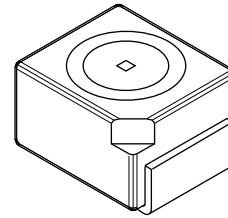
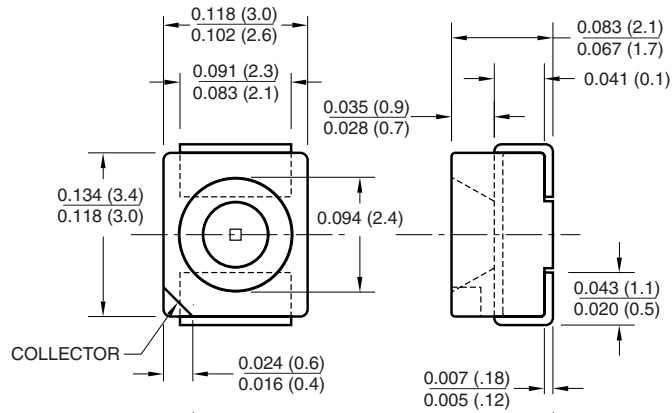


PACKAGE DIMENSIONS



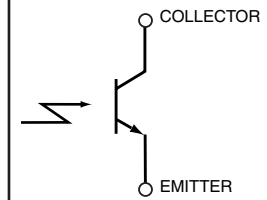
NOTES:

1. Dimensions for all drawings are in inches (millimeters).
2. Tolerance of $\pm .010$ (.25) on all non nominal dimensions unless otherwise specified.

FEATURES

- Surface Mount PLCC-2 Package
- Wide Reception Angle, 120°
- High Sensitivity
- Phototransistor Output
- Matched Emitter: QEB421
- Daylight Filter

SCHEMATIC



NOTES

1. Derate power dissipation linearly 2.2 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. $\lambda = 940$ nm.

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

| Parameter | Symbol | Rating | Unit |
|---|--------------------|----------------|------|
| Operating Temperature | T _{OPR} | -55 to +100 | °C |
| Storage Temperature | T _{STG} | -55 to +100 | °C |
| Soldering Temperature (Flow) ^(2,3) | T _{SOL-F} | 260 for 10 sec | °C |
| Collector Emitter Voltage | V _{CE} | 35 | V |
| Emitter Collector Voltage | V _{EC} | 5 | V |
| Collector Current | I _C | 15 | mA |
| Power Dissipation ⁽¹⁾ | P _D | 165 | mW |

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

| PARAMETER | TEST CONDITIONS | SYMBOL | MIN | TYP | MAX | UNITS |
|--------------------------------|---|-----------------------|-----|-----|------|---------|
| Peak Sensitivity Wavelength | | λ_{PS} | — | 880 | — | nm |
| Wavelength Sensitivity Range | | λ_{SR} | 700 | — | 1000 | nm |
| Reception Angle | | θ | — | 120 | — | Deg. |
| Collector Emitter Dark Current | V _{CE} = 25 V, E _e = 0 | I _D | — | — | 200 | nA |
| Collector Emitter Breakdown | I _C = 1 mA | BV _{CEO} | 30 | — | — | V |
| Emitter Collector Breakdown | I _E = 100 μ A | BV _{ECO} | 5 | — | — | V |
| On-State Collector Current | E _e = 0.1 mW/cm ² (4), V _{CE} = 5 V | I _{C (ON)} | 16 | — | — | μ A |
| Saturation Voltage | E _e = 0.5 mW/cm ² (4), I _C = 0.05 mA | V _{CE (SAT)} | — | — | 0.3 | V |
| Rise Time | V _{CC} = 5 V, R _L = 100 Ω | t _r | — | 8 | — | μ s |
| Fall Time | I _C = 1 mA | t _f | — | 8 | — | μ s |

