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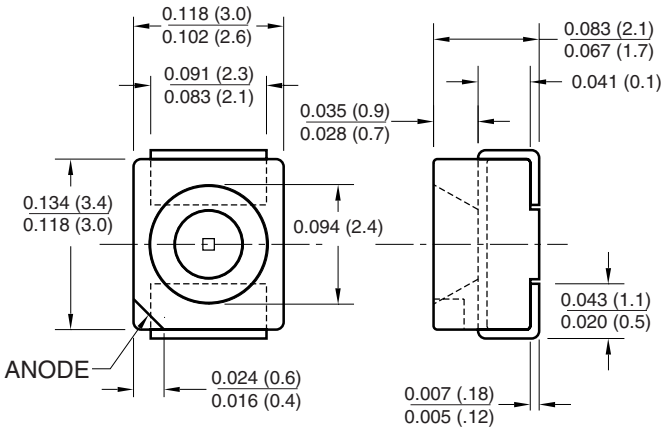
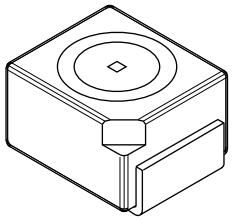
QEB421

SURFACE MOUNT INFRARED LIGHT EMITTING DIODE

PACKAGE DIMENSIONS



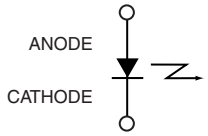
NOTES:
1. Dimensions are in inches (mm)
2. Tolerance of ± .010 (.25) on all non nominal dimensions unless otherwise specified.



FEATURES

- Wavelength = 880 nm, AlGaAs
- Wide Emission Angle, 120°
- Surface Mount PLCC-2 Package
- High Power

SCHEMATIC



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}	260 for 10 sec	°C
Continuous Forward Current	I_F	100	mA
Reverse Voltage	V_R	5	V
Peak Forward Current(4)	I_{FM}	1.75	A
Power Dissipation(1)	P_D	180	mW

NOTES

1. Derate power dissipation linearly 2.4 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Pulse conditions; tp = 100 μs, T = 10 ms.

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Peak Emission Wavelength	I_F = 100 mA	λ_P	—	880	—	nm
Spectral Bandwidth	I_F = 100 mA	$\Delta\lambda$	—	80	—	nm
Emission Angle	I_F = 100 mA	Θ	—	120	—	Deg.
Forward Voltage	I_F = 100 mA, tp = 20 ms	V_F	—	1.5	1.8	V
	I_F = 1 A, tp = 100 μs		—	3.0	3.8	
Reverse Current	V_R = 5 V	I_R	—	—	1	μA
Radiant Intensity	I_F = 100 mA, tp = 20 ms	I_e	4	—	8	mW/sr
	I_F = 1 A, tp = 100 μs		—	48	—	
Radiant Flux	I_F = 100 mA, tp = 20 ms	ϕ_e	—	10	—	mW
Temp. Coeff. of I_E	I_F = 100 mA	T_{CI}	—	-0.5	—	%/K
Temp. Coeff. of V_F	I_F = 100 mA	T_{CV}	—	-4	—	mV/K
Temp. Coeff. of λ	I_F = 100 mA	$T_{C\lambda}$	—	0.25	—	nm/K
Rise Time	I_F = 100 mA	t_r	—	—	1	μs
Fall Time		t_f	—	—	1	μs

TYPICAL PERFORMANCE CURVES

Fig. 1 Normalized Radiant Intensity vs. Forward Current

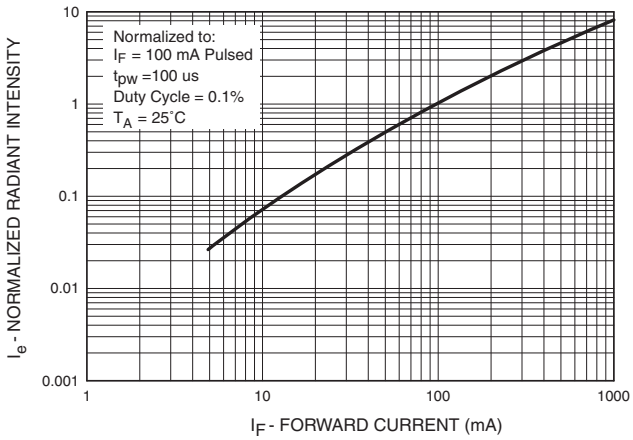


Fig. 2 Forward Current vs. Forward Voltage

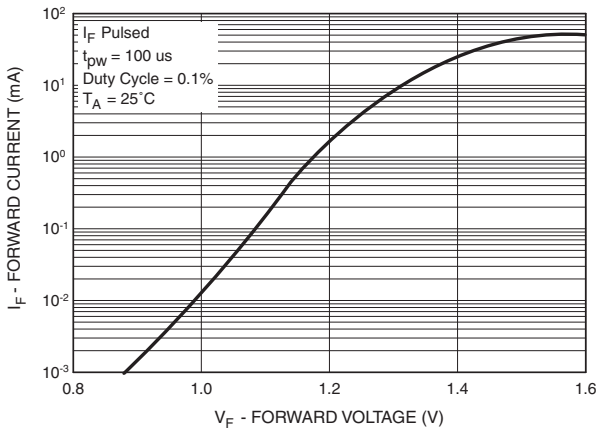


Fig.3 Radiation Diagram

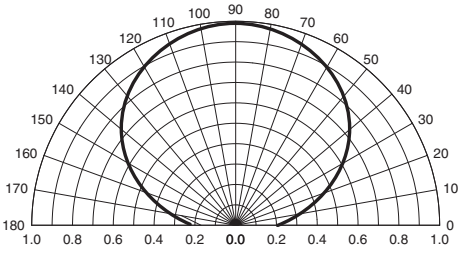


Fig. 4 Forward Voltage vs. Ambient Temperature

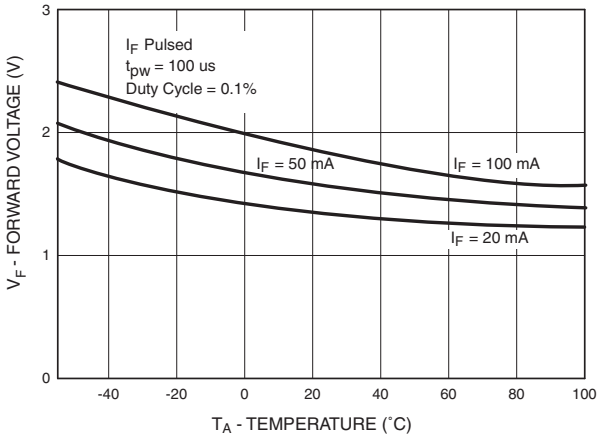


Fig. 5 Spectral Response (TBD)

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