



**THE DATASHEET OF  
QTLP670C4TR**



**QTLP670C-2** HER

**QTLP670C-3** Yellow

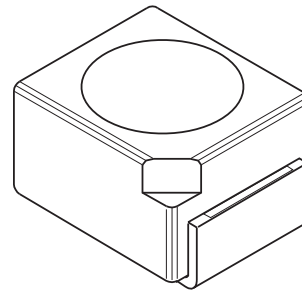
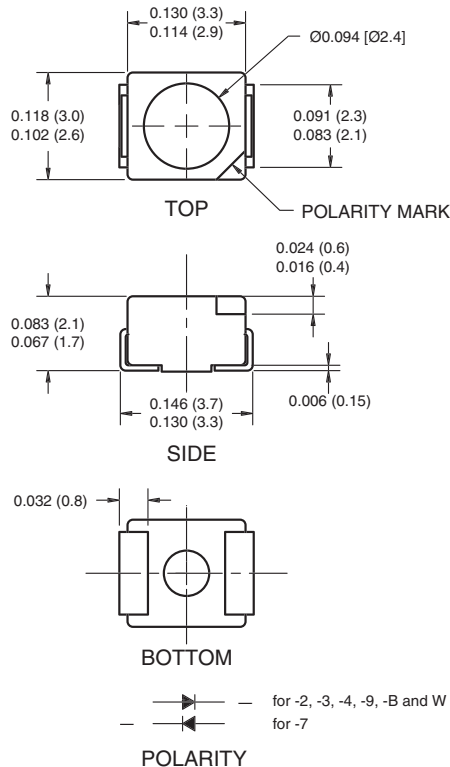
**QTLP670C-4** Green

**QTLP670C-7** AlGaAs Red

**QTLP670C-B** Blue

**QTLP670C-W** White

**PACKAGE DIMENSIONS**



**APPLICATIONS**

- Automotive interior lighting
- Status indication for consumer electronics and office equipment

**DESCRIPTION**

These surface mount LEDs are designed with flat top and sides for the ease of pick-and-place by automatic placement equipment. They are compatible with convective IR and vapor phase reflow soldering. The package size and configuration conform to EIA-535 BAAC standard specification for case size 3528 tantalum capacitor. These LEDs are ideal for backlighting and optical coupling into light pipes.

**FEATURES**

- GaN/SIC technology for -B and -W
- Wide viewing angle of 120°
- Water clear optics
- Moisture-proof packaging
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel

# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT PLCC-2

### QTLP670C

**QTLP670C-2** HER

**QTLP670C-3** Yellow

**QTLP670C-4** Green

**QTLP670C-7** AlGaAs Red

**QTLP670C-B** Blue

**QTLP670C-W** White

**ABSOLUTE MAXIMUM RATINGS** ( $T_A = 25^\circ\text{C}$  Unless otherwise specified)

Parameter	Symbol	QTLP670C						Units
		-2	-3	-4	-7	-B	-W	
Continuous Forward Current	$I_F$	30	30	30	30	30	30	mA
Peak Forward Current ( $f = 1.0 \text{ KHz}$ , Duty Factor = 1/10)	$I_{FM}$	160	160	160	180	100	100	mA
Reverse Voltage ( $I_R = 10 \mu\text{A}$ )	$V_R$	5	5	5	5	5	5	V
Power Dissipation	$P_D$	84	84	84	72	135	135	mW
Operating Temperature	$T_{OPR}$	-40 to +85						$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-40 to +90						$^\circ\text{C}$
Lead Soldering Time	$T_{SOL}$	260 for 5 sec						$^\circ\text{C}$

**ELECTRICAL / OPTICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$ )

Part Number	Symbol	QTLP670C						Condition
		-2	-3	-4	-7	-B	-W	
Luminous Intensity (mcd)	$I_V$	5	5	15	25	20	20	$I_F = 20\text{mA}$
Minimum		10	10	25	40	30	30	
Forward Voltage (V)	$V_F$	2.8	2.8	2.8	2.4	4.5	4.5	$I_F = 20\text{mA}$
Maximum		2.0	2.0	2.1	1.9	3.8	3.8	
Wavelength (nm)	$\lambda_P$	635	585	565	660	430	—	$I_F = 20\text{mA}$
Peak		630	590	570	645	465	—	
Dominant	$\lambda_D$	630	590	570	645	465	—	$I_F = 20\text{mA}$
Chromatic Coordinate	x,y	—	—	—	—	—	x = 0.26 y = 0.28	$I_F = 20\text{mA}$
Spectral Line Half Width (nm)	$\Delta\lambda$	45	35	30	20	65	—	$I_F = 20\text{mA}$
Viewing Angle ( $^\circ$ )	$2\theta_{1/2}$	120	120	120	120	120	120	$I_F = 20\text{mA}$

