.

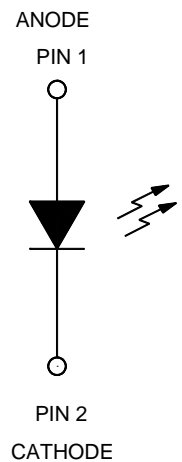
**Package Dimensions**



UNLESS OTHERWISE SPECIFIED, TOLERANCE IS ±0.005.

ALL DIMENSIONS ARE IN INCHES.

**Schematic Diagram**



# 66217

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## ELECTRICAL CHARACTERISTICS

T<sub>A</sub> = 25°C unless otherwise specified.

## FIBER OPTIC LED IN SMA HOUSING

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
Forward Voltage	V <sub>F</sub>			2	V	I <sub>F</sub> = 100 mA	
Reverse Breakdown Voltage	BV <sub>R</sub>	1			V	I <sub>R</sub> = 10 μA	
Coupled Power Output	P <sub>o</sub>	90			μ W	I <sub>F</sub> = 100 mA	1
Output Rise Time	t <sub>R</sub>		8	10	ns	I <sub>F</sub> = 100 mA 5 mA pre-bias	
Output Fall Time	t <sub>F</sub>		6	10	ns	I <sub>F</sub> = 100 mA 5 mA pre-bias	
Peak Wavelength	λ <sub>p</sub>		850		nm	I <sub>F</sub> = 100 mA	

### NOTES:

1. Tested using a 100/140 μm fiber (NA = 0.29). Actual coupled power may vary due to alignment, receptacle and fiber.

### RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Forward Current	I <sub>F</sub>	20	100	mA
Transmission Rate		10		Mb/sec

### SELECTION GUIDE

PART NUMBER	PART DESCRIPTION
66217-001	Commercial
66217-101	Screened to TX level