



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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QTLP610C-R Red

QTLP610C-E Orange

QTLP610C-O Yellow-Orange

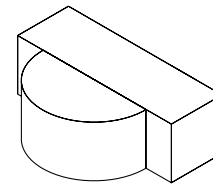
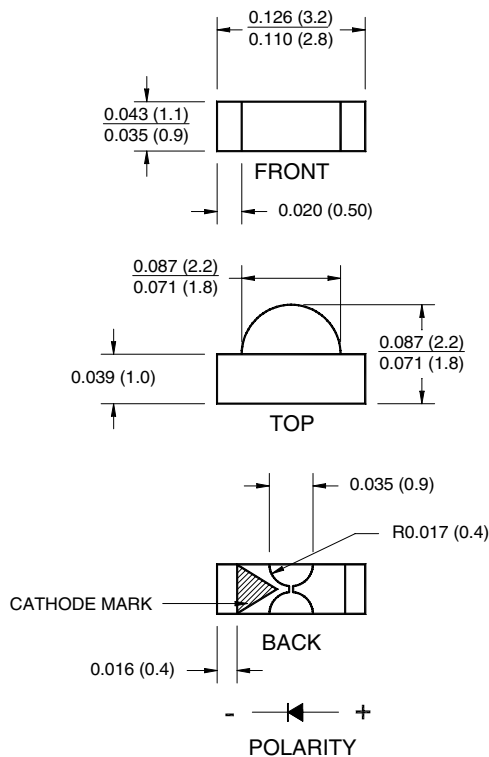
QTLP610C-Y Yellow

QTLP610C-AG Yellow-Green

QTLP610C-IG True Green

QTLP610C-IB Blue

PACKAGE DIMENSIONS



NOTE:

Dimensions for all drawings are in inches (mm).

APPLICATIONS

- LCD edge-lighting
- Edge card edge-lighting

DESCRIPTION

These super bright right angle surface mount chip LEDs emit light in the lateral direction. Small size and wide viewing angle make these LEDs ideal choices for status indication in consumer electronics, industrial control and other applications.

FEATURES

- Small footprint - 3.0(L) X 2.0(W) X 1.0(H) mm
- AlInGaP technology for -R, -E, -O, -Y and -AG
- InGaN/SiC technology for -IG and -IB
- Wide viewing angle of 120°
- Water clear optics
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel

SURFACE MOUNT LED LAMP

SUPER BRIGHT RIGHT ANGLE

QTLP610C-R Red

QTLP610C-E Orange

QTLP610C-O Yellow-Orange

QTLP610C-Y Yellow

QTLP610C-AG Yellow-Green

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ABSOLUTE MAXIMUM RATINGS (T_A =25°C Unless otherwise specified)

Parameter	Symbol	QTLP610C					Units
		-R	-E	-O	-Y	-AG	
Continuous Forward Current	I _F	30	30	30	25	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I _{FM}	160	160	160	120	160	mA
Reverse Voltage (I _R = 10 μA)	V _R	5	5	5	5	5	V
Power Dissipation	P _D	72	72	72	60	72	mW
Operating Temperature	T _{OPR}	-40 to +85					°C
Storage Temperature	T _{STG}	-40 to +90					°C
Lead Soldering Time	T _{SOL}	260 for 5 sec					°C

ABSOLUTE MAXIMUM RATINGS (T_A =25°C Unless otherwise specified)

Parameter	Symbol	QTLP610C		Units
		-IB	-IG	
Continuous Forward Current	I _F	30	30	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I _{FM}	100	100	mA
Reverse Voltage (I _R = 10 μA)	V _R	5	5	V
Power Dissipation	P _D	120	120	mW
Operating Temperature	T _{OPR}	-40 to +85		°C
Storage Temperature	T _{STG}	-40 to +90		°C
Lead Soldering Time	T _{SOL}	260 for 5 sec		°C

