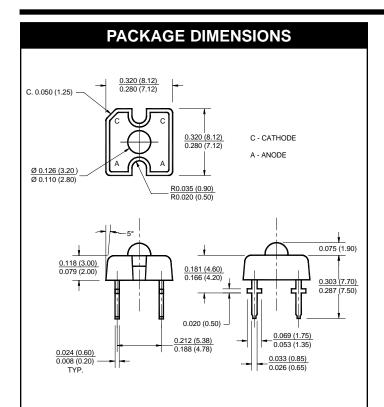


# 4 - PIN POWER LED



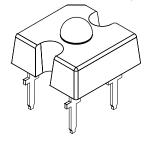
## NOTES:

- 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  $\pm 0.10$ " (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 <sub>A</sub> = 25°C unless otherwise specified)						
Parameter	Symbol	Rating	Unit			
Operating Temperature	T <sub>OPR</sub>	-40 to +100	°C			
Storage Temperature	T <sub>STG</sub>	-40 to +100	°C			
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec	°C			
Continuous Forward Current	I <sub>F</sub>	70	mA			
Peak Forward Current	1	200	mA			
(f = 100 Hz, Duty Factor = 1/10)	l <sub>F</sub>	200				
Reverse Voltage	V <sub>R</sub>	5	V			
Power Dissipation	P <sub>D</sub>	160	mW			

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# 4 - PIN POWER LED

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

ELECTRICAL / OPTICAL CHARACTERISTICS (TA =25°C)					
Part Number	QTLP321C-R	QTLP321C-E	QTLP321C-Y	Condition	
Luminous Flux (mlm)				I <sub>F</sub> = 70 mA	
Minimum	500	500	500		
Typical	1300	1300	1300		
Forward Voltage V <sub>F</sub> (V)				$I_F = 20 / 70 \text{ mA}$	
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 <sub>F</sub> = 70 mA	
Peak	640	620	590		
Dominant	630	615	589		
Spectral Line Half Width (nm)	20	18	15	I <sub>F</sub> = 70 mA	
Viewing Angle (°)	50	50	50	$I_F = 70 \text{ mA}$	

## **TYPICAL PERFORMANCE CURVES**

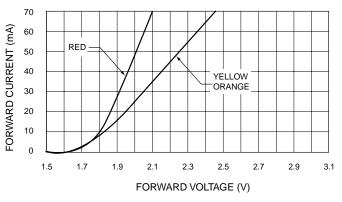


Fig. 1 Forward Current vs. Forward Voltage

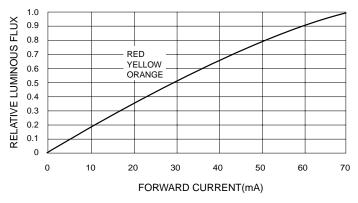


Fig. 2 Relative Luminous Flux vs. Forward Current

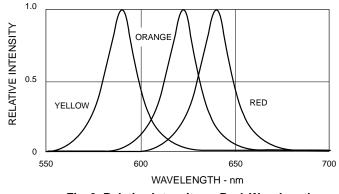
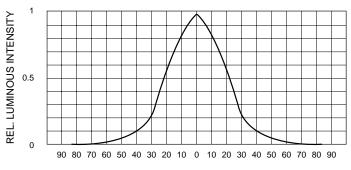


Fig. 3 Relative Intensity vs Peak Wavelength



ANGLE FROM OPTICAL CENTERLINE (DEGREES)

Fig. 4 Rel. Luminous Intensity vs. Angular Displacement

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# 4 - PIN POWER LED

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