Fig.1 Dark Current Vs. Ambient Temperature

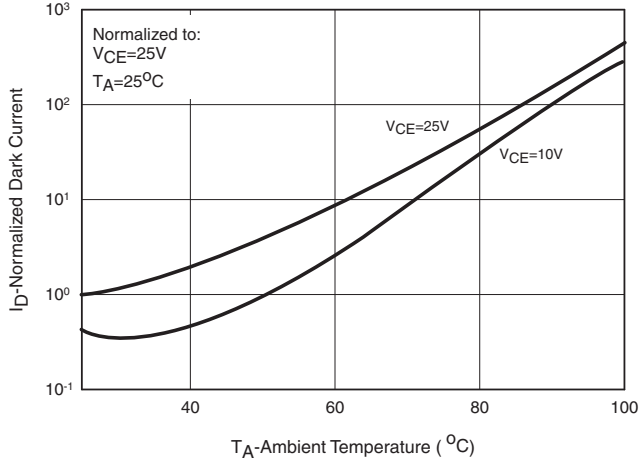


Fig.2 Dark Current Vs. Collector Emitter Voltage

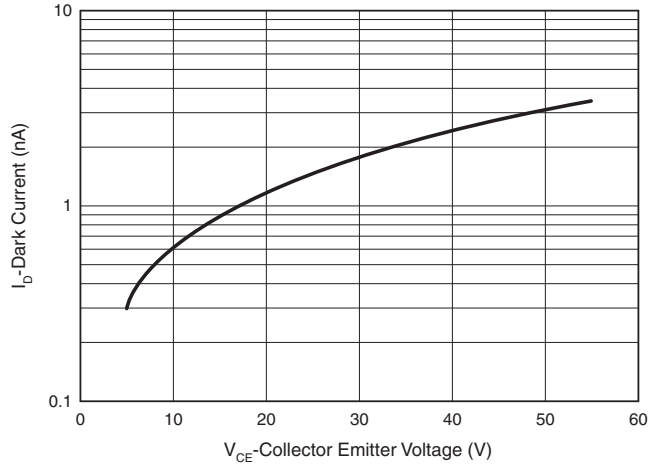


Fig.3 Light Current Vs. Collector to Emitter Voltage

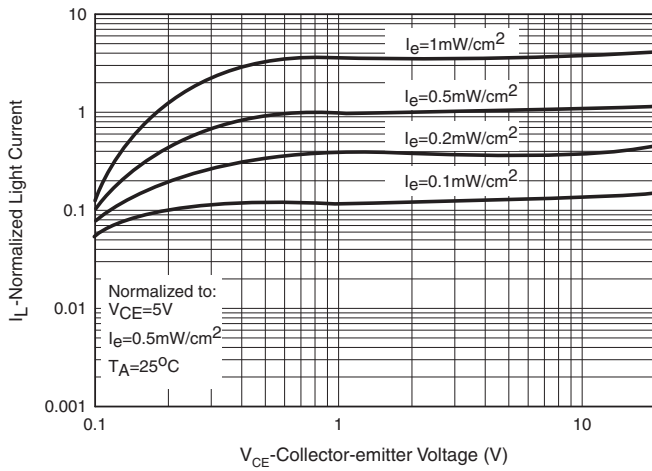
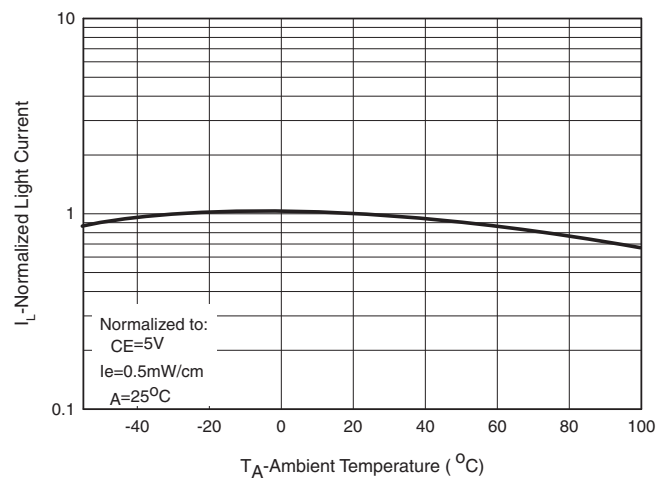


Fig4. Light Current Vs. Ambient Temperature



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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.