L E D L A M P

■ SILICON PHOTORANSISTORS
MODEL: BP-32/BP-51

■ GENERAL DESCRIPTION

The BP-32 and BP-51 are Silicon Nitride Passivated NPN planar Phototransistors with exceptionally stable characteristics and high illumination sensitivity. The cases of BP-32 and BP-51 are encapsulated in clear plastic T—1 to T-1¾ package individually.

■ FEATURES

- High illumination sensitivity.
- Stable characteristics.
- Spectrally and mechanically matched with IR Emitter.

■ APPLICATIONS

- Remote control.
- Burglar alarm.
- Photo detector.
- Automatic control system.
- Smoke detector.
- Industrial use.
- Computer I/O peripheral.

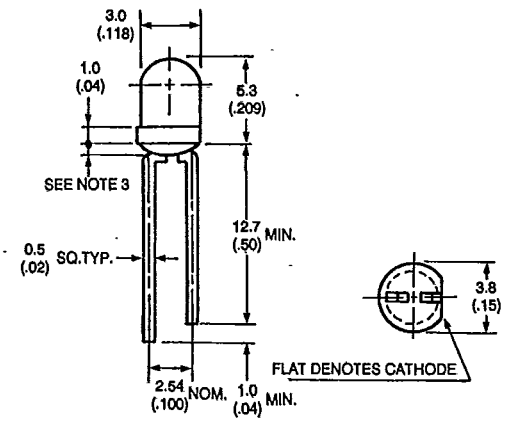
■ ABSOLUTE MAXIMUM RATINGS (25°C unless othetwise noted)

- Collector-to-Emitter Sustaining Voltage Vce (sus).....30V
- Emitter-to-Collector Breakdown Voltage.....5V
- Collector Current Ic.....25mA
- Operating Temperature Range.....−40°C to +85°C
- Storage Temperature Range.....−40°C to +85°C
- Lead Soldering Temperature (1/16 inch from case).....5 sec @ 240°C
- Relative Humidity at 85°C.....85%
- Power Dissipation at (or below) 25°C Free Air Temperature.....100mW

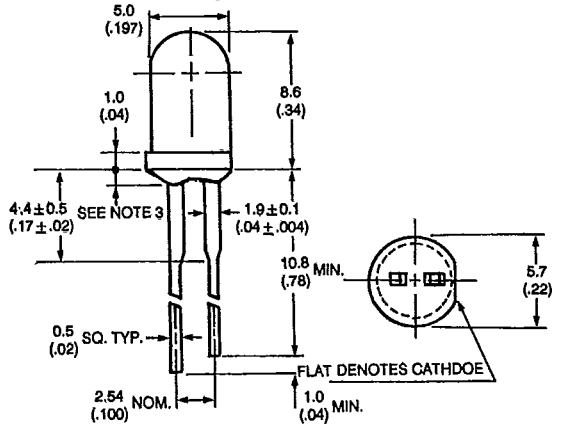
■ ELECTRICAL AND RADIANT CHARACTERISTICS (Ta=25°C)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
Vce (sus)	Collector-to-Emitter Sustaining Voltage	30	60		V	I_C=100μA, H=0
BVeco	Emitter-to-Collector Breakdown Voltage	5	7		V	I_C=100μA, H=0
V_{ce} (sat)	Collector-to-Emitter Saturation Voltage		0.4		V	I_C=0.5mA, H=20mW/cm²
I_D	Dark Current			100	nA	V_{ce}=15V, H=0
I_L	Photo Current, Tungsten Source at Color Temperature of 2854°K	1.0	20		mA	V_{ce}=5V, H=20mW/cm²
T_R	Rise Time (10% to 90%)		5		μs	V_{CC}=30V, I_L=800μA
T_F	Fall Time (90% to 10%)		5		μs	R_L=1 kohm

BP-32



BP-51



PACKAGE DIMENSIONS

NOTES:

1. All Dimensions are in millimeters (inches).
2. Tolerance is ±0.25mm (.010") unless otherwise specified.
3. Protruded resin under flange is 1.5mm (.059") max.
4. Lead spacing is measured where the leads emerge from the package.
5. Specifications are subject to change without notice.