

Plastic Infrared Light Emitting Diode

QED223

Description

The QED223 is 880 nm AlGaAs LEDs encapsulated in a clear purple tinted, plastic T 1 3/4 package.

Features

- $\lambda = 880$ nm
- Chip Material = AlGaAs
- Package Type: T 1 3/4 (5 mm lens diameter)
- Matched Photosensor: QSD123/QSD124
- Medium wide Emission Angle, 30°
- High Output Power
- Package Material and Color: Clear, Purple Tinted, Plastic

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

Symbol	Parameter	Value	Unit
T_{OPR}	Operating Temperature	-40 to 100	°C
T_{STG}	Storage Temperature	-40 to +100	°C
T_{SOL-I}	Soldering Temperature (Iron) (Notes 2, 3, 4)	240 for 5 s	°C
T_{SOL-F}	Soldering Temperature (Flow) (Notes 2, 3)	260 for 10 s	°C
I_F	Continuous Forward Current	100	mA
V_R	Reverse Voltage	5	V
P_D	Power Dissipation (Note 1)	200	mW
$I_{F(Peak)}$	Peak Forward Current (Note 5)	1.5	V

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

1. Derate power dissipation linearly 2.67 mW/°C above 25°C.
2. RMA flux is recommended.
3. Methanol or Isopropyl alcohols are recommended as cleaning agents.
4. Soldering iron tip 1/16" (1.6 mm) minimum from housing.
5. Pulse conditions; $t_p = 100 \mu\text{s}$, $T = 10$ ms.

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

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
λ_{PE}	Peak Emission Wavelength	$I_F = 20$ mA	-	890	-	nm
TC_λ	Temperature Coefficient		-	0.2	-	nm/°C
$2\theta_{1/2}$	Emission Angle	$I_F = 100$ mA	-	30	-	°
V_F	Forward Voltage	$I_F = 20$ mA, $t_p = 20$ ms	-	-	1.7	V
TC_{VF}	Temperature Coefficient		-	-6	-	mV/°C
I_R	Reverse Current	$V_R = 5$ V	-	-	10	μA
I_E	Radiant Intensity	$I_F = 20$ mA, $t_p = 20$ ms	25	-	-	mW/sr
TC_{IE}	Temperature Coefficient		-	-0.3	-	

QED223

TYPICAL PERFORMANCE CURVES

QED223

TYPICAL PERFORMANCE CURVES (continue)

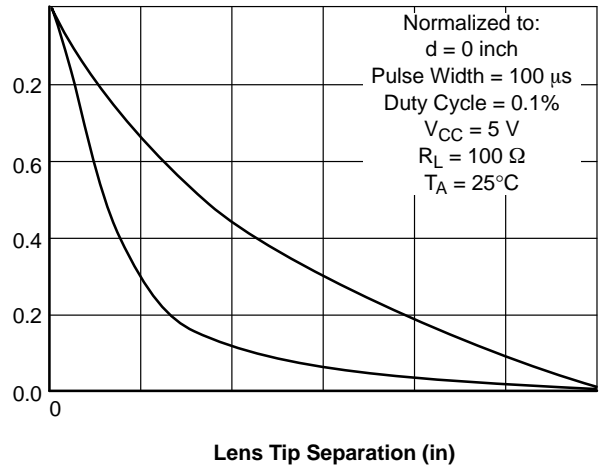


Figure 7. Radiation Diagram

Figure 8. Coupling Characteristics of QED22X and QSD22X

T-1 3/4, 5MM LED
CASE 100CC
ISSUE O

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Notes:

1. Dimensions f

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