0805 Package Chip LED

Features

- Package in 8mm tape on 7” diameter reel
- Compatible with automatic placement equipment
- Compatible with infrared and vapor phase reflow solder process
- Mono-color type
- RoHS compliance



QSLP2QF2

Applications

- Automotive: Backlighting in dashboards and switch
- Telecommunication: indicator and backlighting in telephone and fax
- Flat backlight for LCD, switches and symbols
- General Use

Descriptions

- This SMD Taping is much smaller than leaded components, thus enable smaller board higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Light weight makes them ideal for miniature applications

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TSP2-QF2012A3	AlGaInP	Hyper Red	Water Clear

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	5	V
Forward Current	I_F	25	mA
Peak Forward Current (Duty 1/10 @1KHz)	$I_{F(Peak)}$	160	mA
Power Dissipation	P_d	60	mW
Electrostatic Discharge	ESD	2000	V
Soldering Temperature	T_{so}	260 (for 5 seconds)	°C
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +90	°C

Electro-Optical Characteristics (Ta=25°C)

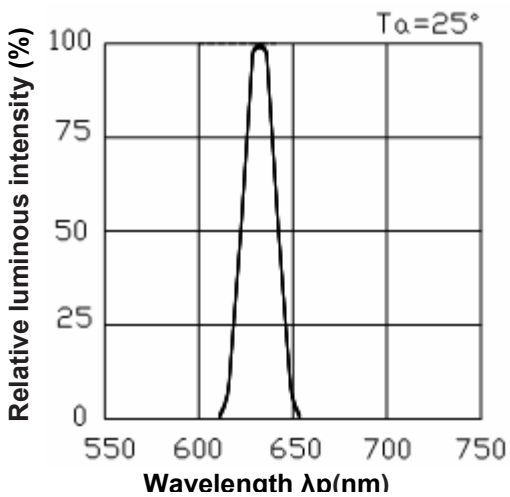
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_V	17	42	-----	mcd	IF =20mA
Viewing Angle	$2\theta_{1/2}$	-----	140	-----	deg	
Peak Wavelength	λ_p	-----	632	-----	nm	
Dominant wavelength	λ_d	-----	624	-----	nm	
Spectrum Radiation Bandwidth	$\triangle\lambda$	-----	20	-----	nm	
Forward Voltage	V_F	-----	2.0	2.4	V	
Reverse Current	I_R	-----	-----	10	μA	V_R=5V

Notes:

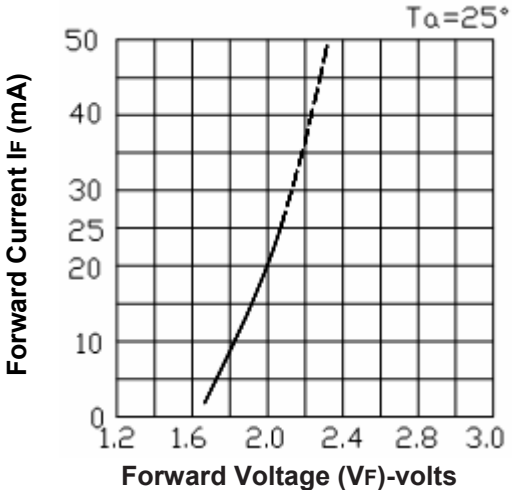
1. Tolerances Unless Dimension ± 0.1mm
2. Angle ± 0.5°

