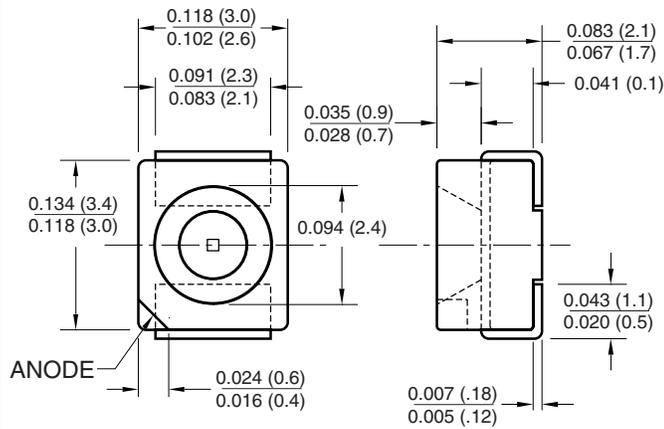
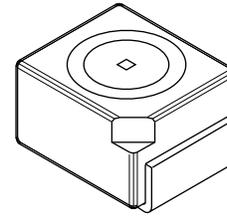


**PACKAGE DIMENSIONS**



**NOTES:**

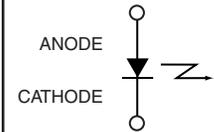
1. Dimensions are in inches (mm)
2. Tolerance of  $\pm .010$  (.25) on all non nominal dimensions unless otherwise specified.



**FEATURES**

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

**SCHEMATIC**



**ABSOLUTE MAXIMUM RATINGS** ( $T_A = 25^\circ\text{C}$  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) <sup>(2,3)</sup>	$T_{sol}$	260 for 10 sec	$^\circ\text{C}$
Continuous Forward Current	$I_F$	100	mA
Reverse Voltage	$V_R$	5	V
Peak Forward Current <sup>(4)</sup>	$I_{FM}$	1.75	A
Power Dissipation <sup>(1)</sup>	$P_D$	180	mW

**NOTES**

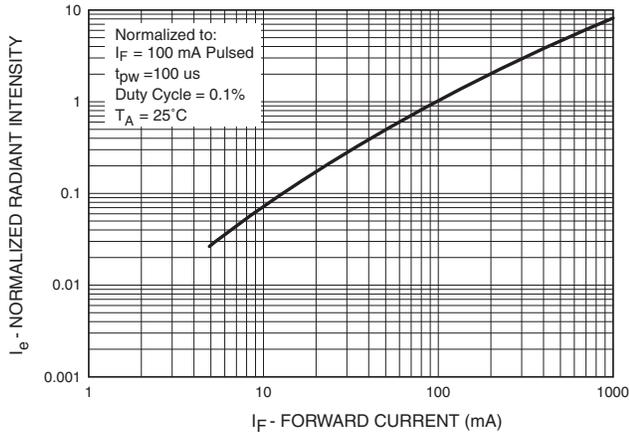
1. Derate power dissipation linearly 2.4 mW/ $^\circ\text{C}$  above 25 $^\circ\text{C}$ .
2. RMA flux is recommended.
3. Methanol or isopropyl alcohols are recommended as cleaning agents.
4. Pulse conditions;  $t_p = 100 \mu\text{s}$ ,  $T = 10 \text{ ms}$ .

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

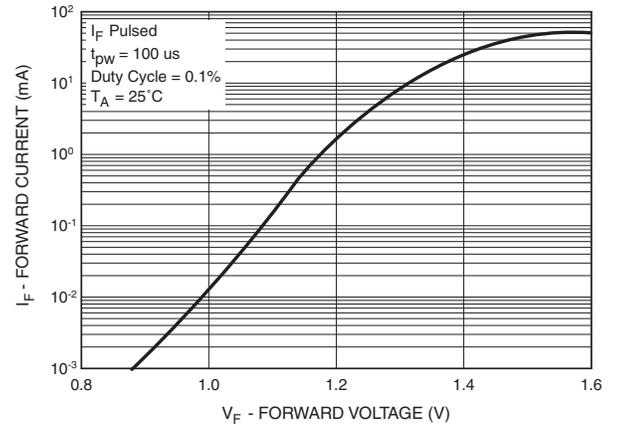
PARAMETER	TEST CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNITS
Peak Emission Wavelength	$I_F = 100 \text{ mA}$	$\lambda_P$	—	880	—	nm
Spectral Bandwidth	$I_F = 100 \text{ mA}$	$\Delta\lambda$	—	80	—	nm
Emission Angle	$I_F = 100 \text{ mA}$	$\theta$	—	120	—	Deg.
Forward Voltage	$I_F = 100 \text{ mA}$ , $t_p =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

**TYPICAL PERFORMANCE CURVES**

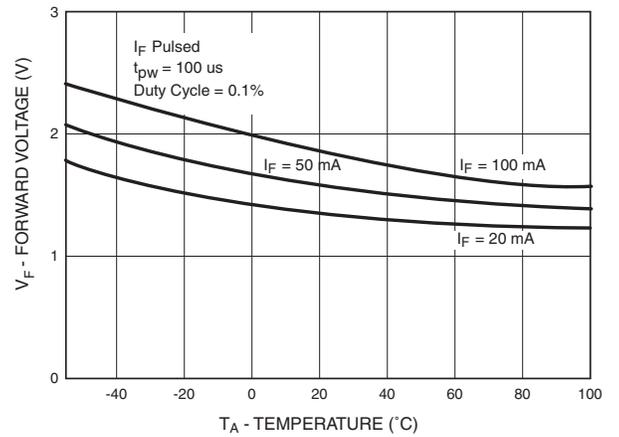
**Fig. 1 Normalized Radiant Intensity vs. Forward Current**



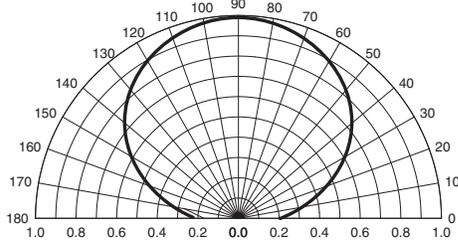
**Fig. 2 Forward Current vs. Forward Voltage**



**Fig. 4 Forward Voltage vs. Ambient Temperature**



**Fig.3 Radiation Diagram**



**Fig. 5 Spectral Response (TBD)**

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QEB421

Surface Mount Infrared Light Emitting Diode

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Features

- Wavelength = 880 nm, AlGaAs
- Wide emission angle, 120°
- Surface mount PLCC-2 package
- High power

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Product status/pricing/packageing

Product	Product status	Pricing*	Inventory check & ordering	Package type	Packing method
QEB421.TR	Full Production	\$0.185	<a href="#">Purchase</a>	PLCC	TAPE REEL
QEB421	Full Production	\$0.171	<a href="#">Purchase</a>	PLCC	BULK

\* Fairchild 1,000 piece Budgetary Pricing

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