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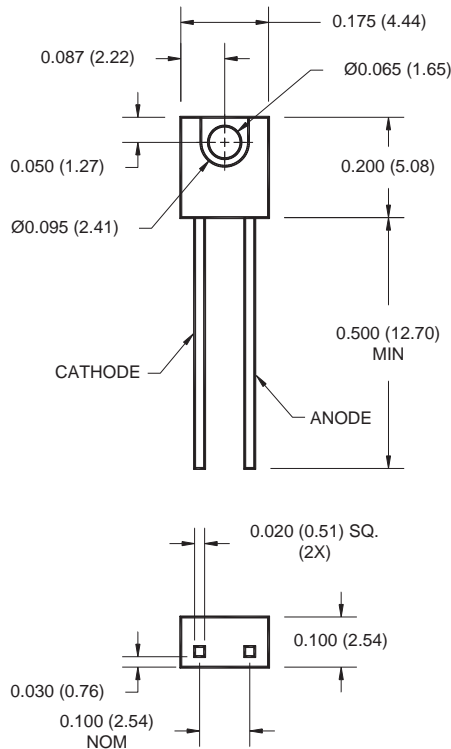
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ELECTRONICS

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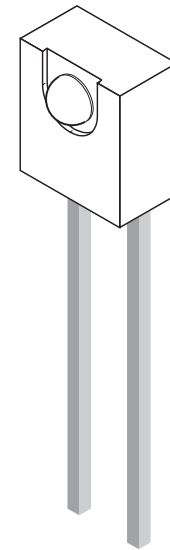
Jameco Part Number 1069771

**PACKAGE DIMENSIONS**

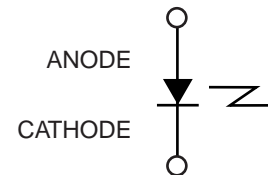


**NOTES:**

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



**SCHEMATIC**



**DESCRIPTION**

The QEE12X is a 880 nm AlGaAs LED encapsulated in a medium wide angle, plastic sidelooker package.

**FEATURES**

- $\lambda = 880$  nm
- Package Type = Sidelooker
- Chip Material = AlGaAs
- Matched Photosensor: QSE113
- Medium Wide Emission Angle, 50°
- Package Material: Clear Epoxy
- High Output Power
- Orange stripe on the top side

**QEE122 QEE123**

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

Parameter	Symbol	Rating	Unit
Operating Temperature	$T_{OPR}$	-40 to + 100	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 to + 100	$^\circ\text{C}$
Soldering Temperature (Iron) <sup>(2,3,4)</sup>	$T_{SOL-I}$	240 for 5 sec	$^\circ\text{C}$
Soldering Temperature (Flow) <sup>(2,3)</sup>	$T_{SOL-F}$	260 for 10 sec	$^\circ\text{C}$
Continuous Forward Current	$I_F$	50	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation <sup>(1)</sup>	$P_D$	100	mW

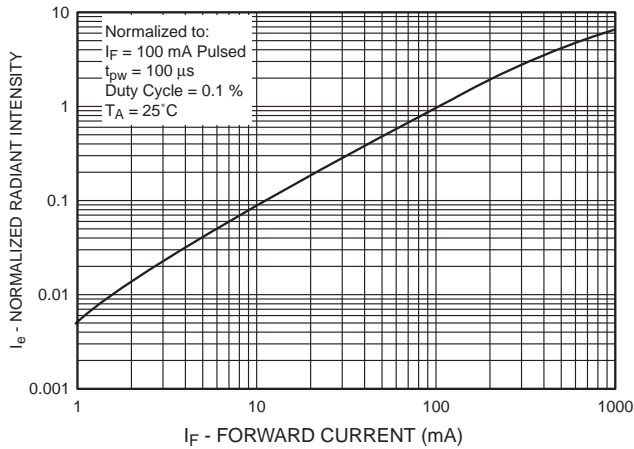
**NOTES:**

1. Derate power dissipation linearly 1.33 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. Soldering iron 1/16" (1.6 mm) minimum from housing

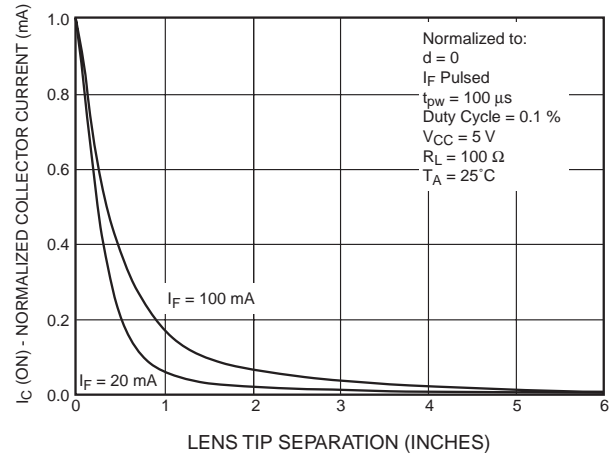
**ELECTRICAL / OPTICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$ )