Typical Electro-Optical Characteristics Curves

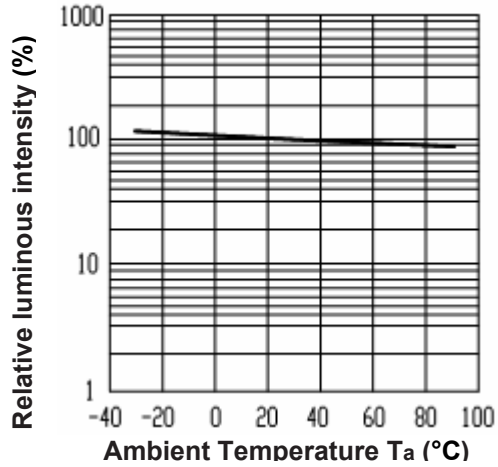
Spectrum Distribution



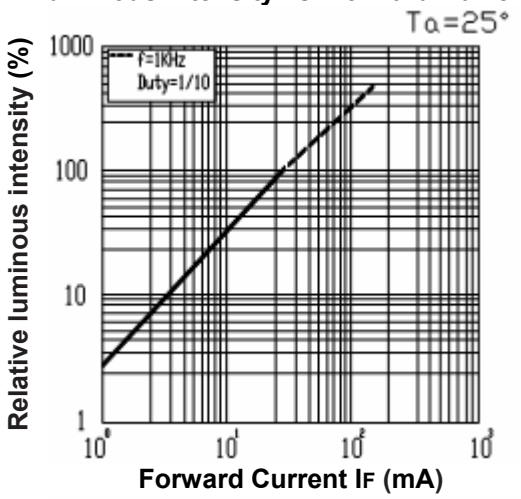
Forward Current vs. Forward Voltage



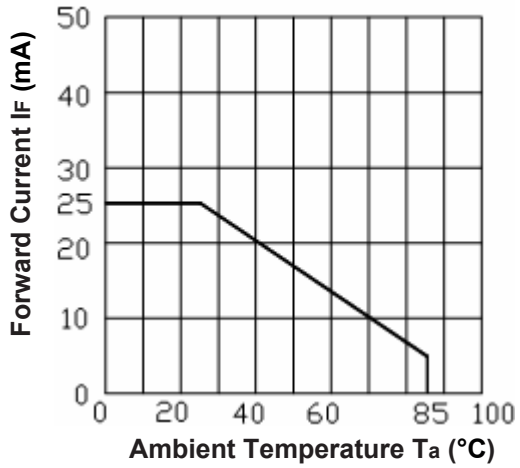
Luminous Intensity vs. Ambient Temperature

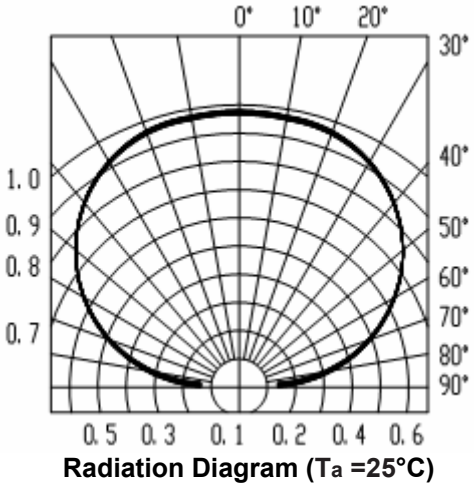


Luminous Intensity vs. Forward Current



Forward Current Derating Curve





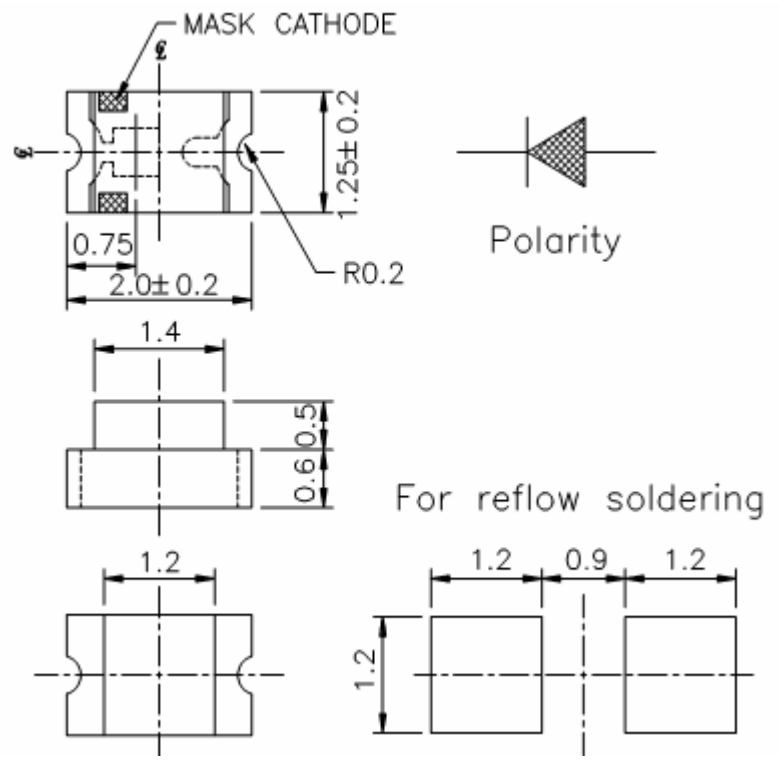
Reliability Test Items and Conditions

The reliability of products shall be satisfied with items listed below.

