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[Everlight Electronics Co Ltd](#)  
[QTLP650DRGBTR](#)

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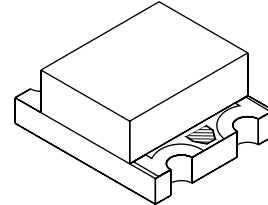
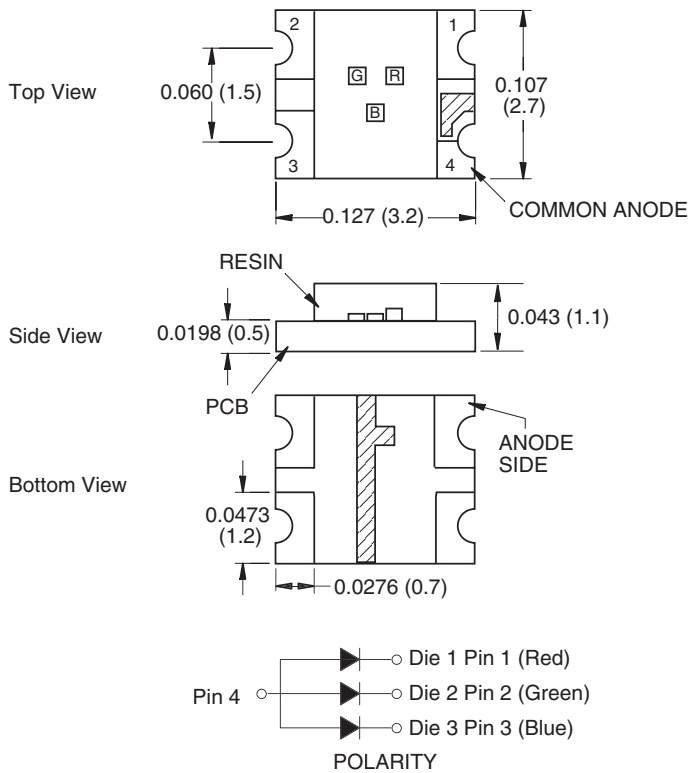


# SURFACE MOUNT LED LAMP

## FULL COLOR 1210

QTLP650D-RGB Red/Green/Blue

### PACKAGE DIMENSIONS



**NOTE:**  
 Dimensions for all drawings are in inches (mm).

### APPLICATIONS

- Keypad backlighting
- Push-button backlighting
- LCD backlighting

### DESCRIPTION

This full-color surface mount chip LED is designed to fit industry standard footprint. Small size, low profile and wide viewing angle make this LED ideal for backlighting applications and panel illumination.

### FEATURES

- Miniature footprint - 3.2(L) X 2.7(W) X 1.1(H) mm
- AllInGaP and InGaN technology
- Wide viewing angle of 140°
- Diffused optics
- Moisture-proof packaging
- Available in 0.315" (8mm) width tape on 7" (178mm) diameter reel; 2,000 units per reel



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### QTLP650D-RGB Red/Green/Blue

ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> =25°C Unless otherwise specified)					
Parameter	Symbol	R	G	B	Units
Continuous Forward Current	I <sub>F</sub>	30	20	20	mA
Peak Forward Current (f = 1.0 KHz, Duty Factor = 1/10)	I <sub>FM</sub>	100	80	80	mA
Reverse Voltage (I <sub>R</sub> = 100 μA)	V <sub>R</sub>	5			V
Power Dissipation	P <sub>D</sub>	72	78	78	mW
Operating Temperature	T <sub>OPR</sub>	-30 to +80			°C
Storage Temperature	T <sub>STG</sub>	-40 to +85			°C
Lead Soldering Time	T <sub>SOL</sub>	260 for 5 sec			°C

ELECTRICAL / OPTICAL CHARACTERISTICS (T <sub>A</sub> =25°C)						
Parameter	Symbol	QTLP650D			Condition	
		R	G	B		
Luminous Intensity (mcd)	min:	25	63	25	I <sub>F</sub> = 20mA	
	typ:	60	130	40		
Forward Voltage (V)	typ:	1.9	3.3	3.3	I <sub>F</sub> = 20mA	
	max:	2.4	3.9	3.9		
Wavelength (nm)	Peak:	630	520	468	I <sub>F</sub> = 20mA	
	Dominance:	624	525	470		
Typical Viewing Angle (°)	2U1/2	140			I <sub>F</sub> = 20mA	



