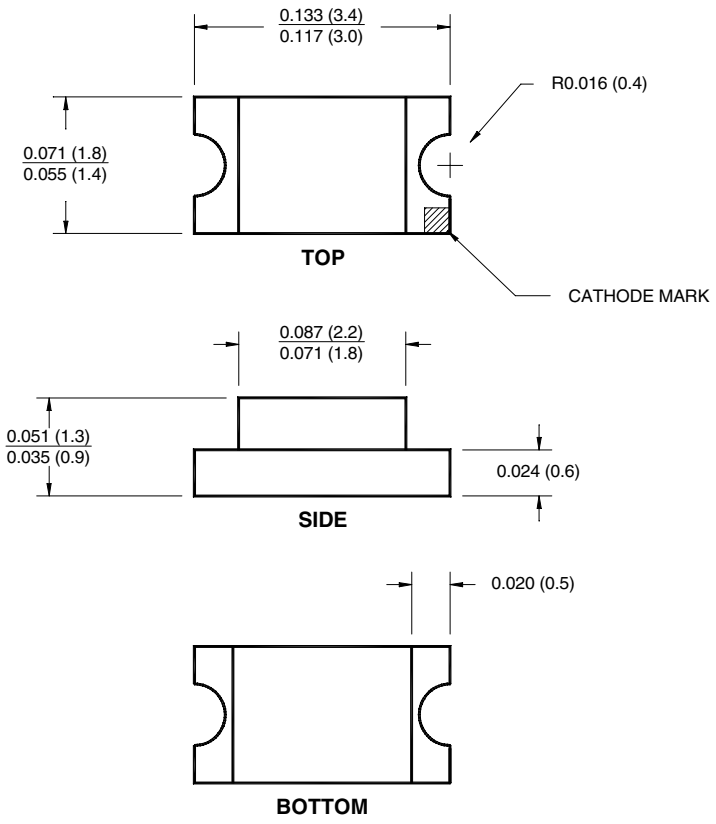
FAIRCHILD
SEMICONDUCTOR™

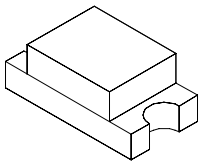
SURFACE MOUNT LED LAMP
(1206) Chip Type - Water Clear

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

PACKAGE DIMENSIONS



NOTE:
Dimensions are in inches (mm).



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_A = 25°C unless otherwise specified)

Parameter	Pure Green QTLP650C-5	Orange QTLP650C-8	Units
Continuous Forward Current - I_F	30	30	mA
Peak Forward Current - I_F (f = 1.0 KHz, Duty Factor = 1/10)	160	160	mA
Reverse Voltage - V_R (I_R = 10 µA)	5	5	V
Power Dissipation - P_D	100	100	mW
Operating Temperature - T_{OPR}	-40 to +100		°C
Storage Temperature - T_{STG}	-40 to +100		°C
Lead Soldering Time - T_{SOL}			
Wave	260 for 5 sec		°C
Reflow	260 for 10 sec		

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ELECTRICAL / OPTICAL CHARACTERISTICS (T_A =25°C)

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

TYPICAL PERFORMANCE CURVES

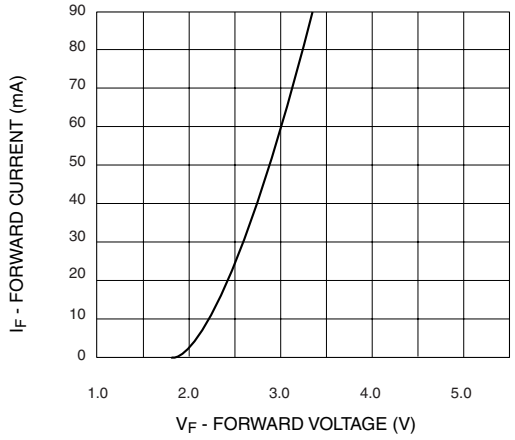

Fig. 1 Forward Current vs. Forward Voltage

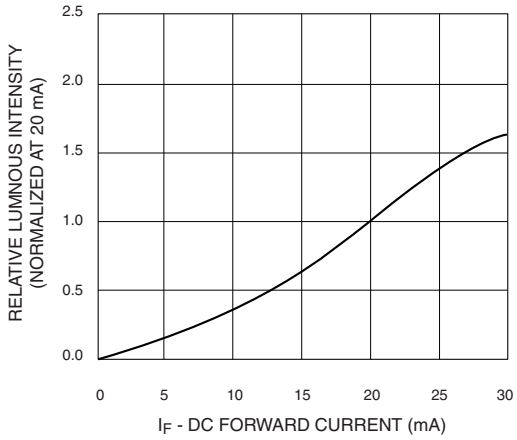

Fig. 2 Relative Luminous Intensity vs. DC Forward Current

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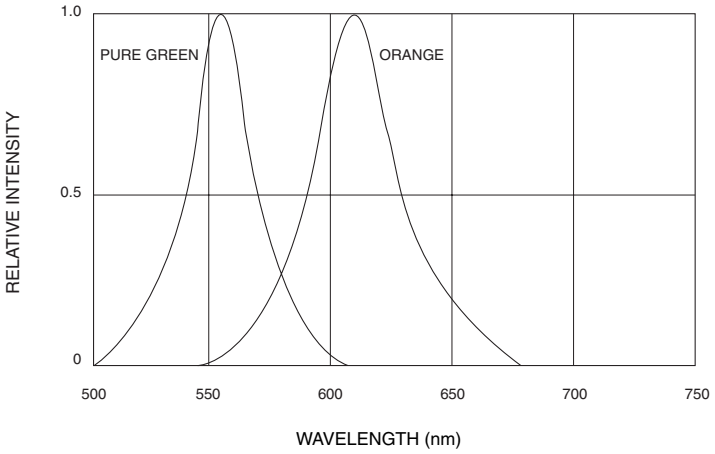