Confidence level: 90%,
LTPD: 10%

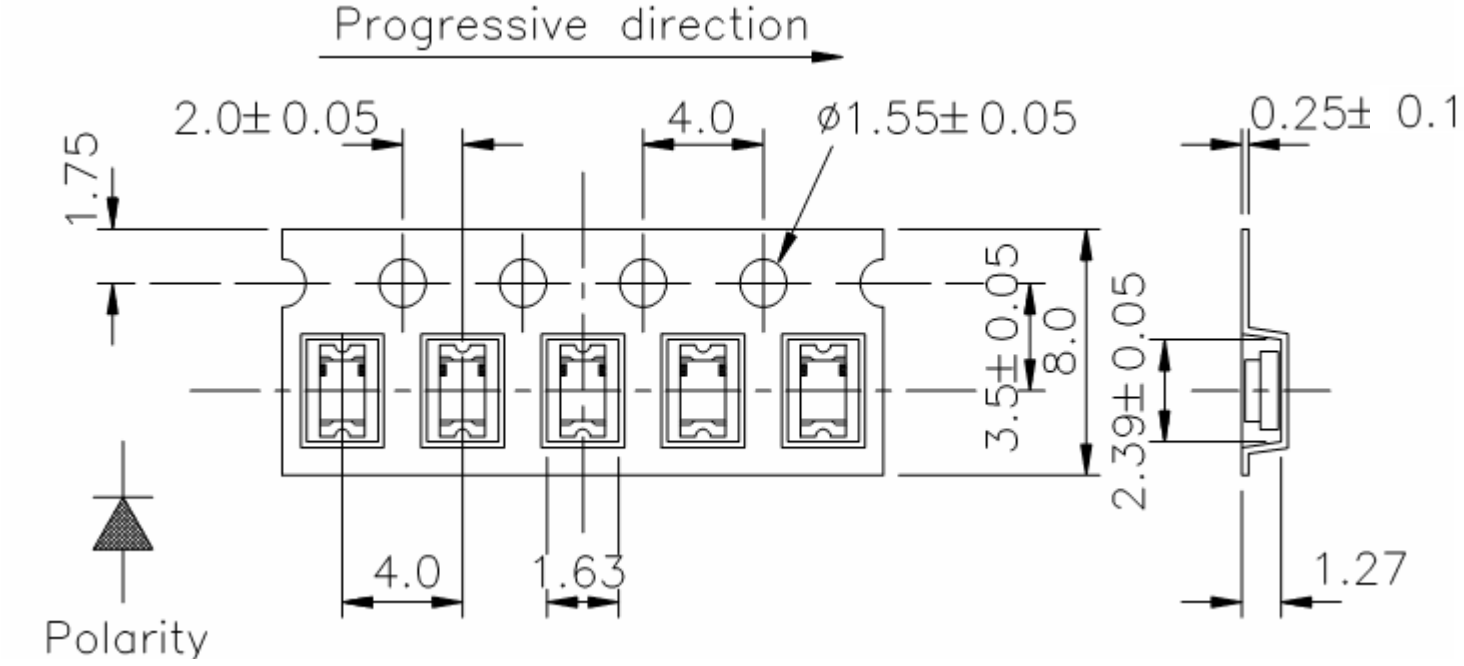
No.	Items	Test Condition	Test Hours / Cycles	Sample Size	Ac/Re
1	Solder Heat	Temp.: 260°C ±5°C.	5 Sec	76 PCS.	0/1
2	Temperature Cycle	H: +85°C 30min ∫ 5 min L: -55°C 15min	50 Cycles	76 PCS.	0/1
3	Thermal Shock	H: +100°C 5min ∫ 10 sec L: -10°C 5min	50 Cycles	76 PCS.	0/1
4	High Temperature Storage	Temp: 100°C	1000 Hrs.	76 PCS.	0/1
5	Low Temperature Storage	Temp: -55°C	1000 Hrs.	76 PCS.	0/1
6	DC Operating Life	I_F = 20 mA	1000 Hrs.	76 PCS.	0/1
7	High Temperature / High Humidity	85°C / 85%RH	1000 Hrs.	76 PCS.	0/1

Package Dimensions (In mm)