Parameter	Test Conditions	Symbol	Min	Typ	Max	Units
Peak Emission Wavelength	$I_F = 100\text{ mA}$	$\lambda_{PE}$	—	880	—	nm
Emission Angle	$I_F = 100\text{ mA}$	$2\theta_{1/2}$	—	50	—	Deg.
Forward Voltage	$I_F = 100\text{ mA}$ , $t_p = 20\text{ ms}$	$V_F$	—	—	1.7	V
Reverse Current	$V_R = 5\text{ V}$	$I_R$	—	—	10	$\mu\text{A}$
Radiant Intensity QEE122	$I_F = 100\text{ mA}$ , $t_p = 20\text{ ms}$	$I_E$	4	—	16	mW/sr
Radiant Intensity QEE123	$I_F = 100\text{ mA}$ , $t_p = 20\text{ ms}$	$I_E$	8	—	—	mW/sr
Rise Time	$I_F = 100\text{ mA}$	$t_r$	—	800	—	ns
Fall Time		$t_f$	—	800	—	ns

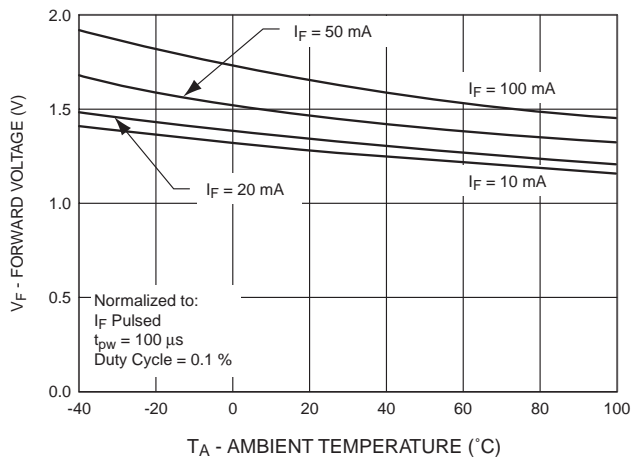
**Fig.1 Normalized Radiant Intensity vs. Forward Current**



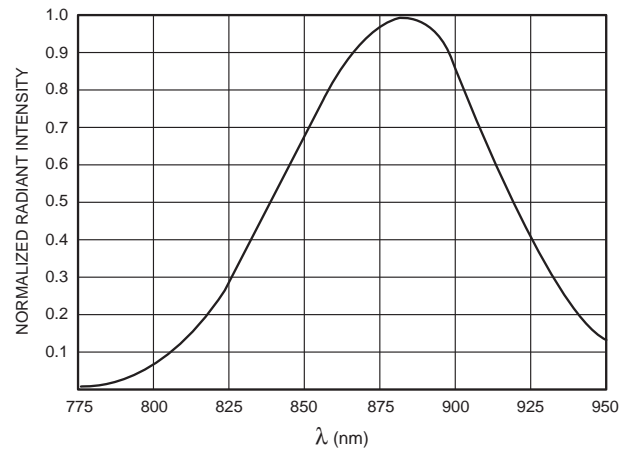
**Fig.2 Coupling Characteristics of QEE123 And QSE113**



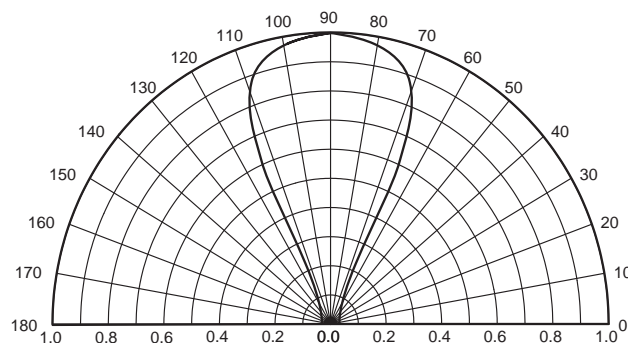
**Fig.3 Forward Voltage vs. Ambient Temperature**



**Fig. 4 Normalized Intensity vs. Wavelength**



**Fig. 5 Radiation Diagram**



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