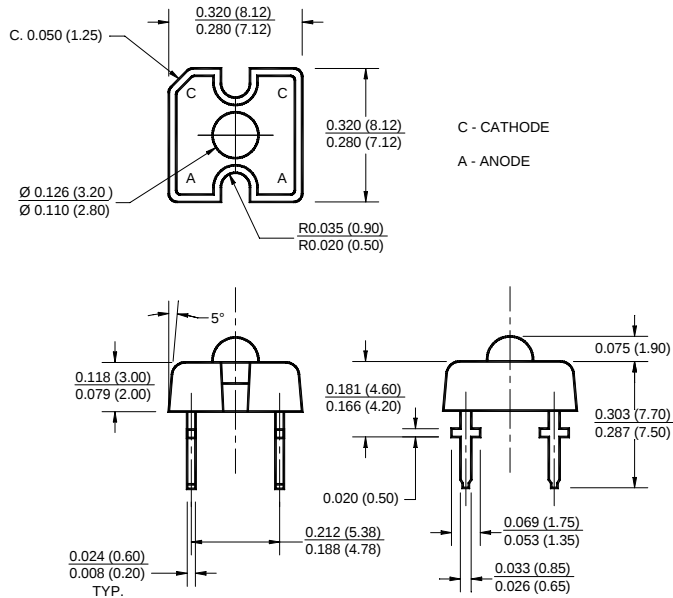


PACKAGE DIMENSIONS

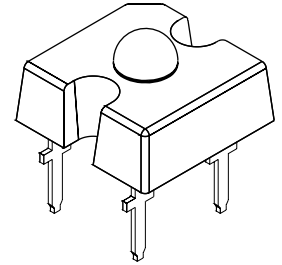


RED
ORANGE
YELLOW

QTLP321C-R
QTLP321C-E
QTLP321C-Y

FEATURES

- AlInGaP (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 ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Rating	Unit
Operating Temperature	T_{OPR}	-40 to +100	$^\circ\text{C}$
Storage Temperature	T_{STG}	-40 to +100	$^\circ\text{C}$
Lead Soldering Time	T_{SOL}	260 for 5 sec	$^\circ\text{C}$
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

RED
ORANGE
YELLOW

QTLP321C-R
QTLP321C-E
QTLP321C-Y

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A = 25°C)

Part Number	QTLP321C-R	QTLP321C-E	QTLP321C-Y	Condition
Luminous Flux (lm)				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

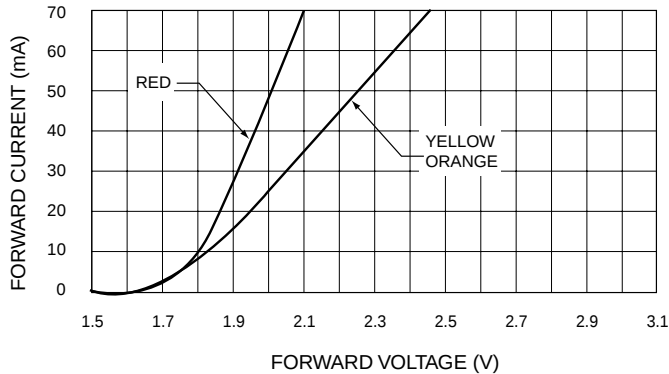


Fig. 1 Forward Current vs. Forward Voltage

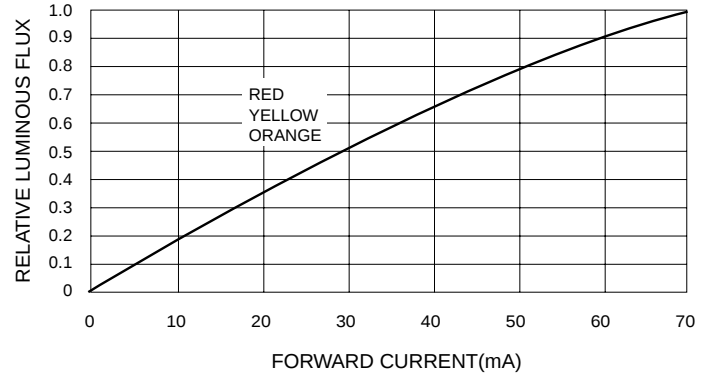


Fig. 2 Relative Luminous Flux vs. Forward Current

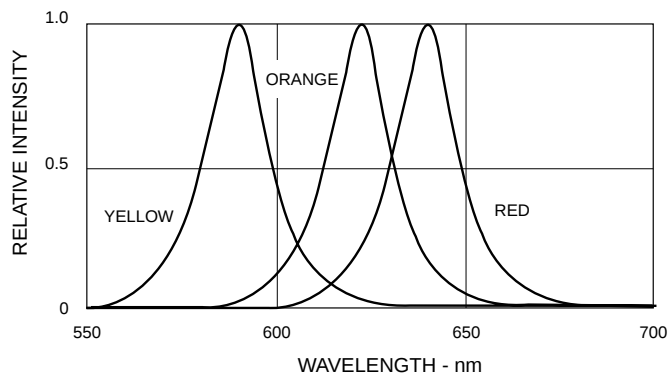


Fig. 3 Relative Intensity vs. Peak Wavelength

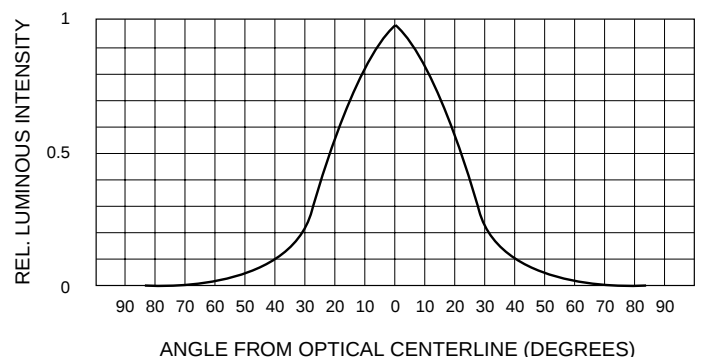


Fig. 4 Rel. Luminous Intensity vs. Angular Displacement

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN; NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE PRESIDENT OF FAIRCHILD SEMICONDUCTOR CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
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.