**QTLP670C-2 HER**

**QTLP670C-3 Yellow**

**QTLP670C-4 Green**

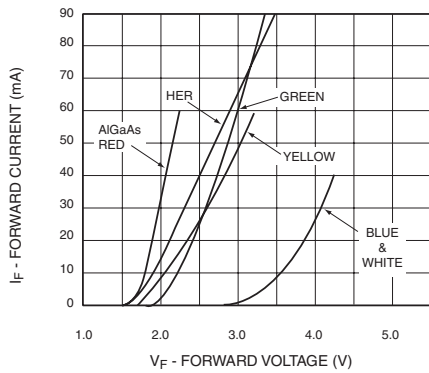
**QTLP670C-7 AlGaAs Red**

**QTLP670C-B Blue**

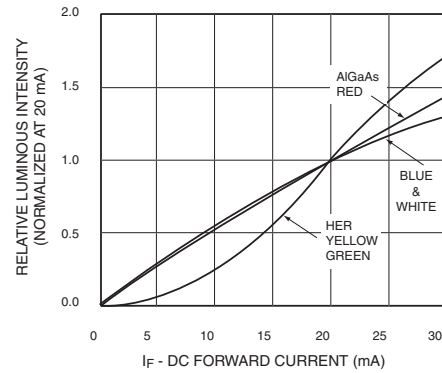
**QTLP670C-W White**

**TYPICAL PERFORMANCE CURVES**

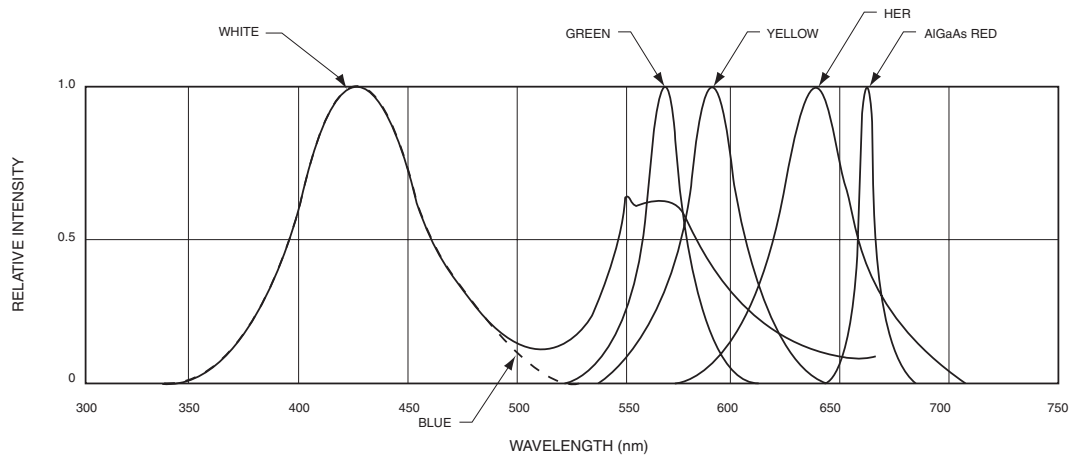
**Fig. 1 Forward Current vs. Forward Voltage**



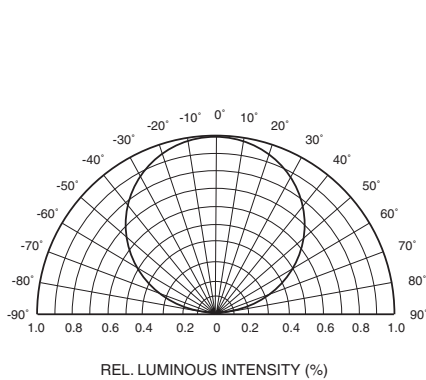
**Fig. 2 Relative Luminous Intensity vs. DC Forward Current**