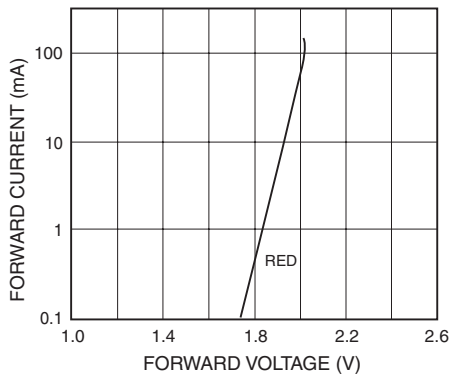
# SURFACE MOUNT LED LAMP

## FULL COLOR 1210

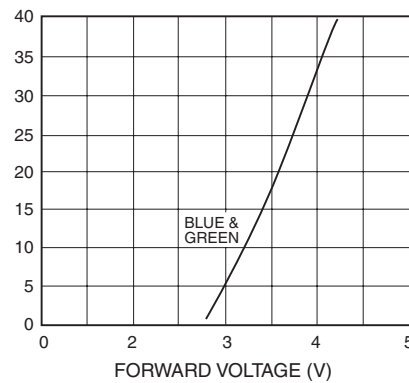
**QTLP650D-RGB Red/Green/Blue**

### TYPICAL PERFORMANCE CURVES

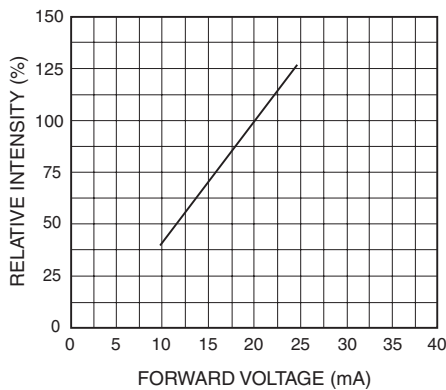
**Fig. 1A Forward Current vs. Forward Voltage**



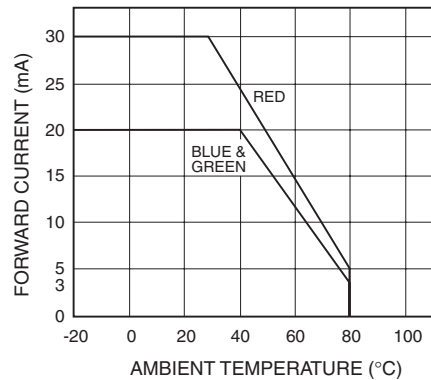
**Fig. 1B Forward Current vs. Forward Voltage**



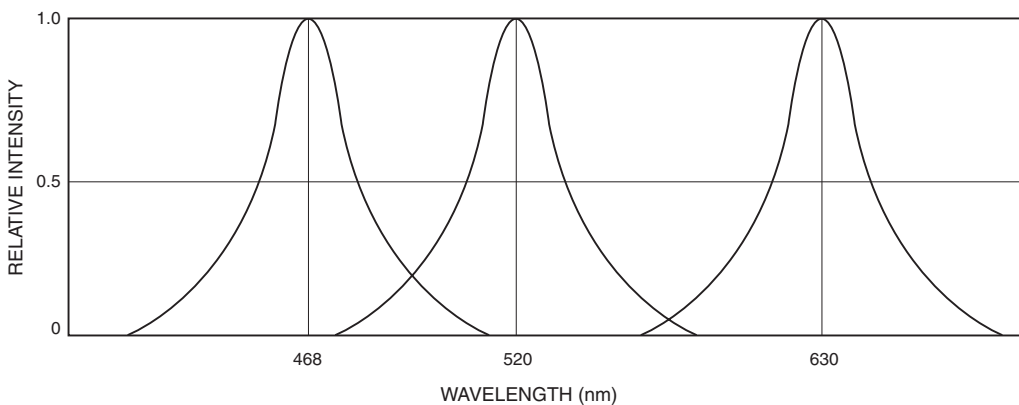
**Fig. 2 Relative Intensity vs. Forward Current**



