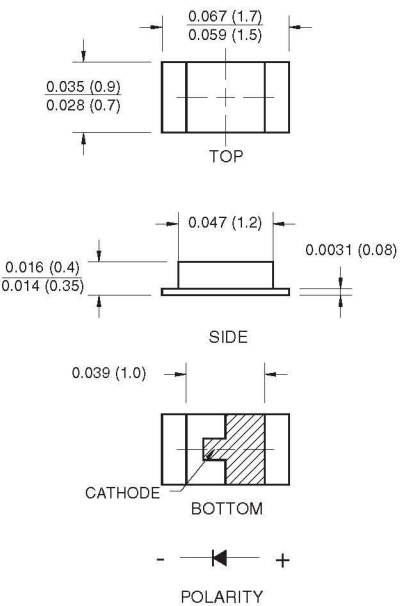
SURFACE MOUNT LED LAMP

0603 (0.35 mm Height)

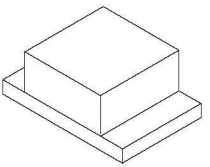
QTLP603CIWTR White

PACKAGE DIMENSIONS



NOTE:

Dimensions for all drawings are in inches (mm).



APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

DESCRIPTION

This surface mount chip LED is designed to fit industry standard footprint. Small size, low profile and wide viewing angle make this LED an ideal choice for backlighting applications and panel illumination. This device utilizes an InGaN/Sapphire blue LED.

FEATURES

- Miniature footprint — 1.6(L) X 0.8(W) X 0.35(H) mm
- Wide viewing angle of 120°
- Diffused 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
0603 (0.35 mm Height)

QTLP603CIWTR White

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)			
Parameter	**Symbol**	**Rating**	**Unit**
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
Continuous Forward Current	I_F	25	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I_{FM}	100	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	110	mW

ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)		
Part Number	**QTLP603CIWTR**	**Condition**
Luminous Intensity (mcd)		
Bin I3	21 - 42	I_F = 5 mA
Bin I4	30 - 60	
Bin I5	45 - 90	
Forward Voltage (V)		
Bin V0	2.55 - 2.75	I_F = 5 mA
Bin V1	2.75 - 2.95	
Bin V2	2.95 - 3.15	
Bin V3	3.15 - 3.35	
Chromaticity Coordinate	See page 3	I_F = 5 mA
Reverse Current (μA) - max	10	V_R = 5 V
Spectral Line Half Width (nm)	35	I_F = 5 mA
Viewing Angle (°)	120	I_F = 5 mA

Notes:
– Forward Voltage Tolerance = ±0.1V
– Luminous Intensity Tolerance = ±15%

QTLP603CIWTR — White

Color Ranks

(I_F = 5mA, Ta = 25°C)

	Bin a0			
x	0.280	0.264	0.283	0.296
y	0.248	0.267	0.305	0.276

	Bin b5			
x	0.296	0.311	0.307	0.287
y	0.276	0.294	0.315	0.295

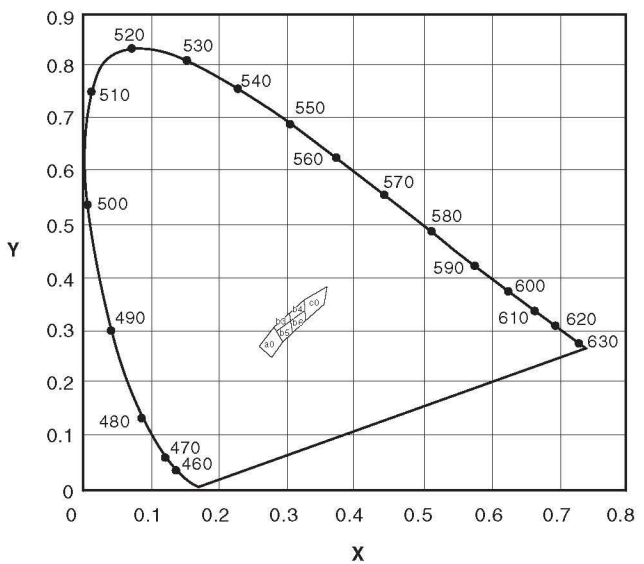
	Bin b3			
x	0.307	0.287	0.304	0.283
y	0.315	0.295	0.330	0.305

