



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

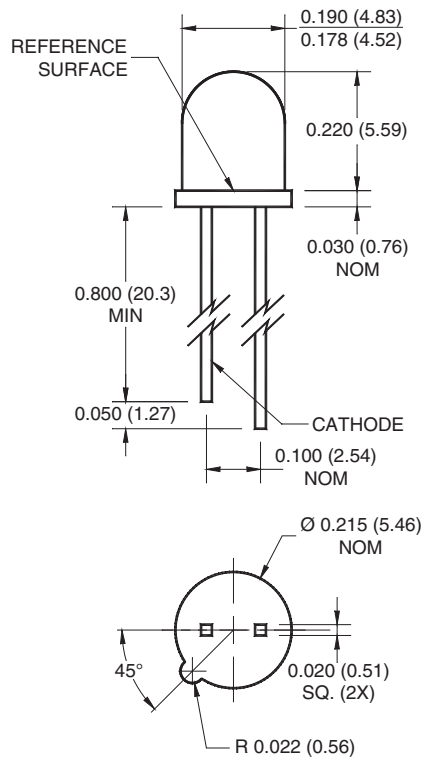
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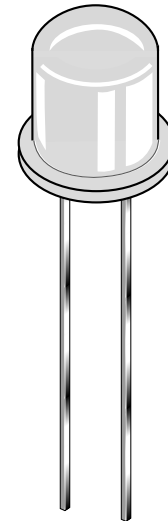


PACKAGE DIMENSIONS

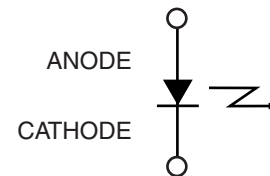


NOTES:

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 QED522/523 is an 880 nm AlGaAs LED encapsulated in a clear, peach tinted, plastic TO-46 package.

FEATURES

- $\lambda = 880$ nm
- Chip material = AlGaAs
- Package type: Plastic TO-46
- Matched Photosensor: QSD722/723/724
- Narrow Emission Angle, 20°
- High Output Power
- Package material and color: clear, peach tinted, plastic

QED522 QED523

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) ^(2,3,4)	T_{SOL-I}	240 for 5 sec	$^\circ\text{C}$
Soldering Temperature (Flow) ^(2,3)	T_{SOL-F}	260 for 10 sec	$^\circ\text{C}$
Continuous Forward Current	I_F	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation ⁽¹⁾	P_D	200	mW

NOTES:

1. Derate power dissipation linearly 2.67 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	$I_F = 100\text{ mA}$	λ_{PE}	—	880	—	nm
Emission Angle	$I_F = 100\text{ mA}$	$2\theta_{1/2}$	—	20	—	Deg.
Forward Voltage	$I_F = 100\text{ mA}$, $t_p = 20\text{ ms}$	V_F	—	—	1.8	V
Reverse Current	$V_R = 5\text{ V}$	I_R	—	—	10	μA
Radiant Intensity QEC522	$I_F = 100\text{ mA}$, $t_p = 20\text{ ms}$	I_E	20	—	80	mW/sr
Radiant Intensity QEC523	$I_F = 100\text{ mA}$, $t_p = 20\text{ ms}$	I_E	40	—	—	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

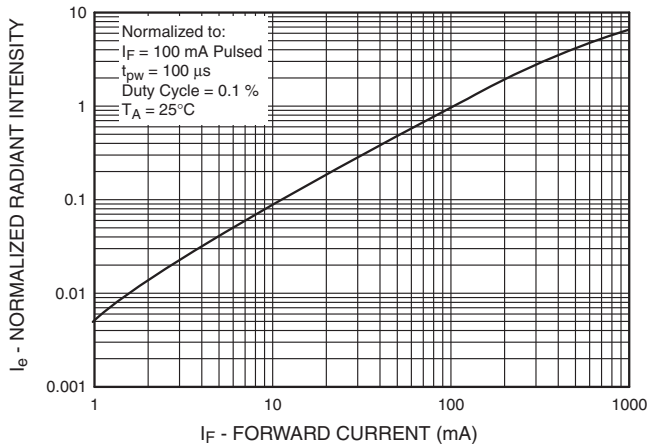


Fig. 2 Forward Voltage vs. Ambient Temperature

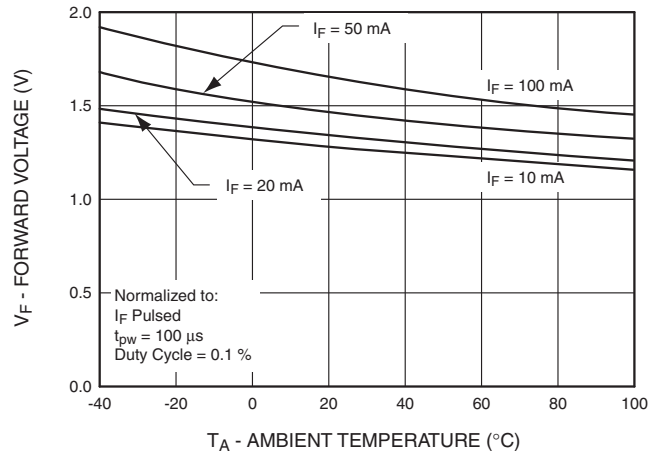


Fig. 3 Normalized Radiant Intensity vs. Wavelength

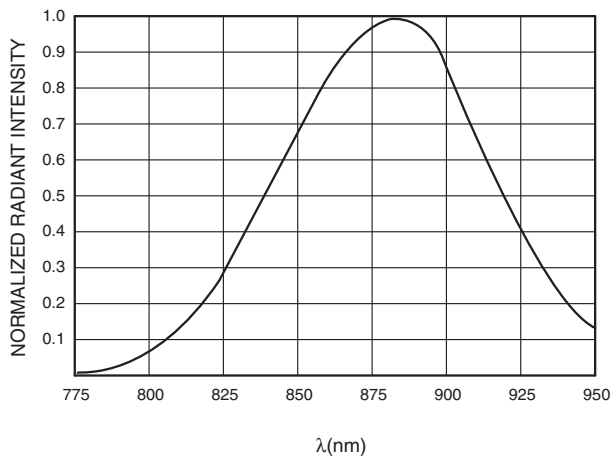
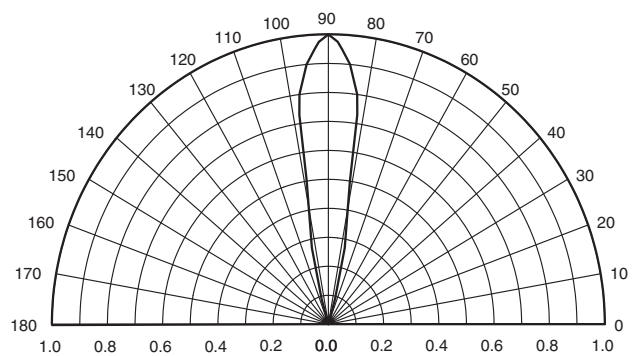


Fig. 4 Radiation Diagram



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