**Fig. 3 Forward Current vs. Ambient Temperature**

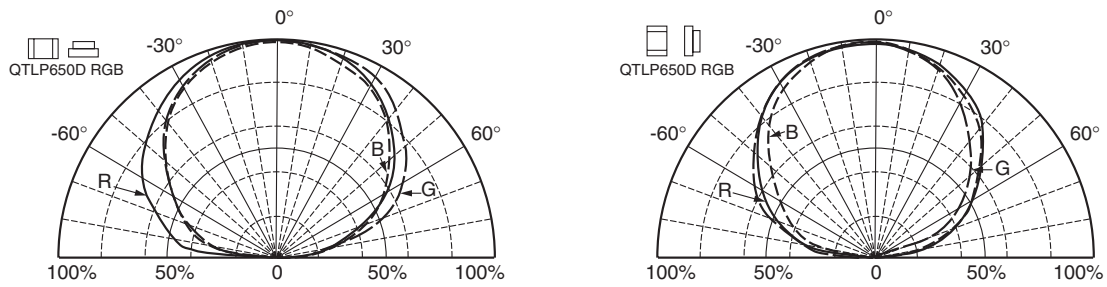


**Fig. 4 Relative Intensity vs. Peak Wavelength**



**TYPICAL PERFORMANCE CURVES**

**Fig.5 Radiation Diagrams**



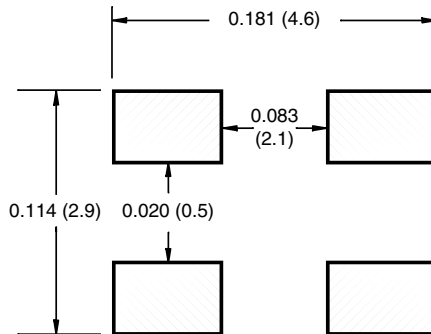


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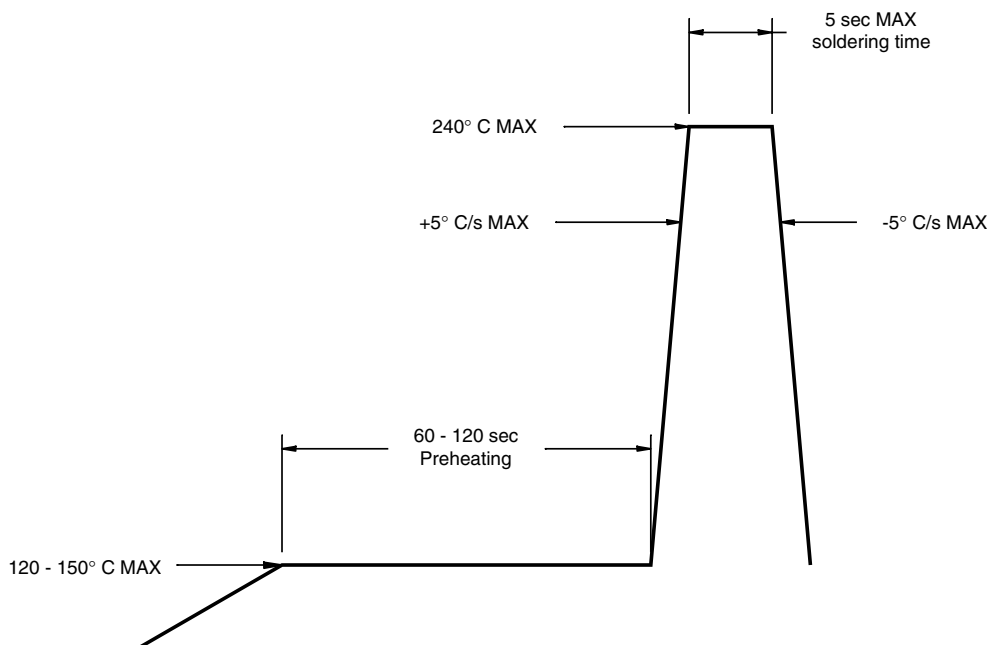
## FULL COLOR 1210

QTLP650D-RGB Red/Green/Blue

### RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



### RECOMMENDED IR REFLOW SOLDERING PROFILE







# SURFACE MOUNT LED LAMP

## FULL COLOR 1210

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**QTLP650D-RGB Red/Green/Blue**

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