

**61111**

**TO - 46 HIGH SPEED PHOTODETECTOR**



05/16/2011

**Features:**

- Hermetically sealed
- High speed
- TTL compatible
- Narrow acceptance angle

**Applications:**

- Incremental encoding
- Reflective sensors
- Position sensors
- Level sensors

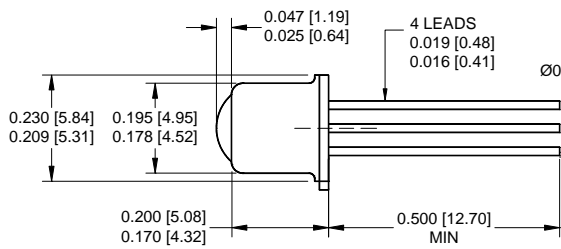
**DESCRIPTION**

The **61111** is a high speed, high gain, inverting photodetector in a lensed TO-46 four-lead package. The TTL compatible output is capable of switching with propagation delays of 55 ns typical. Available screened to customer specifications or screened to MIL-PRF-19500.

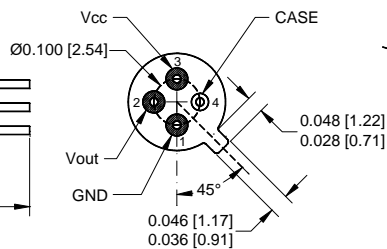
**ABSOLUTE MAXIMUM RATINGS**

Output Voltage .....	7 V
Supply Voltage .....	7 V
Continuous Collector Current .....	20 mA
Power Dissipation .....	175 mW
Storage Temperature .....	-65°C to +150°C
Operating Temperature .....	-55°C to +125°C
Lead Soldering Temperature (10 seconds, 1/16" from case) .....	240°C

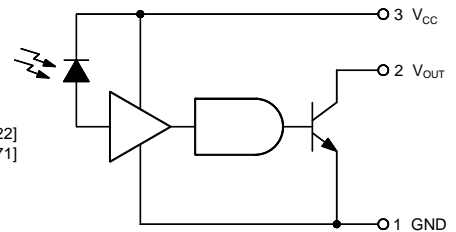
**Package Dimensions**



ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]



**Schematic Diagram**



# 61111

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## ELECTRICAL CHARACTERISTICS

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

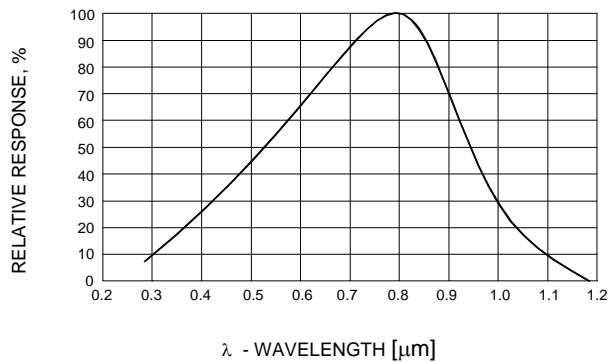
## TO - 46 HIGH SPEED PHOTODETECTOR

PARAMETER	SYMBOL	MIN	TYP	MAX	UNITS	TEST CONDITIONS	NOTE
High Level Output Current	I <sub>OH</sub>		5	200	μA	V <sub>CC</sub> = 5.5 V, V <sub>O</sub> = 5.5 V, I <sub>F</sub> = 250 μA	
Low Level Output voltage	V <sub>OL</sub>		0.4	0.5	V	V <sub>CC</sub> = 5.5 V, I <sub>OL</sub> (Sinking) = 10 mA	
High Level Supply Current	I <sub>CCH</sub>		9	13	mA	V <sub>CC</sub> = 5.5 V, I <sub>F</sub> = 0	
Angular Response	θ		10		degrees		1

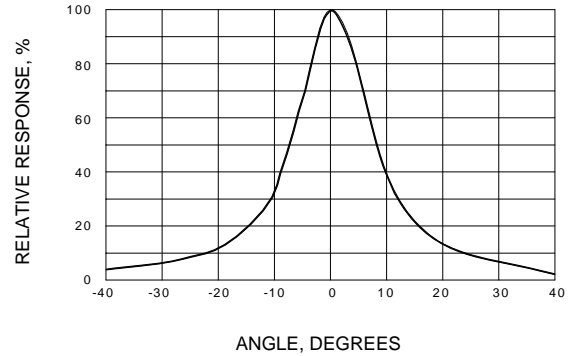
### NOTES:

- The angle between incidence for peak response and incidence for 50% of peak response.

### RELATIVE SPECTRAL RESPONSE



### ANGULAR RESPONSE



### RECOMMENDED OPERATING CONDITIONS:

PARAMETER	SYMBOL	MIN	MAX	UNITS
Supply Voltage	V <sub>CC</sub>	4.5	5.5	V

### SELECTION GUIDE

PART NUMBER	PART DESCRIPTION
61111-001	Commercial
61111-101	Screened to TX level
61111-105	Screened to TXV level