

## CQX14, CQX16 GaAs INFRARED EMITTING DIODE

## PACKAGE DIMENSIONS 0.209 (5.31) 0.184 (4.67) 0.030 (0.76) 0.255 (6.48) NOM 1 00 (25 4) MIN ANODE (CASE) -0.100 (2.54) 0.050 (1.27) 0.040 (1.02) Ø0.020 (0.51) 2X 0.040 (1.02) NOTES:

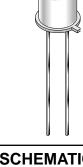
- 1. Dimensions for all drawings are in inches (mm).
- 2. Tolerance of ± .010 (.25) on all non-nominal dimensions unless otherwise specified.

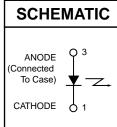
### **DESCRIPTION**

The CQX14/16 are 940 nm LEDs in a narrow angle, TO-46 packages.

## **FEATURES**

- Good optical to mechanical alignment
- Mechanically and wavelength matched to the TO-18 series phototransistor
- · Hermetically sealed package
- High irradiance level
- European "Pro Electron" registered





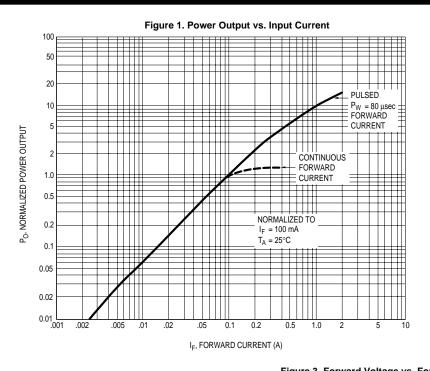
- 1. Derate power dissipation linearly 1.70 mW/°C above 25°C ambient.
- 2. Derate power dissipation linearly 13.0 mW/°C above 25°C case.
- 3. RMA flux is recommended.
- 4. Methanol or isopropyl alcohols are recommended as cleaning agents.
- 5. Soldering iron tip 1/16" (1.6mm) minimum from housing.
- 6. As long as leads are not under any stress or spring tension
- 7. Total power output,  $P_O$ , is the total power radiated by the device into a solid angle of 2  $\pi$  steradians.

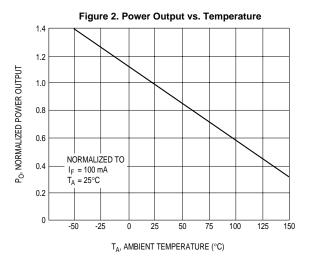
#### **ABSOLUTE MAXIMUM RATINGS** (T<sub>A</sub> = 25°C unless otherwise specified) **Symbol Parameter** Rating Unit **Operating Temperature** TOPR -65 to +125 °C °C Storage Temperature -65 to +150 T<sub>STG</sub> Soldering Temperature (Iron)(3,4,5 and 6) 240 for 5 sec °C $T_{SOL-I}$ Soldering Temperature (Flow)(3,4 and 6) °C 260 for 10 sec $T_{SOL-F}$ Continuous Forward Current 100 mΑ $I_{\mathsf{F}}$ Forward Current (pw, 1µs; 200Hz) 10 $I_{\mathsf{F}}$ Α ٧ Reverse Voltage 3 $V_R$ Power Dissipation $(T_A = 25^{\circ}C)^{(1)}$ 170 mW $P_D$ Power Dissipation (T<sub>C</sub> = 25°C)(2) W $P_D$ 1.3

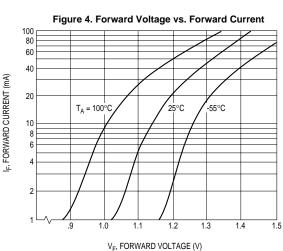
ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C) (All measurements made under pulse conditions)						
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Peak Emission Wavelength	$I_F = 100 \text{ mA}$	$\lambda_{P}$	_	940	_	nm
Emission Angle at 1/2 Power	I <sub>F</sub> = 100 mA	θ	_	±8	_	Deg.
Forward Voltage	I <sub>F</sub> = 100 mA	V <sub>F</sub>	_	_	1.7	V
Reverse Leakage Current	V <sub>R</sub> = 3 V	I <sub>R</sub>	_	_	10	μA
Total Power CQX14 <sup>(7)</sup>	I <sub>F</sub> = 100 mA	Po	5.4	_	_	mW
Total Power CQX16 <sup>(7)</sup>	I <sub>F</sub> = 100 mA	Po	1.5	_	_	mW
Rise Time 0-90% of output		t <sub>r</sub>	_	1.0	_	μs
Fall Time 100-10% of output		t <sub>f</sub>	_	1.0	_	μs

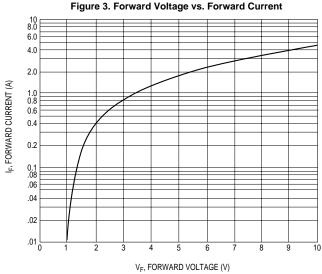


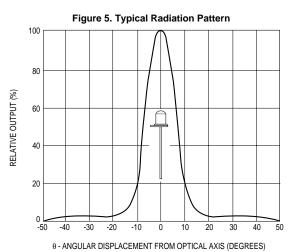
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