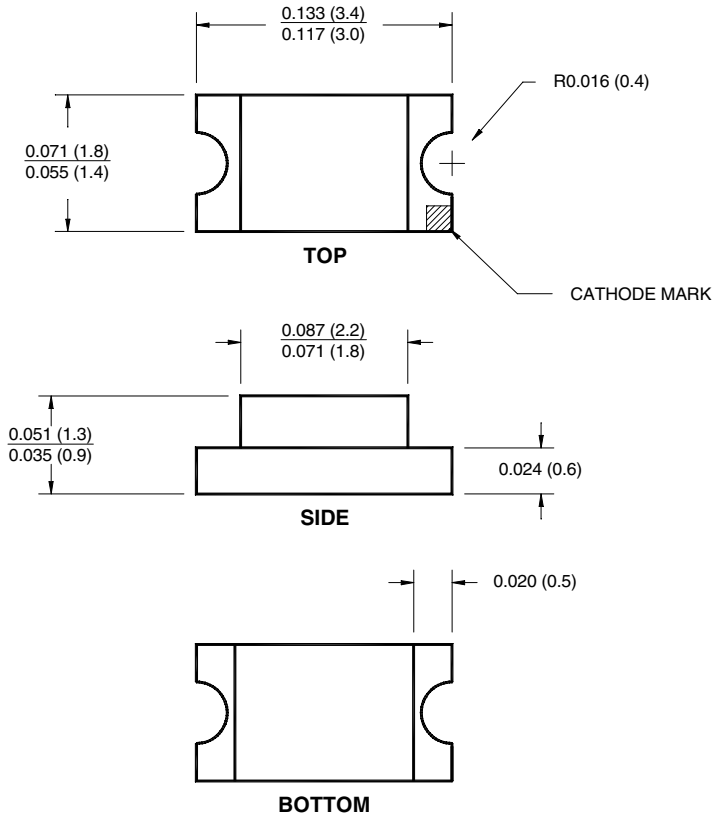


# SURFACE MOUNT LED LAMP

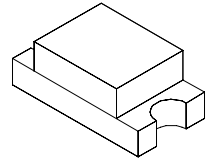
## (1206) Chip Type - Water Clear

### PACKAGE DIMENSIONS



NOTE:  
Dimensions are in inches (mm).

**PURE GREEN** QTLP650C-5  
**ORANGE** QTLP650C-8



### FEATURES

- Ultra-miniature and extremely low profile
- Industrial standard footprint
- Wide viewing angle of 140°
- Water clear optics
- Moisture-proof packaging

### DESCRIPTION

These surface mount lamps are designed to fit industry standard profile and footprint for ultra-miniature chip type 1206. The low profile and 140° viewing angle, moisture-proof packaging makes this chip type LED ideal for panel illumination, push-button backlighting and membrane switch applications.

### ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Pure Green QTLP650C-5	Orange QTLP650C-8	Units
Continuous Forward Current - I <sub>F</sub>	30	30	mA
Peak Forward Current - I <sub>F</sub> (f = 1.0 KHz, Duty Factor = 1/10)	160	160	mA
Reverse Voltage - V <sub>R</sub> (I <sub>R</sub> = 10 μA)	5	5	V
Power Dissipation - P <sub>D</sub>	100	100	mW
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>			°C
Wave	260 for 5 sec		
Reflow	260 for 10 sec		

<b>PURE GREEN</b>	<b>QTLP650C-5</b>
<b>ORANGE</b>	<b>QTLP650C-8</b>

### ELECTRICAL / OPTICAL CHARACTERISTICS (T<sub>A</sub> = 25°C)

Part Number	Pure Green QTLP650C-5	Orange QTLP650C-8	Condition
Luminous Intensity (mcd)			I <sub>F</sub> = 20 mA
Minimum	1.5	3.0	
Typical	3.5	6.0	
Forward Voltage (V)			I <sub>F</sub> = 20 mA
Maximum	2.8	2.8	
Typical	2.1	2.1	
Peak Wavelength (nm)	555	610	I <sub>F</sub> = 20 mA
Spectral Line Half Width (nm)	30	40	I <sub>F</sub> = 20 mA
Viewing Angle (°)	140	140	I <sub>F</sub> = 20 mA