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ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	Symbol	QTLP610C					Condition
		-R	-E	-O	-Y	-AG	
Luminous Intensity (mcd)	I _V	20	20	20	20	10	I _F = 20mA
Minimum		45	45	45	45	20	
Forward Voltage (V)	V _F	2.4	2.4	2.4	2.4	2.4	I _F = 20mA
Maximum		2.0	2.0	2.0	2.0	2.0	
Wavelength (nm)	λ _P	630	620	610	590	575	I _F = 20mA
Peak		624	615	605	589	573	
Dominant	λ _D	20	18	18	15	20	I _F = 20mA
Spectral Line Half Width (nm)	Δλ	120	120	120	120	120	I _F = 20mA
Viewing Angle (°)	2Θ _{1/2}						I _F = 20mA

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

Part Number	Symbol	QTLP610C		Condition
		-IB	-IG	
Luminous Intensity (mcd)	I _V	20	60	I _F = 20mA
Minimum		30	100	
Forward Voltage (V)	V _F	4.0	4.0	I _F = 20mA
Maximum		3.5	3.5	
Wavelength (nm)	λ _P	465	520	I _F = 20mA
Peak		470	525	
Dominant	λ _D	25	35	I _F = 20mA
Spectral Line Half Width (nm)	Δλ	120	120	I _F = 20mA
Viewing Angle (°)	2Θ _{1/2}			I _F = 20mA

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TYPICAL PERFORMANCE CURVES (QTLP610C-R, -E, -O, -Y and -AG)

Fig. 1 Forward Current vs. Forward Voltage

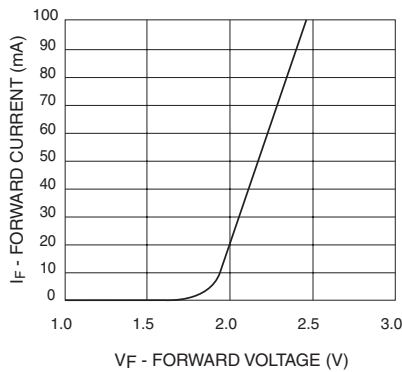


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

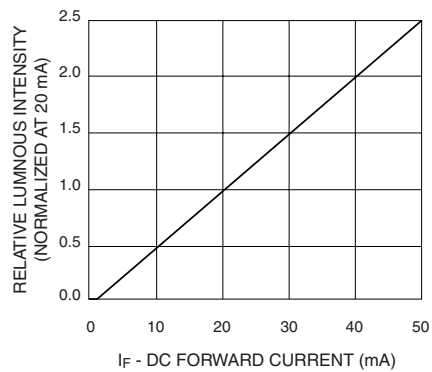


Fig. 3 Relative Intensity vs. Peak Wavelength

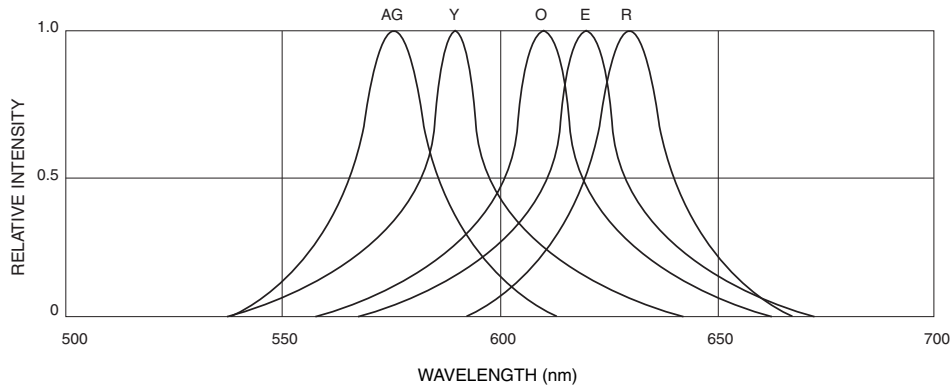


Fig.4 Radiation Diagram

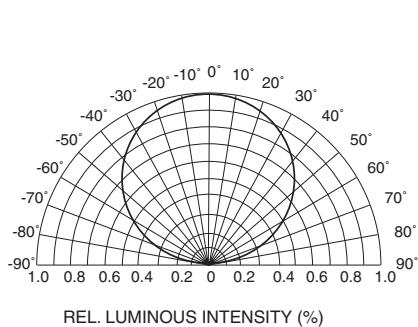
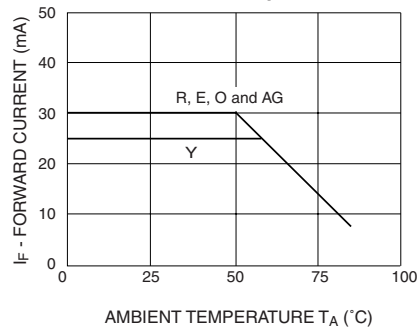