Fig. 3 Relative Intensity vs. Peak Wavelength

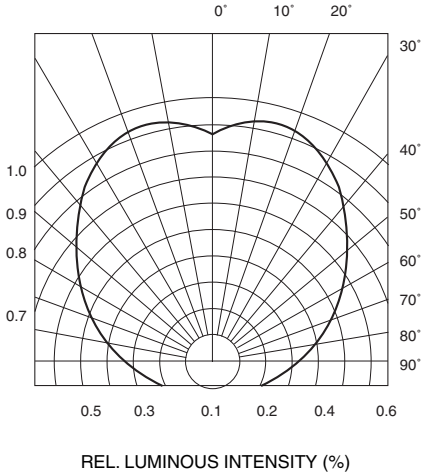

Fig. 4 Radiation Diagram

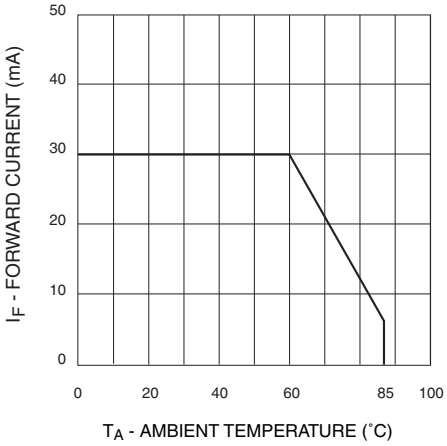

Fig. 5 Current Derating Curve

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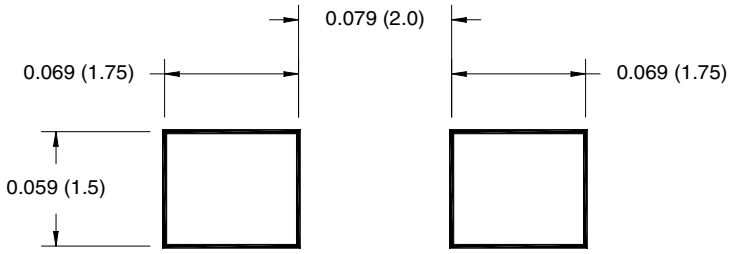
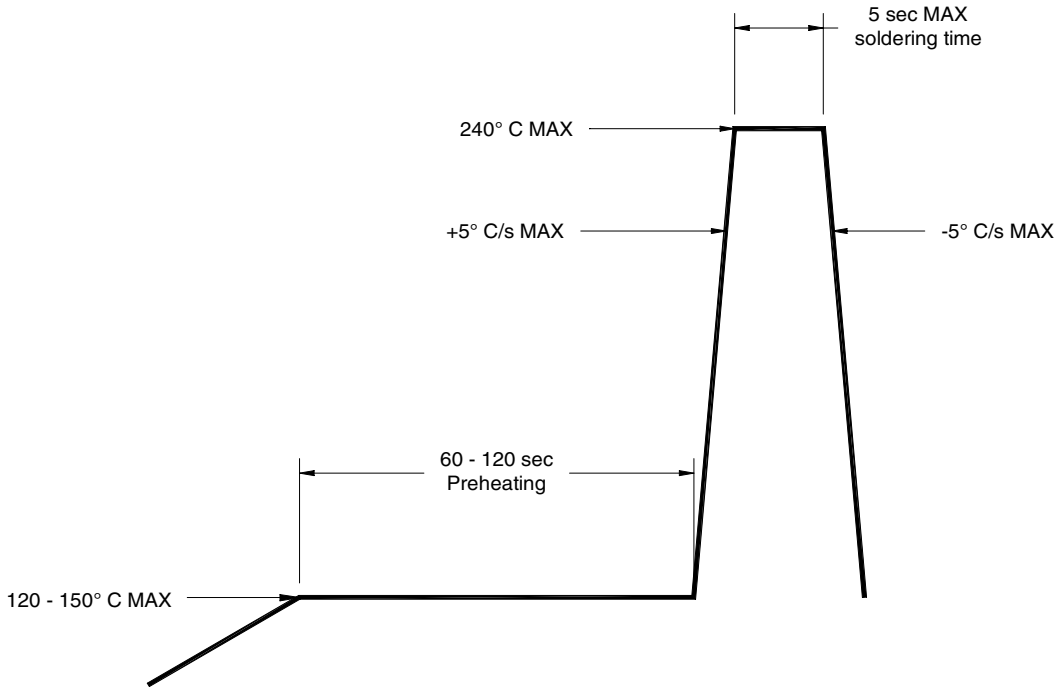
RECOMMENDED PRINTED CIRCUIT BOARD PATTERN



RECOMMENDED IR REFLOW SOLDERING PROFILE



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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.