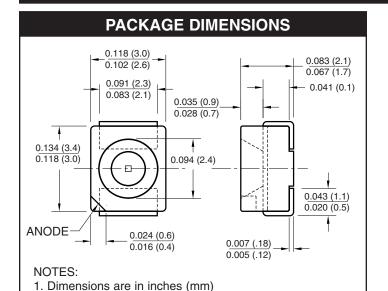
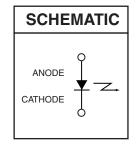
QEB421 SURFACE MOUNT INFRARED LIGHT EMITTING DIODE



FEATURES

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



- 2. Tolerance of ± .010 (.25) on all non nominal dimensions unless otherwise specified.

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	Α					
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 μ s, T = 10 ms.

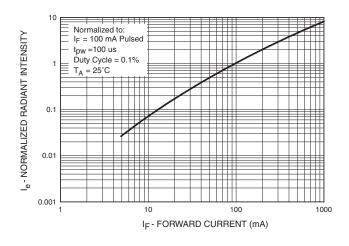
ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C)									
PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS			
Peak Emission Wavelength	$I_F = 100 \text{ mA}$	λ_{P}	_	880	_	nm			
Spectral Bandwidth	$I_F = 100 \text{ mA}$	$\Delta \lambda$	_	80	_	nm			
Emission Angle	$I_F = 100 \text{ mA}$	θ	_	120	_	Deg.			
Forward Voltage	$I_F = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	V_{F}	_	1.5	1.8	V			
	$I_F = 1 \text{ A}, \text{ tp} = 100 \ \mu\text{s}$		_	3.0	3.8				
Reverse Current	$V_R = 5 V$	I _R	_	_	1	μΑ			
Radiant Intensity	$I_F = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	le	4	_	8	mW/sr			
	$I_F = 1 \text{ A}, \text{ tp} = 100 \ \mu\text{s}$		_	48	_				
Radiant Flux	$I_F = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	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	$I_F = 100 \text{ mA}$	$T_{C\lambda}$	_	0.25	_	nm/K			
Rise Time	I _F = 100 mA	t _r	_	_	1	μs			
Fall Time		t_f	_	_	1	μs			



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TYPICAL PERFORMANCE CURVES

Fig. 1 Normalized Radiant Intensity vs. Forward Current



10² I_F Pulsed t_{pw} = 100 us Duty Cycle = 0.1% T_A = 25°C T_A

Fig. 2 Forward Current vs. Forward Voltage

Fig.3 Radiation Diagram

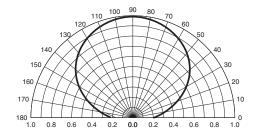


Fig. 4 Forward Voltage vs. Ambient Temperature

V_F - FORWARD VOLTAGE (V)

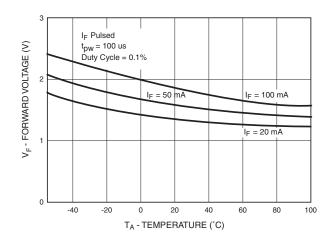


Fig. 5 Spectral Response (TBD)



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