Fig.5 Maximum Forward Current vs. Ambient Temperature



QTLP610C-R Red

QTLP610C-E Orange

QTLP610C-O Yellow-Orange

QTLP610C-Y Yellow

QTLP610C-AG Yellow-Green

QTLP610C-IG True Green

QTLP610C-IB Blue

TYPICAL PERFORMANCE CURVES (QTLP610C-IG and -IB)

Fig. 1 Forward Current vs. Forward Voltage

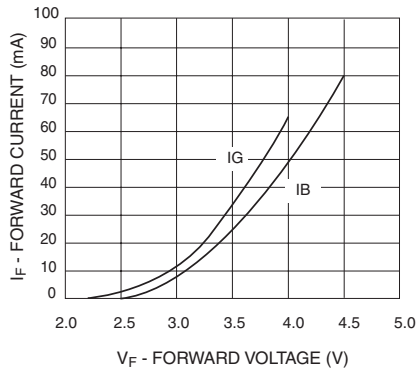


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

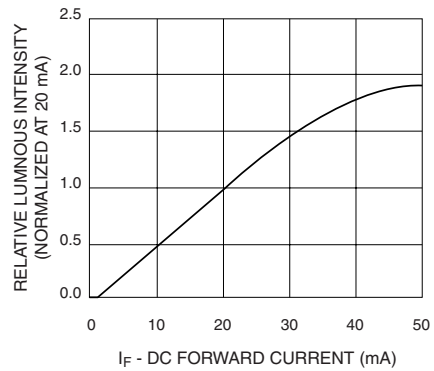


Fig. 3 Relative Intensity vs. Peak Wavelength

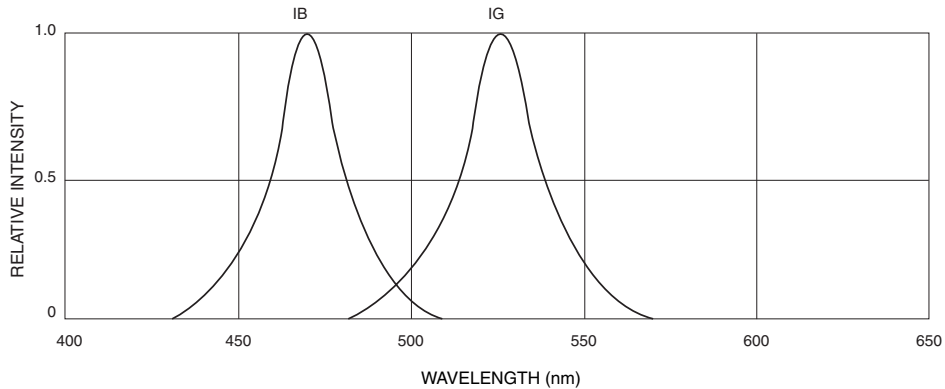


Fig. 4 Radiation Diagram

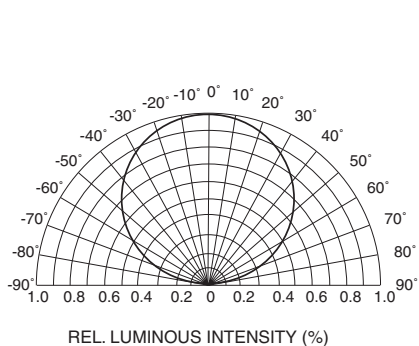
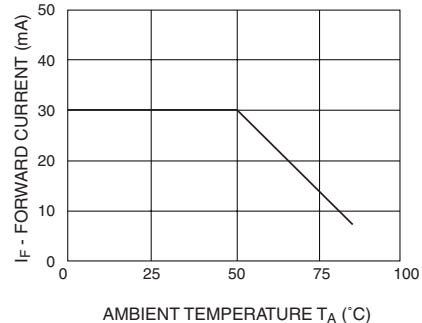