### TYPICAL PERFORMANCE CURVES

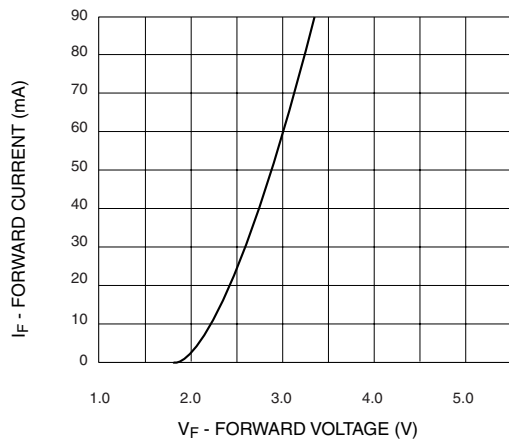


Fig. 1 Forward Current vs. Forward Voltage

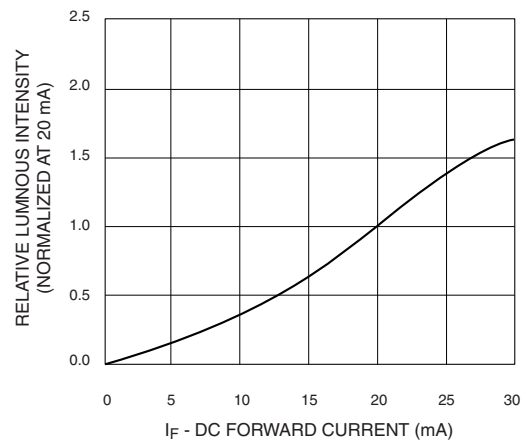
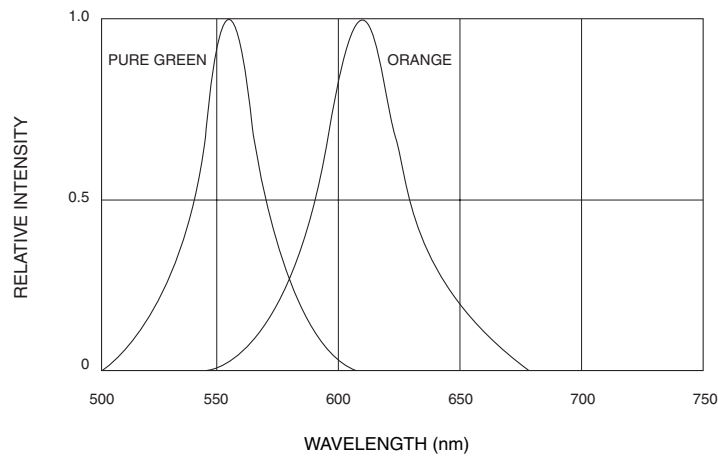


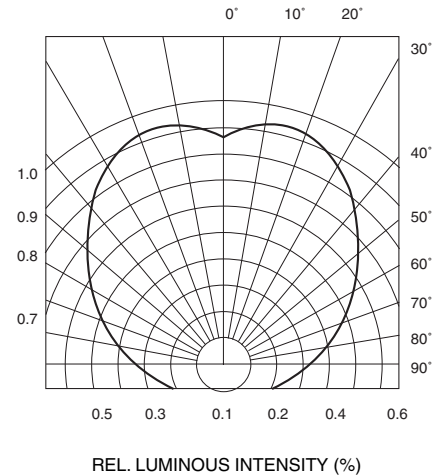
Fig. 2 Relative Luminous Intensity vs. DC Forward Current