	Bin b6			
x	0.311	0.307	0.330	0.330
y	0.294	0.315	0.318	0.339

	Bin b4			
x	0.307	0.330	0.330	0.304
y	0.315	0.339	0.360	0.330

	Bin c0			
x	0.330	0.330	0.361	0.356
y	0.318	0.360	0.385	0.351

Chromaticity Diagram



TYPICAL PERFORMANCE CURVES

Fig. 1 Forward Current vs. Forward Voltage

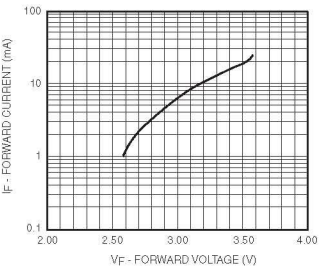


Fig. 2 Relative Luminous Intensity vs. DC Forward Current

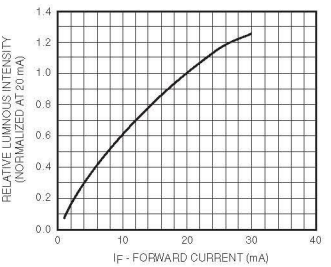


Fig. 3 Relative Intensity vs. Peak Wavelength

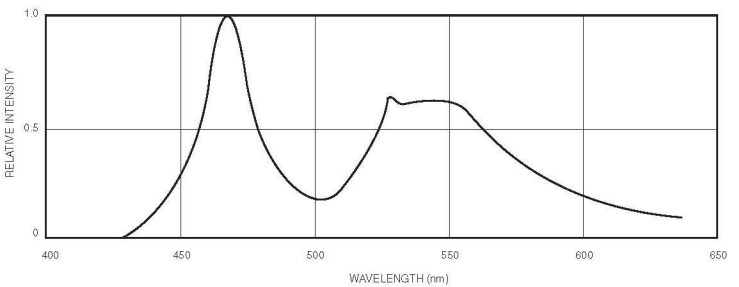


Fig.4 Radiation Diagram

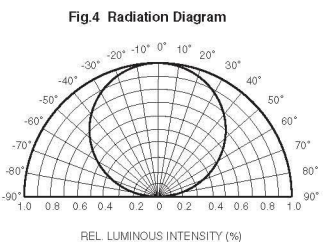
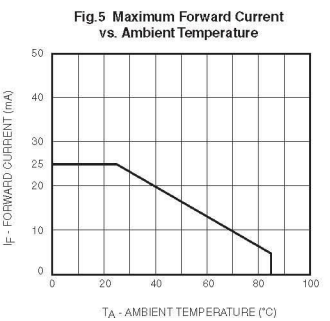
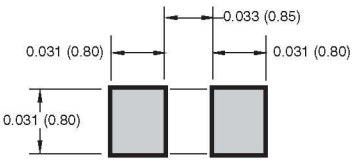


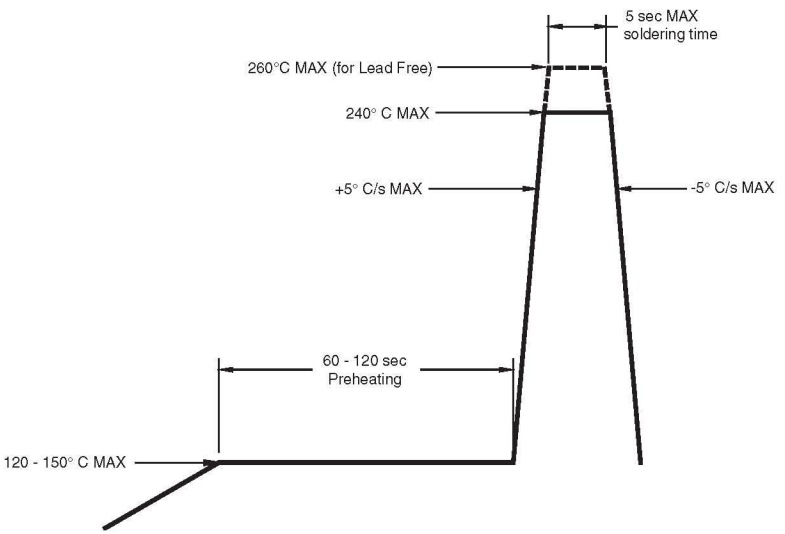
Fig.5 Maximum Forward Current vs. Ambient Temperature



RECOMMENDED PRINTED CIRCUIT BOARD PATTERN

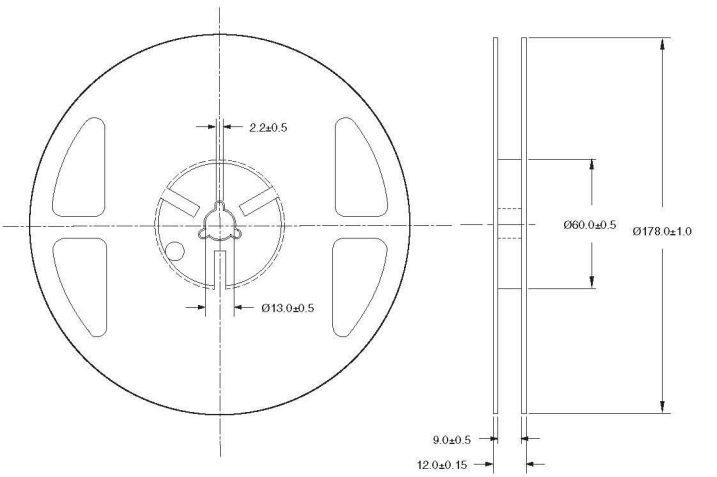


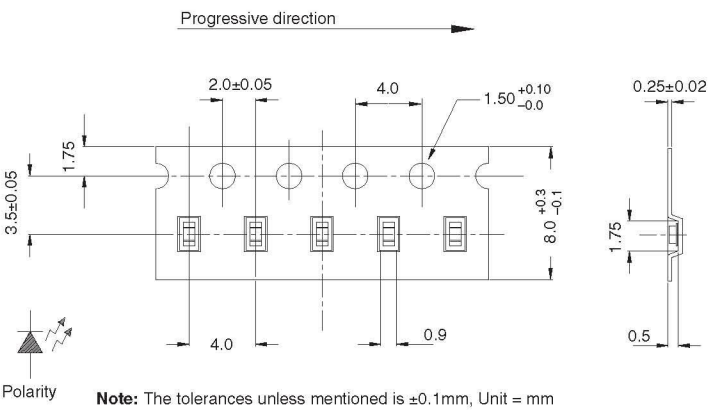
RECOMMENDED IR REFLOW SOLDERING PROFILE



QTLP603CIWTR White

TAPE AND REEL DIMENSIONS





Note: The tolerances unless mentioned is ±0.1mm, Unit = mm

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