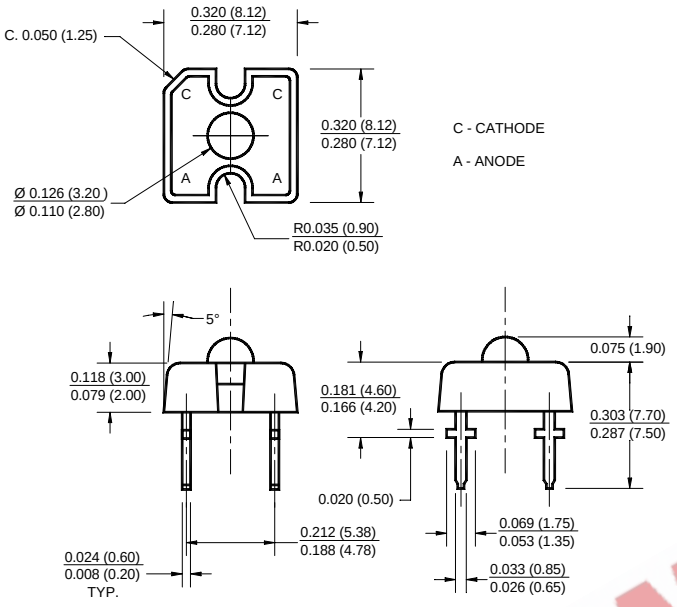
FAIRCHILD
SEMICONDUCTOR™

4 - PIN POWER LED

PACKAGE DIMENSIONS



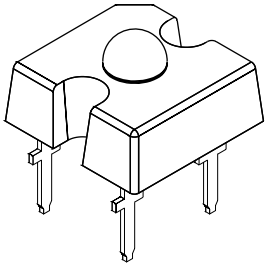
NOTES:

1. Dimensions for all drawings are in inches (mm).
2. Lead spacing is measured where the leads emerge from the package.
3. Protruded resin under the flange is 0.059" (1.5 mm) max.
4. All tolerances are ±0.10" (0.25 mm) unless otherwise specified.

RED	**QTLP321C-R**
ORANGE	**QTLP321C-E**
YELLOW	**QTLP321C-Y**

FEATURES

- AllnGaP (Aluminum Indium Gallium Phosphide) technology
- High current application
- Reduced thermal resistance
- Tube packaging



DESCRIPTION

This low profile, 4-pin LED provides a more uniform and evenly distributed illumination than existing LED designs. Its unique optical package enables designers to utilize fewer LEDs while achieving superior lighting performance.

APPLICATIONS

- Exterior automotive lighting
- Area displays
- Backlighting
- Message panels

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
Lead Soldering Time	T_{SOL}	260 for 5 sec	°C
Continuous Forward Current	I_F	70	mA
Peak Forward Current (f = 100 Hz, Duty Factor = 1/10)	I_F	200	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	160	mW

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RED	**QTLP321C-R**
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YELLOW	**QTLP321C-Y**

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	QTLP321C-R	QTLP321C-E	QTLP321C-Y	Condition
Luminous Flux (mlm)				I_F = 70 mA
Minimum	500	500	500	
Typical	1300	1300	1300	
Forward Voltage V_F (V)				I_F = 20 / 70 mA
Maximum	2.4 / 2.8	2.4 / 2.8	2.4 / 2.8	
Typical	2.0 / 2.2	2.0 / 2.2	2.0 / 2.2	
Wavelength (nm)				I_F = 70 mA
Peak	640	620	590	
Dominant	630	615	589	
Spectral Line Half Width (nm)	20	18	15	I_F = 70 mA
Viewing Angle (°)	50	50	50	I_F = 70 mA

TYPICAL PERFORMANCE CURVES

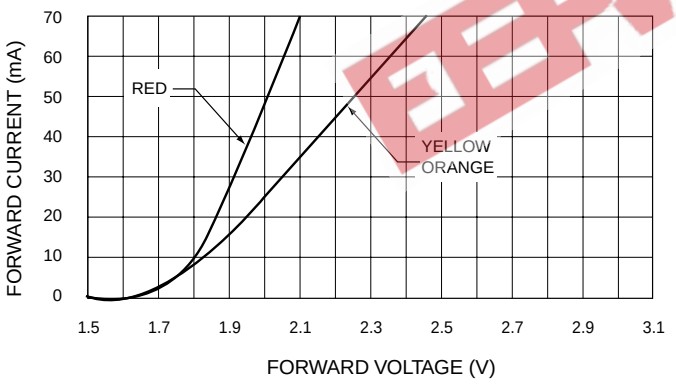

Fig. 1 Forward Current vs. Forward Voltage

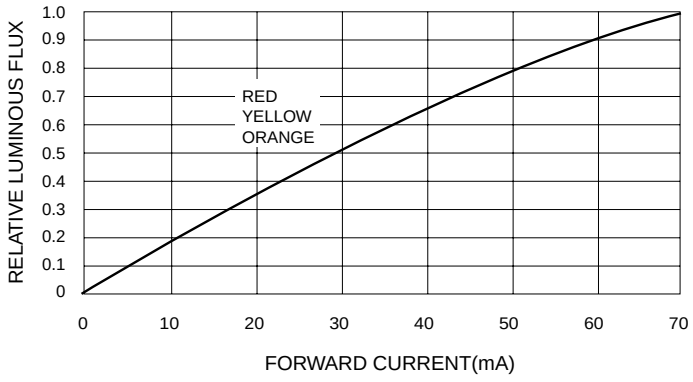

Fig. 2 Relative Luminous Flux vs. Forward Current

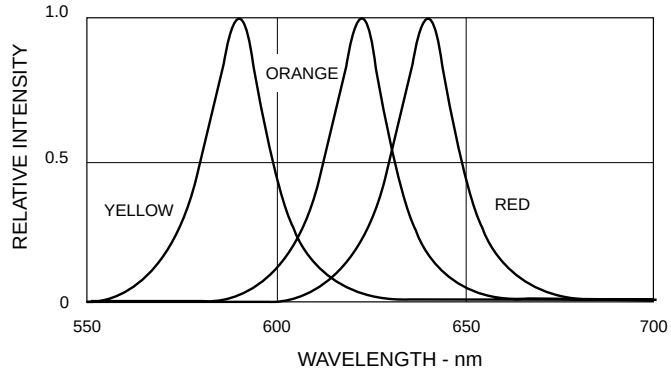

Fig. 3 Relative Intensity vs Peak Wavelength

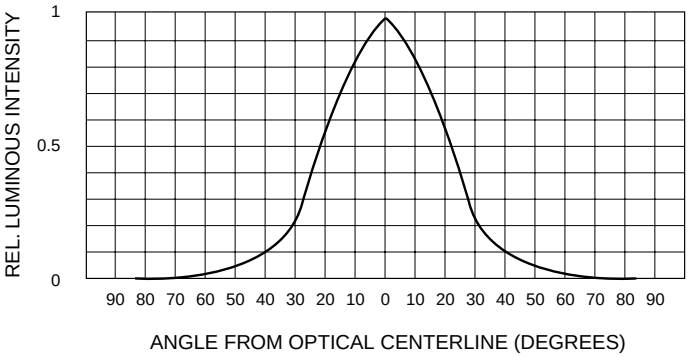

Fig. 4 Rel. Luminous Intensity vs. Angular Displacement

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2. 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.