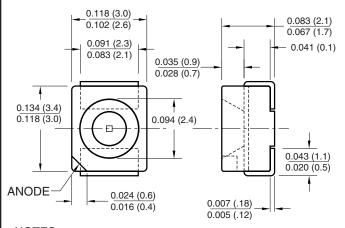


QEB421 SURFACE MOUNT INFRARED LIGHT EMITTING DIODE

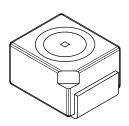
SEMICONDUCTOR

PACKAGE DIMENSIONS



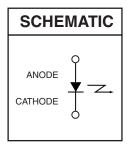
NOTES:

- 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



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	١ _F	100	mA					
Reverse Voltage	V _R	5	V					
Peak Forward Current ⁽⁴⁾	I _{FM}	1.75	А					
Power Dissipation ⁽¹⁾	PD	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 μ s, T = 10 ms.

ELECTRICAL / OPTICAL CHARACTERISTICS (TA =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	$I_{\rm F} = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	V _F		1.5	1.8	V
	$I_{\rm F} = 1$ A, tp = 100 μ s		_	3.0	3.8	
Reverse Current	V _R = 5 V	I _R	_		1	μΑ
Radiant Intensity	$I_{\rm F} = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	le	4	_	8	mW/sr
	$I_{\rm F} = 1$ A, tp = 100 μ s		_	48	_	
Radiant Flux	$I_{\rm F} = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	фе	_	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



QEB421 SURFACE MOUNT INFRARED LIGHT EMITTING DIODE

TYPICAL PERFORMANCE CURVES

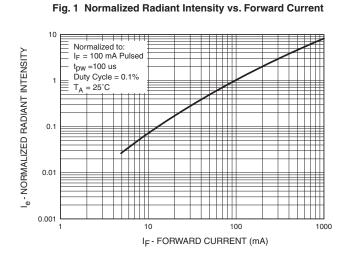


Fig. 2 Forward Current vs. Forward Voltage

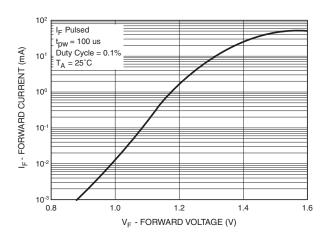


Fig. 4 Forward Voltage vs. Ambient Temperature

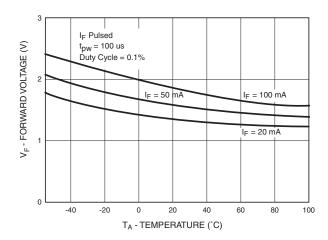


Fig.3 Radiation Diagram

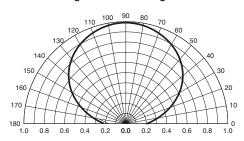


Fig. 5 Spectral Response (TBD)



QEB421 SURFACE MOUNT INFRARED LIGHT EMITTING DIODE

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