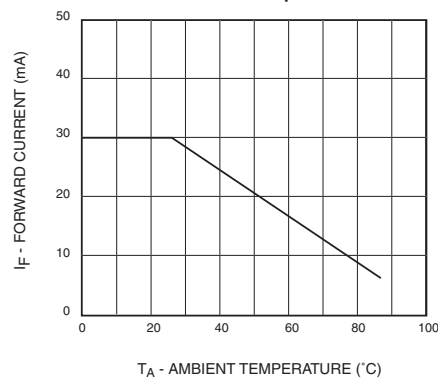
**Fig. 3 Relative Intensity vs. Peak Wavelength**



**Fig. 4 Radiation Diagram**



**Fig. 5 Maximum Forward Current vs. Ambient Temperature**



# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT PLCC-2

### QTLP670C

QTLP670C-2 HER

QTLP670C-3 Yellow

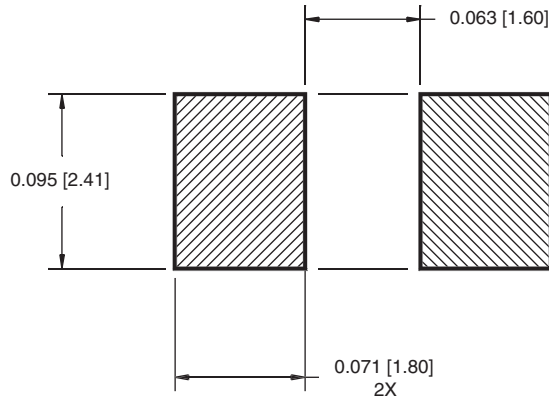
QTLP670C-4 Green

QTLP670C-7 AlGaAs Red

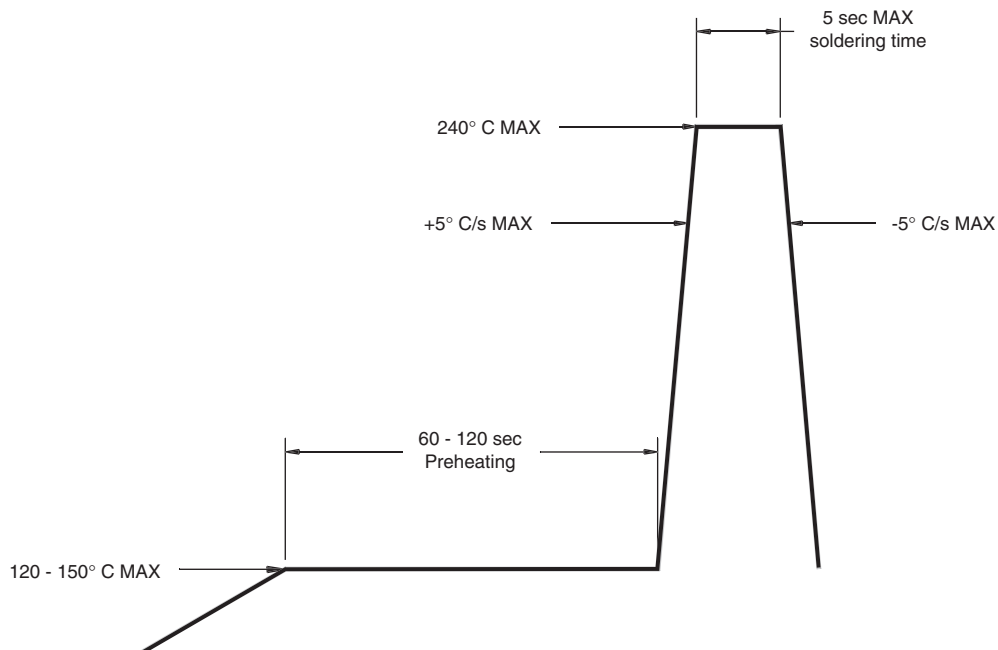
QTLP670C-B Blue

QTLP670C-W White

#### RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



#### RECOMMENDED IR REFLOW SOLDERING PROFILE



# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT PLCC-2

### QTLP670C

QTLP670C-2 HER

QTLP670C-3 Yellow

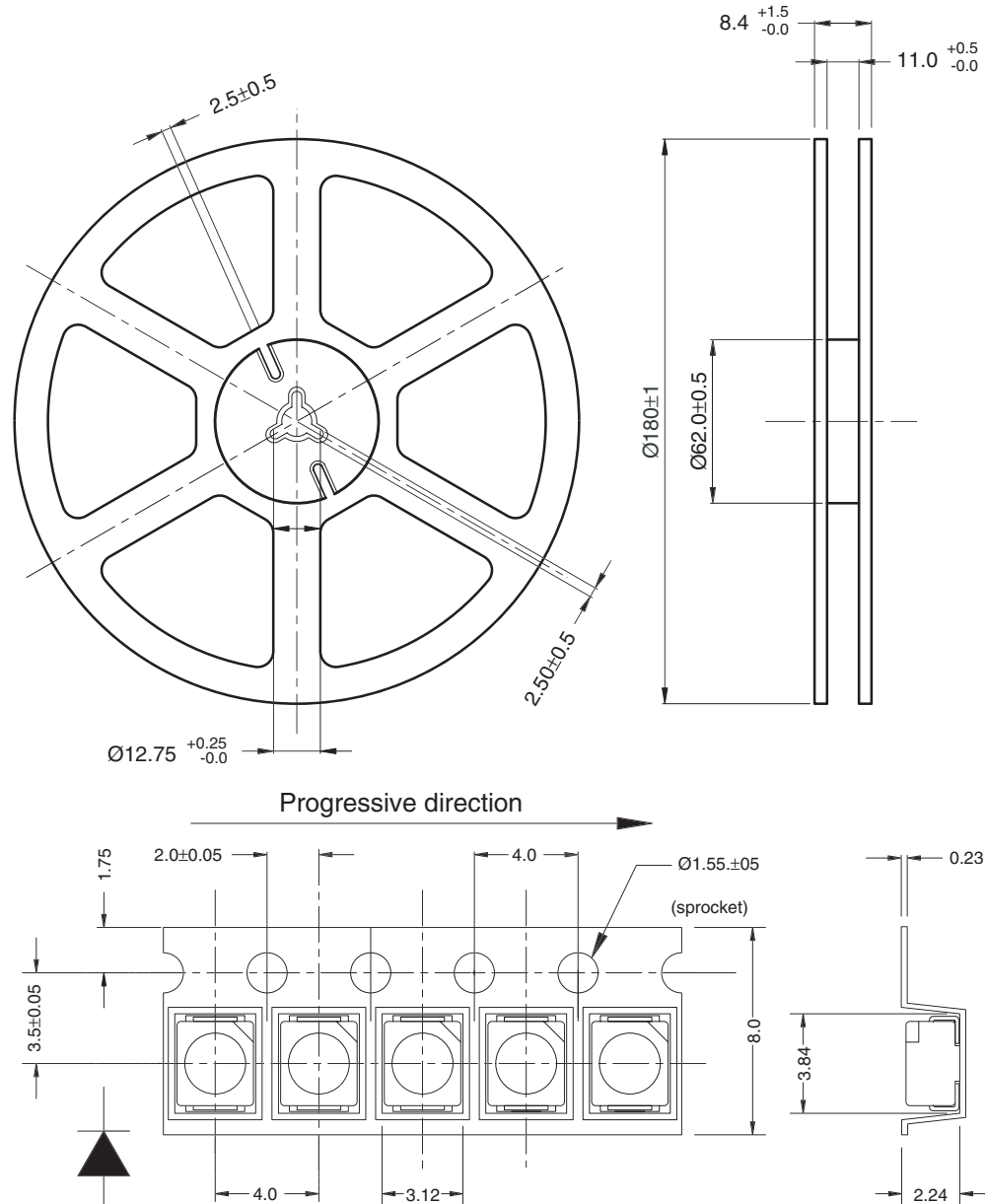
QTLP670C-4 Green

QTLP670C-7 AlGaAs Red

QTLP670C-B Blue

QTLP670C-W White

### TAPE AND REEL DIMENSIONS



for -2, -3, -4, -9, -B and -W

Polarity

Dimensional tolerance is  $\pm 0.1\text{mm}$  unless otherwise specified

Angle:  $\pm 0.5$

Unit: mm

Polarity marks are on the sprocket side.

# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT PLCC-2

### QTLP670C

QTLP670C-2 HER

QTLP670C-3 Yellow

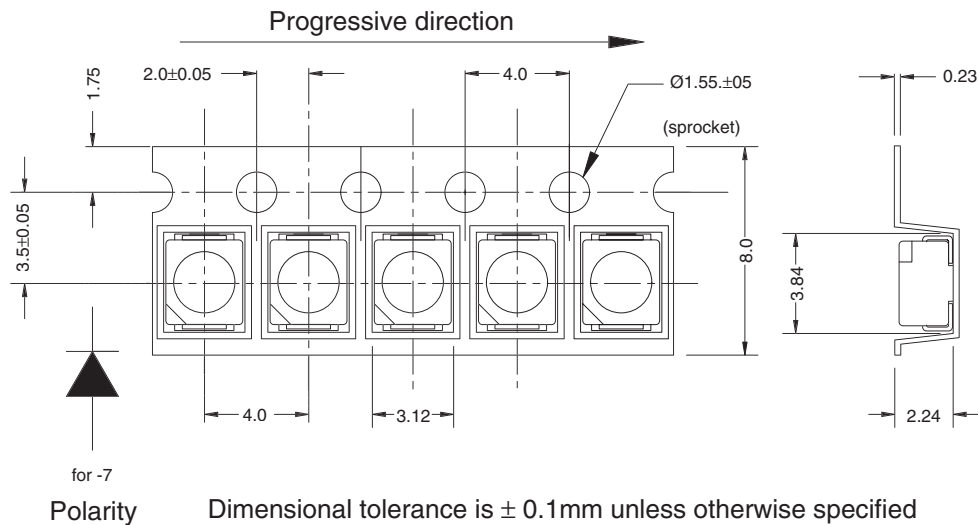
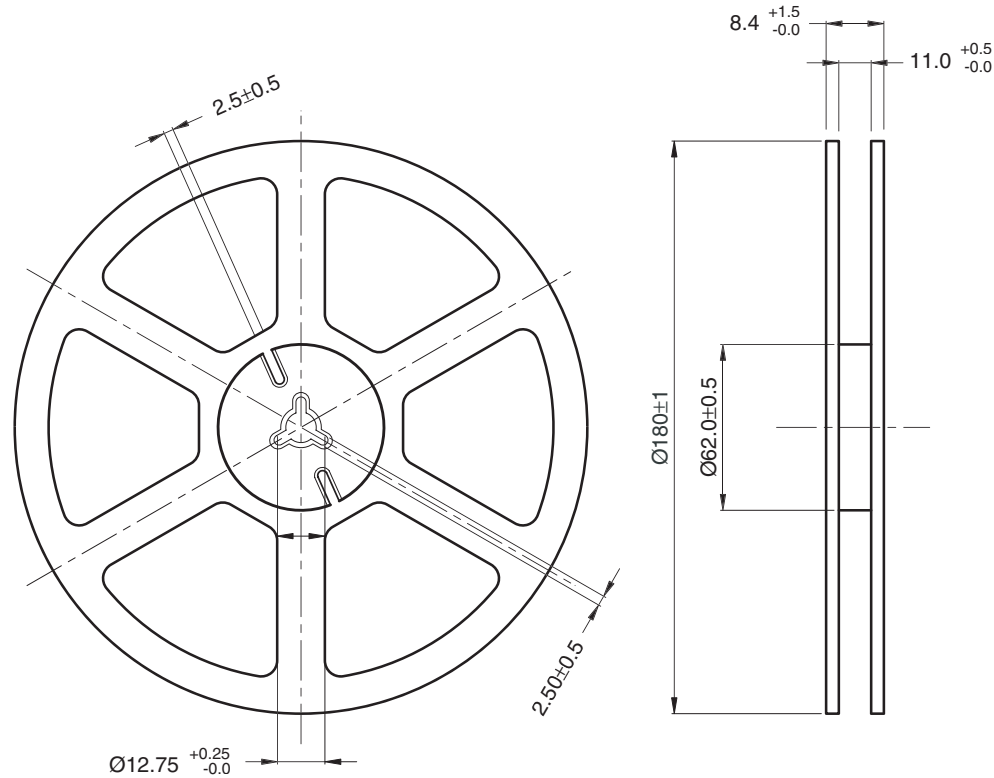
QTLP670C-4 Green

QTLP670C-7 AlGaAs Red

QTLP670C-B Blue

QTLP670C-W White

### TAPE AND REEL DIMENSIONS



for -7 Polarity

Dimensional tolerance is  $\pm 0.1\text{mm}$  unless otherwise specified

Angle:  $\pm 0.5$

Unit: mm

Polarity marks are on the opposite sprocket side.

# SURFACE MOUNT LED LAMP

## STANDARD BRIGHT PLCC-2

### QTLP670C

---

**QTLP670C-2** HER

**QTLP670C-3** Yellow

**QTLP670C-4** Green

**QTLP670C-7** AlGaAs Red

**QTLP670C-B** Blue

**QTLP670C-W** White

---

#### 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.

## Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View QTLP670C4TR on WIN SOURCE](#)
-  [Everlight Electronics Co Ltd Information](#)

## Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management