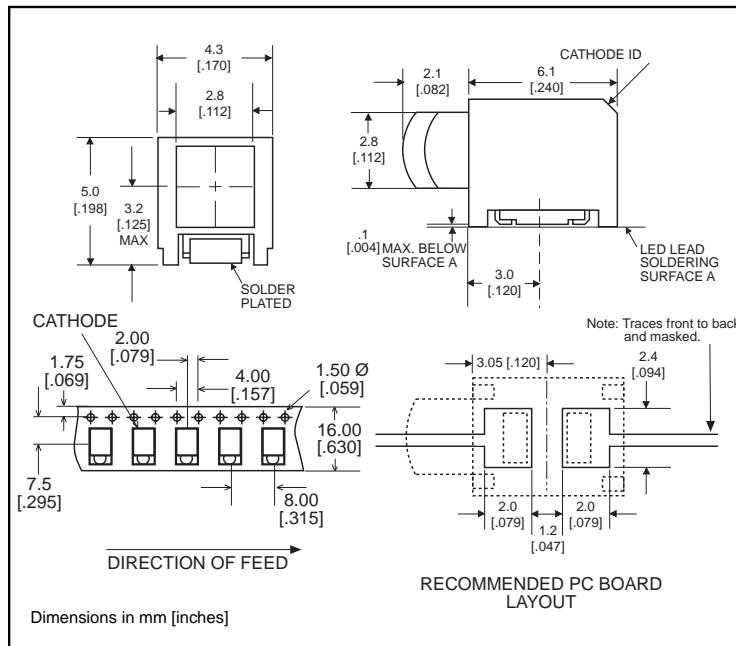


**3mm  
Prism® CBI® Infrared Emitter  
True Surface Mount LED**

**Dialight**

**591-7101-1xx**



Dimensions in mm [inches]

**Part No.\***

591-7101-1xx

**Configuration**

880 nm IR Emitter

**Applications**

- Control and drive circuits
- Copiers
- Proximity Sensors
- Data Links

**Benefits**

- Small Package conserves space
- Fast switching time
- Increased sensing range from narrow beam
- Very high efficiency GaAlAs IR LEDs
- Long product life due to reliable components
- Meets UL 94V-0 requirements
- Vibration and shock resistant
- Economical handling with 7 and 13 inch reels

U.S. Patent RE 34,254; foreign patents pending

**Characteristics (T<sub>A</sub> = 25°C)  $\lambda$  = 880 nm**

Peak Wavelength (I <sub>F</sub> = 100 mA, t <sub>p</sub> = 20 ms)	880 ±20 nm
Spectral Bandwidth (50% of I <sub>REL</sub> , I <sub>F</sub> = 100 mA)	80 nm
Full Angle (2θ 1/2)	30°
Emitting Area Dimensions	0.1 x 0.1 in.
Capacitance (V <sub>R</sub> = 0 V, f = 1 MHz)	25 pF
Forward Voltage (I <sub>F</sub> = 100 mA, t <sub>p</sub> = 20 ms)	1.5 (≤1.8) V
Forward Voltage (I <sub>F</sub> = 1 A, t <sub>p</sub> = 100 µs)	3.0 (≤3.8) V
Reverse Current (V <sub>R</sub> = 5 V)	0.01 (≤1) µA
Total Radiant Flux (I <sub>F</sub> = 100 mA, t <sub>p</sub> = 20 ms)	10 mW
Radiant Intensity (I <sub>F</sub> = 100 mA, t = 20 ms)	6 mW/sr

**\* ORDERING INFORMATION**

**591-7101-1xx**

packaging option

02	20 pieces on tape
07	7" reel, 400 pcs/reel
13	13" reel, 1600 pcs/reel

**Maximum Ratings**

Reverse Voltage	5 V
Forward Current	100 mA
Surge Current (t = 10 µs, D = 0)	2.5 A
Total Power Dissipation	180 mW
Reflow Soldering:	
Temperature at Soldering Zone	Maximum Transit Time
260° C	10 sec
215° C	30 sec
Preheating Temperature (Approximately 1 min)	150° C
Operating & Storage Temperature	-55° C to +100° C
Junction Temperature	100°C