Fig. 5 Maximum Forward Current vs. Ambient Temperature



SURFACE MOUNT LED LAMP

SUPER BRIGHT RIGHT ANGLE

QTLP610C-R Red

QTLP610C-E Orange

QTLP610C-O Yellow-Orange

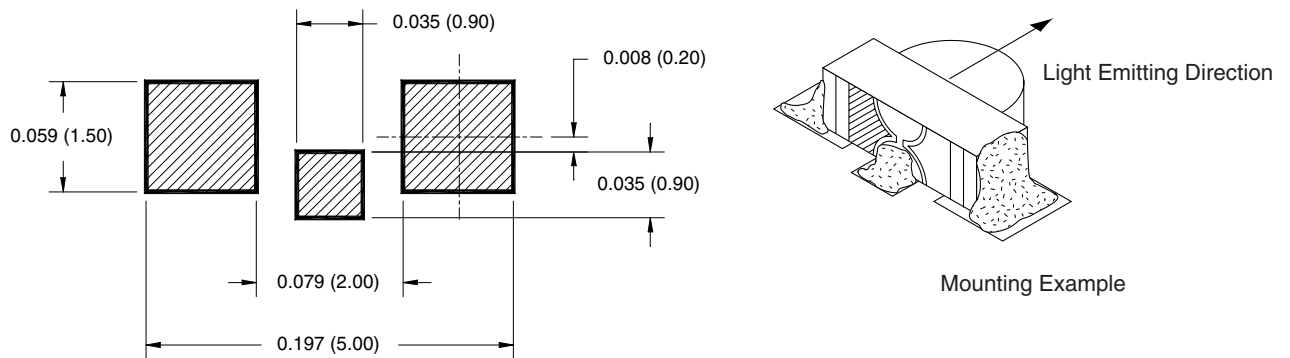
QTLP610C-Y Yellow

QTLP610C-AG Yellow-Green

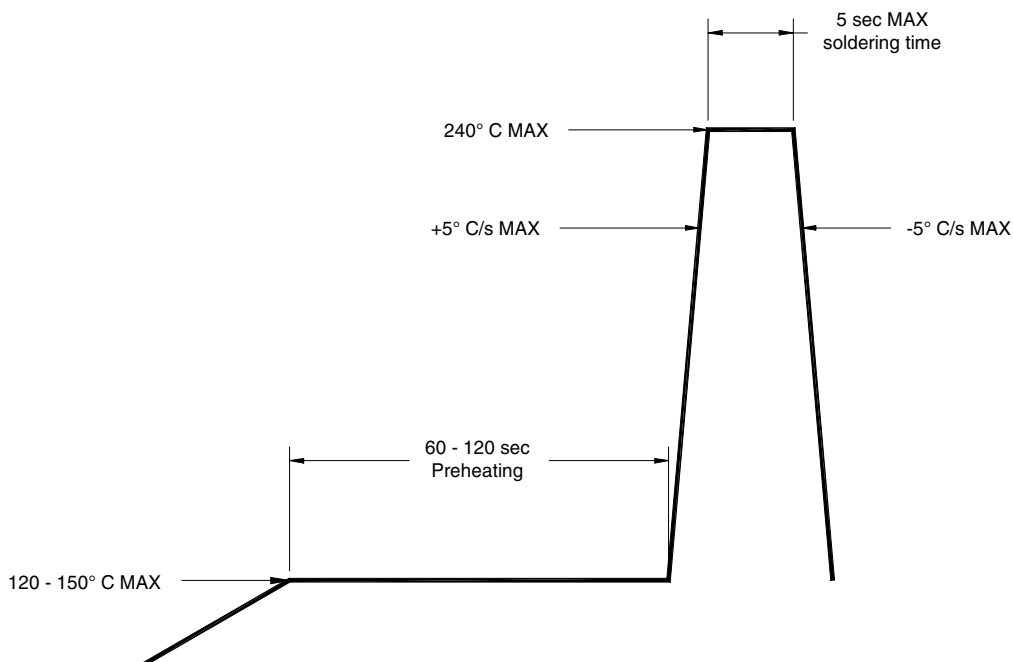
QTLP610C-IG True Green

QTLP610C-IB Blue

RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