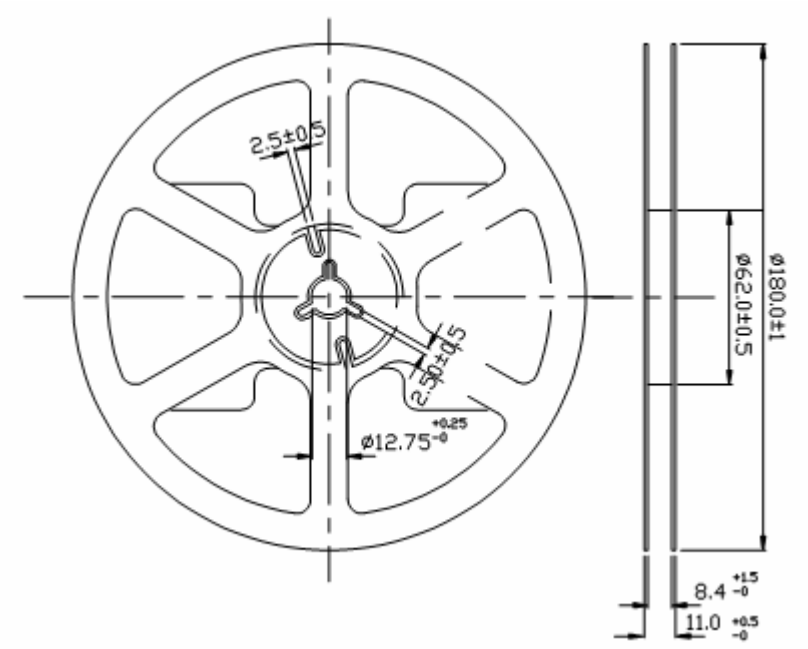


Note: The tolerances unless mentioned is ±0.1mm, Unit = mm

Carrier Tape Dimensions Loaded quantity 3000pcs per reel (In mm)

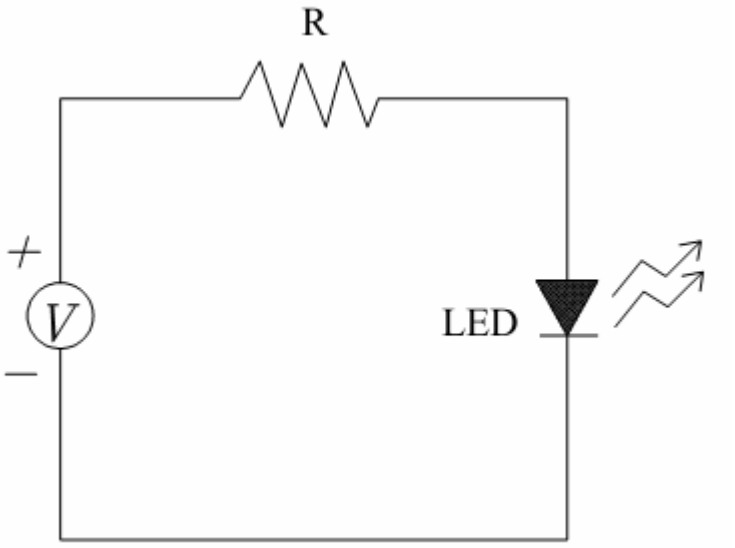


Reel Dimensions



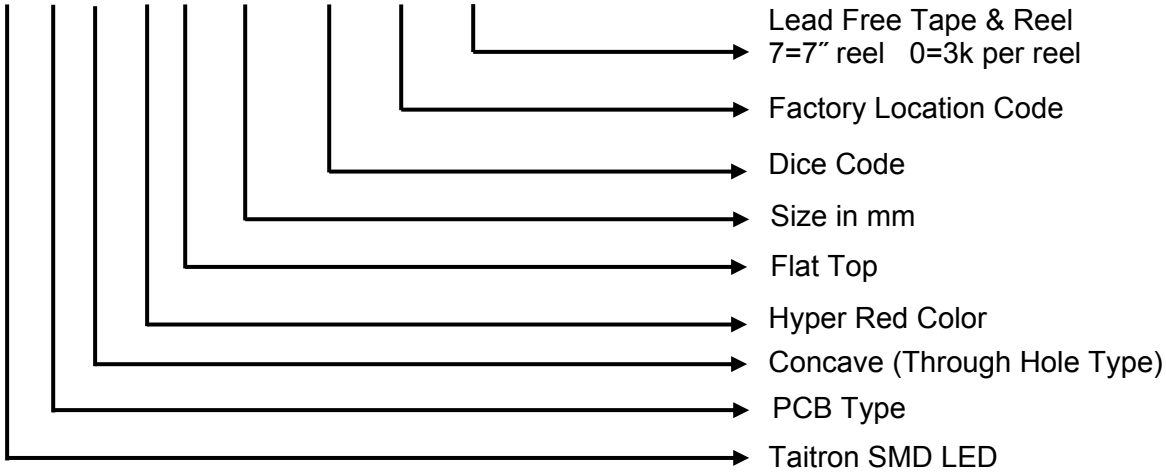
Note: The tolerances unless mentioned is ± 0.1mm, Unit = mm

Test Circuit



Ordering Information

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