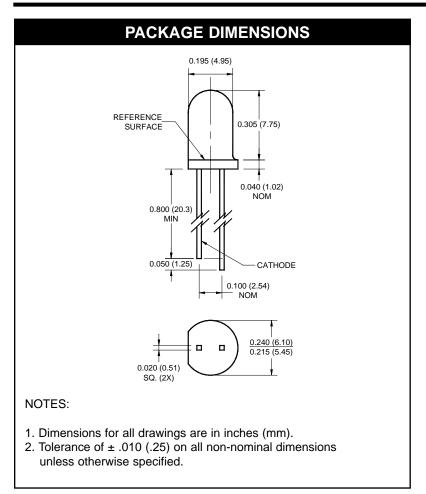
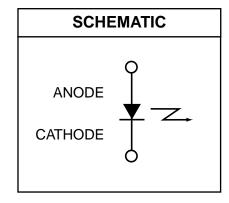


QED221 QED222 QED223







DESCRIPTION

The QED22X is an 880nm AlGaAs LED encapsulated in clear, purple tinted, plastic T-1 3/4 package.

FEATURES

- λ = 880 nm
- Chip material = AlGaAs
- Package type: T-1 3/4 (5mm lens diameter)
- Matched Photosensor: QSD122/123/124
- Medium Wide Emission Angle, 40°
- High Output Power
- Package material and color: Clear, purple tinted, plastic



QED221 QED222 QED223

ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise specified)							
Parameter	Symbol	Rating	Unit				
Operating Temperature	T _{OPR}	-40 to +100	°C				
Storage Temperature	T _{STG}	-40 to +100	°C				
Soldering Temperature (Iron) (2,3,4)	T _{SOL-I}	240 for 5 sec	°C				
Soldering Temperature (Flow) (2,3)	T _{SOL-F}	260 for 10 sec	°C				
Continuous Forward Current	I _F	100	mA				
Reverse Voltage	V _R	5	V				
Power Dissipation (1)	P _D	200	mW				
Peak Forward Current (5)	I _{F(Peak)}	1.5	A				

ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C)								
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS		
Peak Emission Wavelength	I _F = 100 mA	λ_{PE}	_	880	_	nm		
Emission Angle	I _F = 100 mA	θ	_	±20	_	Deg.		
Forward Voltage	$I_F = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	V _F	_	_	1.7	V		
Reverse Current	V _R = 5 V	I _R	_	_	10	μA		
Radiant Intensity QED221	$I_F = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	Ι _Ε	10	_	20	mW/sr		
Radiant Intensity QED222	$I_F = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	Ι _Ε	16	_	32	mW/sr		
Radiant Intensity QED223	$I_F = 100 \text{ mA}, \text{ tp} = 20 \text{ ms}$	I _E	25	_	_	mW/sr		
Rise Time	1 100 mA	t _r	_	800	_	ns		
Fall Time	I _F = 100 mA	t _f	_	800	_	ns		

- 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 1/16" (1.6mm) minimum from housing.
- 5. Pulse conditions; tp = $100 \mu S$, T = 10 ms.



QED221 Q

QED222

QED223

Fig. 1 Normalized Radiant Intensity vs. Input Current

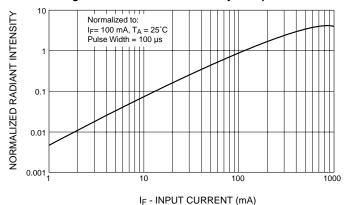


Fig. 2 Coupling Characteristics of QED22X with QSD12X

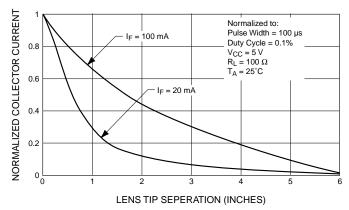


Fig. 3 Forward Voltage vs. Temperature

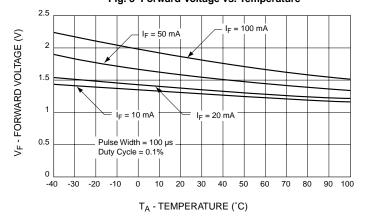


Fig. 4 Normalized Radiant Intensity vs. Wavelength

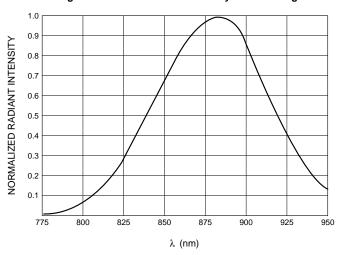


Fig. 5 Forward Current vs. Forward Voltage

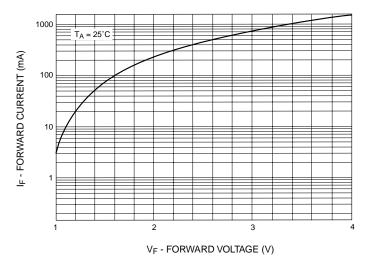
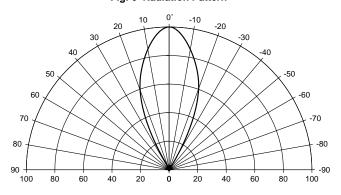


Fig. 6 Radiation Pattern





QED221 QED222 QED223

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- A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.