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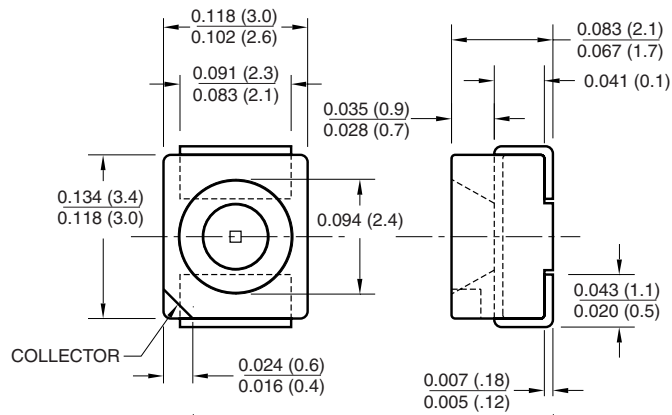
ON Semiconductor®

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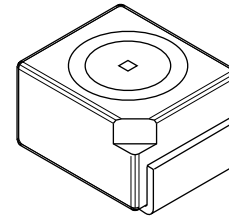
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PACKAGE DIMENSIONS



NOTES:

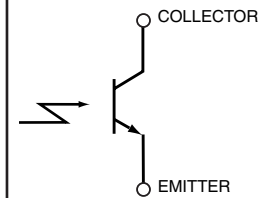
1. Dimensions for all drawings are in inches (millimeters).
2. Tolerance of $\pm .010$ (.25) on all non nominal dimensions unless otherwise specified.



FEATURES

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

SCHEMATIC



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-55 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 to +100	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}	260 for 10 sec	$^\circ\text{C}$
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

NOTES

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

ELECTRICAL / OPTICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

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, $E_o = 0$	I_D	—	—	200	nA
Collector Emitter Breakdown	$I_C = 1$ mA	BV_{CEO}	30	—	—	V
Emitter Collector Breakdown	$I_E = 100$ μA	BV_{ECO}	5	—	—	V
On-State Collector Current	$E_o = 0.1$ mW/cm ² ⁽⁴⁾ , $V_{CE} = 5$ V	$I_{C(ON)}$	16	—	—	μA
Saturation Voltage	$E_o = 0.5$ 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	—	μs
Fall Time	$I_C = 1$ mA	t_f	—	8	—	μs

Fig.1 Dark Current Vs. Ambient Temperature

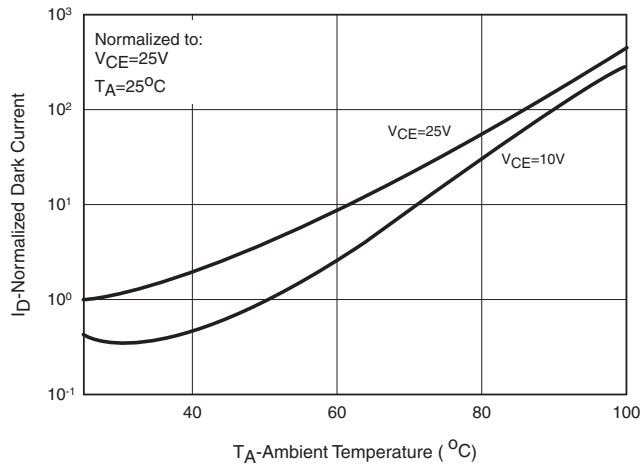


Fig.2 Dark Current Vs. Collector Emitter Voltage

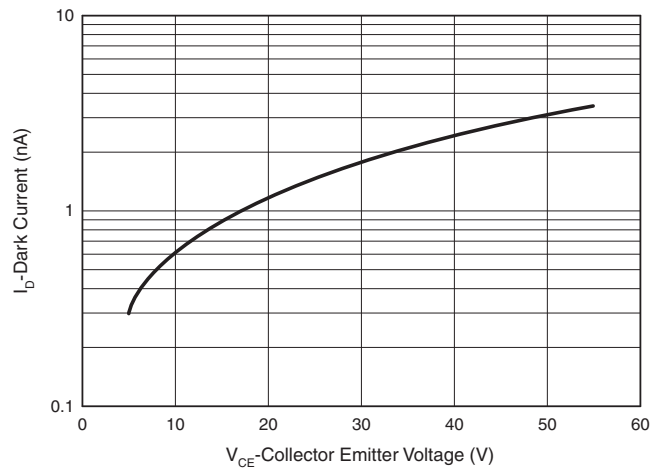


Fig.3 Light Current Vs. Collector to Emitter Voltage

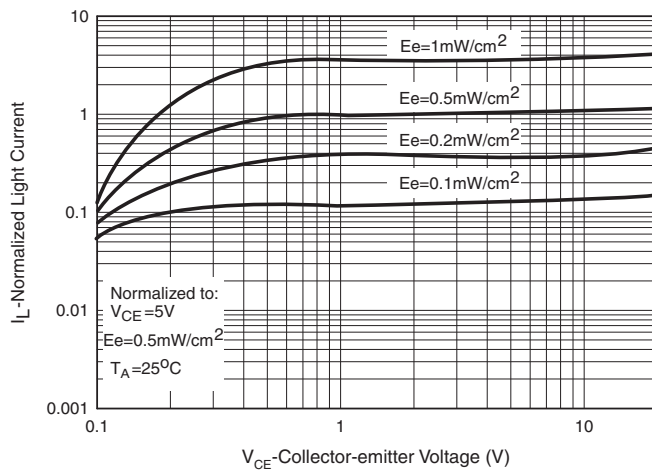
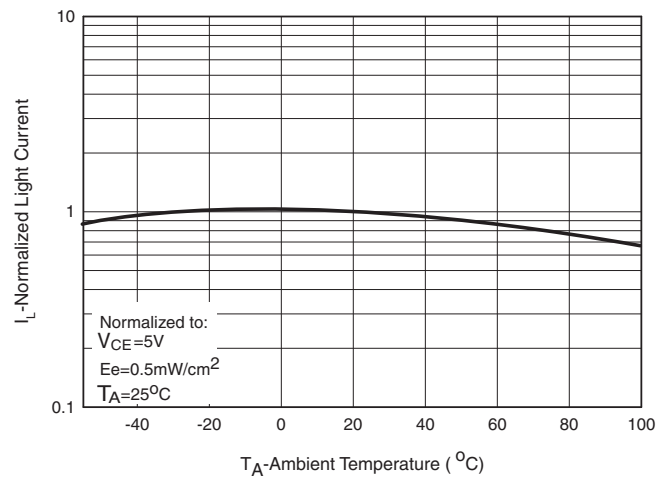


Fig.4. Light Current Vs. Ambient Temperature



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