

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:

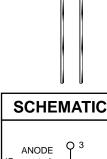
- 1. Dimensions for all drawings are in inches (mm).
- 2. Tolerance of ± .010 (.25) on all non-nominal dimensions unless otherwise specified.

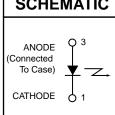
DESCRIPTION

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





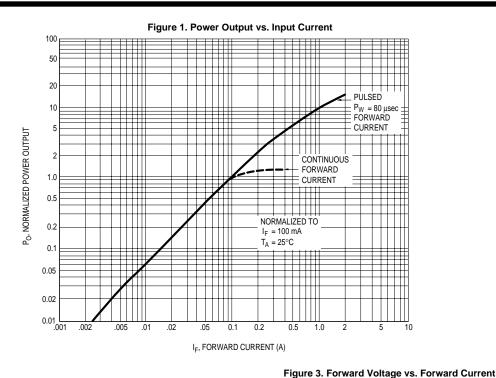
- 1. Derate power dissipation linearly 1.70 mW/°C above 25°C ambient.
- 2. Derate power dissipation linearly 13.0 mW/°C above 25°C case.
- 3. RMA flux is recommended.
- 4. Methanol or isopropyl alcohols are recommended as cleaning agents.
- 5. Soldering iron tip 1/16" (1.6mm) minimum from housing.
- 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 π steradians.

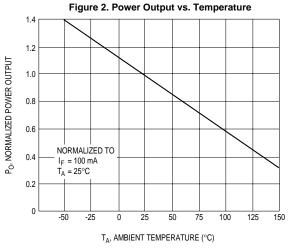
ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified) **Symbol Parameter** Rating Unit **Operating Temperature** TOPR -65 to +125 °C °C Storage Temperature -65 to +150 T_{STG} Soldering Temperature (Iron)(3,4,5 and 6) 240 for 5 sec °C T_{SOL-I} Soldering Temperature (Flow)(3,4 and 6) °C 260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

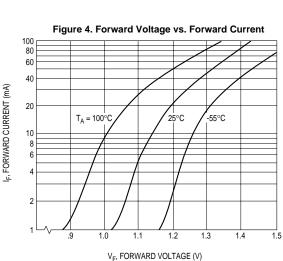
ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C) (All measurements made under pulse conditions)						
PARAMETER	TEST CONDITIONS	SYMBOL	MIN	TYP	MAX	UNITS
Peak Emission Wavelength	$I_F = 100 \text{ mA}$	λ_{P}	_	940	_	nm
Emission Angle at 1/2 Power	I _F = 100 mA	θ	_	±8	_	Deg.
Forward Voltage	I _F = 100 mA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

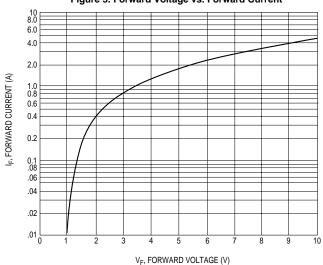


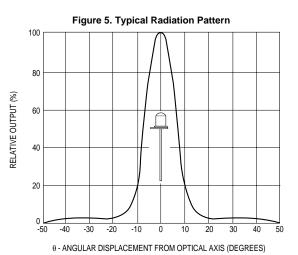
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- A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.