PURE GREEN	QTLP650C-5
ORANGE	QTLP650C-8

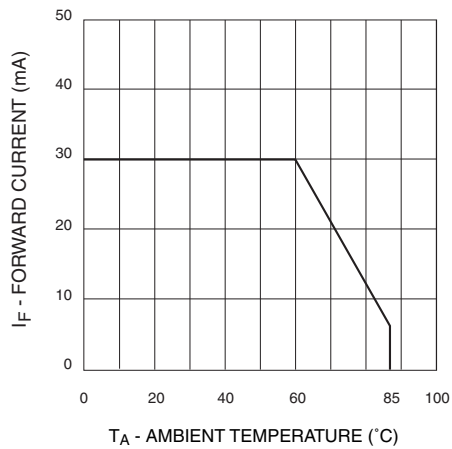
**TYPICAL PERFORMANCE CURVES**



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



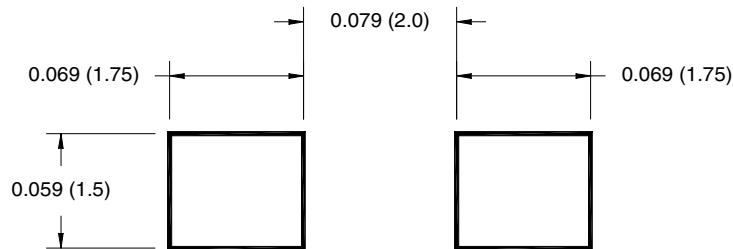
**Fig. 4 Radiation Diagram**



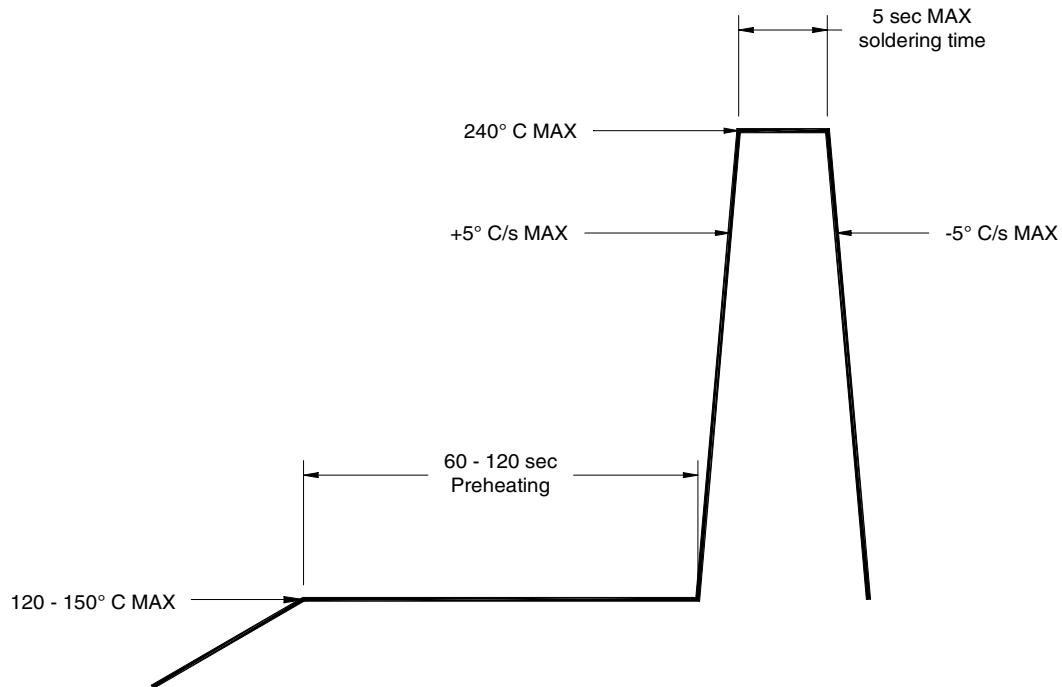
**Fig. 5 Current Derating Curve**

PURE GREEN	QTLP650C-5
ORANGE	QTLP650C-8

## RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



## RECOMMENDED IR REFLOW SOLDERING PROFILE



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