

PHOTOTRANSISTOR

BP103B-2/3

Page 1 / 2

Features

- MECHANICALLY AND SPECTRALLY MATCHED TO INFRARED EMITTING LED LAMP
- T_{1 3/4}, TRANSPARENT EPOXY RESIN LENS, SOLDER TABS 2.54 mm (1/10") LEAD SPACING, COLLECTOR MARKING: SHORT SOLDER LEAD, FLAT AT PACKAGE BOTTOM
- WATER CLEAR LENS

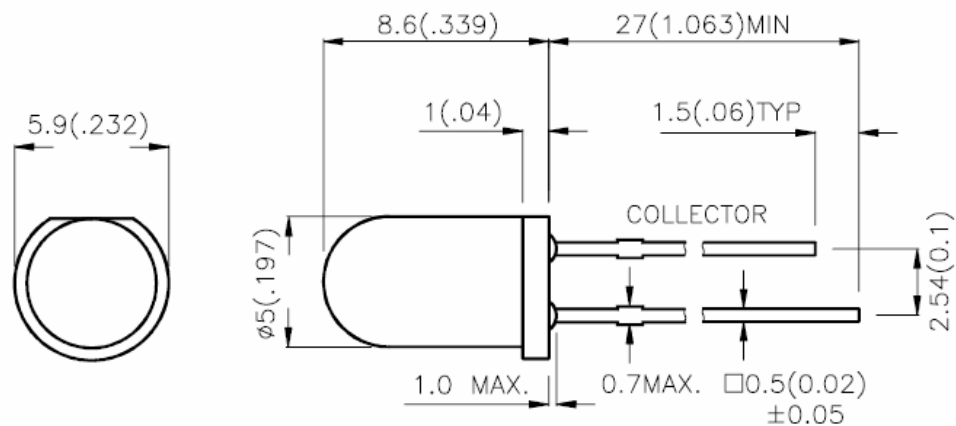
Description

- MADE WITH NPN SILICON PHOTOTRANSISTOR CHIP

Applications

- Computer-controlled flashes
- LIGHT-REFLECTING SWITCHES FOR STEADY AND VARYING INTENSITY
- INDUSTRIAL ELECTRONICS
- FOR CONTROL AND DRIVE CIRCUITS

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25 (0.01)$ unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subject to change without notice.

PHOTOTRANSISTOR

BP103B-2/3

Page 2 / 2

Electrical / Optical Characteristics at $T_A=25^\circ\text{C}$

| Symbol | Parameter | Min. | Typ. | Max. | Unit | Test Condition |
|-----------------|---|------|------|------|------|--|
| $V_{BR\ CE0}$ | Collector-to-Emitter Breakdown Voltage | 30 | - | - | V | $I_C=100\mu\text{A}$ $E_e=0\text{mW}/\text{cm}^2$ |
| $V_{BR\ EC0}$ | Emitter-to-Collector Breakdown Voltage | 5 | - | - | V | $I_E=100\mu\text{A}$ $E_e=0\text{mW}/\text{cm}^2$ |
| $V_{CE\ (SAT)}$ | Collector-to-Emitter Saturation Voltage | - | - | 0.8 | V | $I_C=2\text{mA}$ $E_e=20\text{mW}/\text{cm}^2$ |
| I_{CE0} | Collector Dark Current | - | - | 100 | nA | $V_{CE}=10\text{V}$ $E_e=0\text{mW}/\text{cm}^2$ |
| T_R | Rise Time (10% to 90%) | - | 3 | - | us | $V_{CE}=5\text{V}$ $I_C=1\text{mA}$ $R_L=1000\Omega$ |
| T_F | Fall Time (90% to 10%) | - | 3 | - | us | |
| $I_{(ON)}$ | On State Collector Current | 0.1 | 0.5 | - | mA | $V_{CE}=5\text{V}$ $E_e=1\text{mW}/\text{cm}^2$ $\lambda=940\text{nm}$ |

Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

| Parameter | Maximum Rating |
|---|--|
| Collector-to-Emitter Breakdown Voltage | 30V |
| Emitter-to-Collector Breakdown Voltage | 5V |
| Power Dissipation at (or below) 25°C Free Air Temperature | 100mW |
| Operating Temperature Range | $-40^\circ\text{C} \sim +85^\circ\text{C}$ |
| Storage Temperature Range | $-40^\circ\text{C} \sim +85^\circ\text{C}$ |
| Lead soldering Temperature ($>5\text{mm}$ for 5sec) | 260°C |