QTLP610C-R Red

QTLP610C-E Orange

QTLP610C-O Yellow-Orange

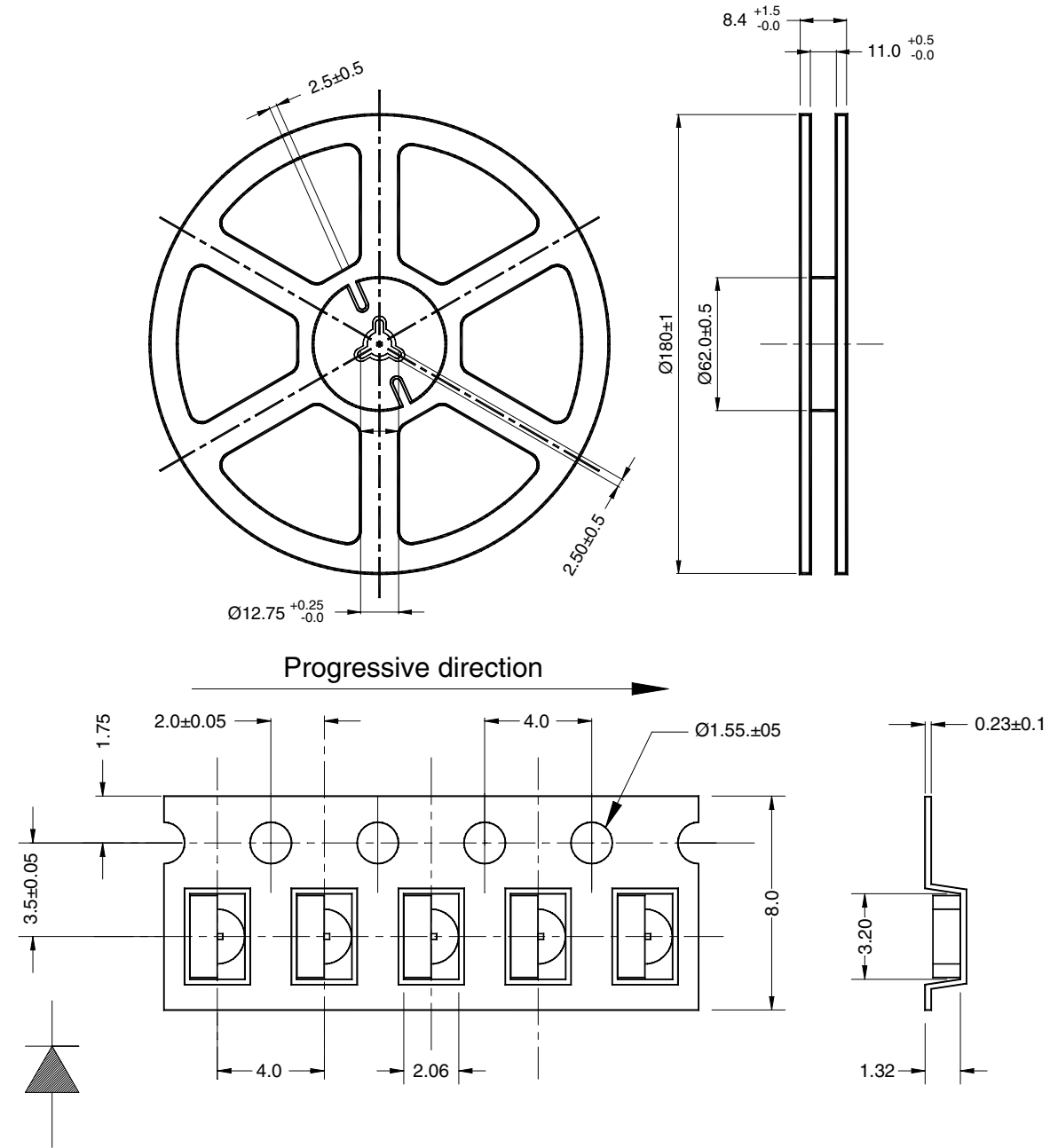
QTLP610C-Y Yellow

QTLP610C-AG Yellow-Green

QTLP610C-IG True Green

QTLP610C-IB Blue

TAPE AND REEL DIMENSIONS



Polarity

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

Angle: ± 0.5

Unit: mm

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