



0603 PACKAGE 0.8mm HEIGHT SUPER RED LED TSP1-QF1608H8-3033

0603 Package 0.8mm Height Super Red 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

Descriptions

- The SMD series enable smaller board size, higher packing density, reduced storage space, and small equipment.
- Besides, light weight makes them ideal for miniature applications.



QSLP1QF1



Applications

- Automotive: backlighting in dashboard and switch
- Telecommunication: indicator and backlighting in telephone and fax
- Flat backlight for LCD, switches and symbols
- General use

Device Selection Guide

Part No.	Chip		Lens Color
	Material	Emitted Color	
TSP1-QF1608H8-3033	AlInGaP	Super Red	Water Clear

0603 Package 0.8mm Height Super Red LED

TSP1-QF1608H8-3033

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	25	mA
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +90	°C
Electrostatic Discharge	ESD	2000	V
Power Dissipation	Pd	60	mW
Peak Forward Current (Duty 1/10 @1KHz)	IFP	60	mA
Soldering Temperature	Tsol	260 for 5 sec.	°C

0603 Package 0.8mm Height Super Red LED

TSP1-QF1608H8-3033

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	61.5	-----	108	mcd	IF=20mA
Peak Wavelength	λ _p	-----	632	-----	nm	
Dominant Wavelength	λ _d	621	-----	631	nm	
Spectrum Radiation Bandwidth	Δ λ	-----	20	-----	nm	
Viewing Angle	2θ _{1/2}	-----	100	-----	deg	
Forward Voltage	V _F	1.75	-----	2.35	V	
Reverse Current	I _R	-----	-----	10	μ A	VR=5V

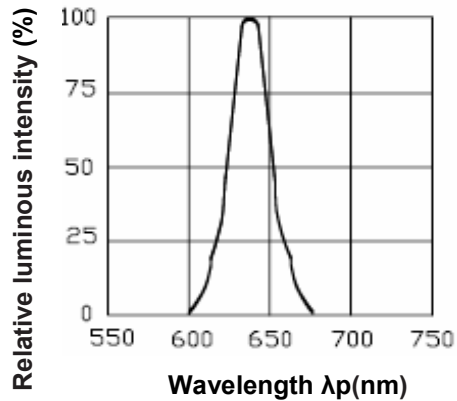
Notes: Tolerance of Luminous Intensity ±10%
Tolerance of Dominant wavelength ±1nm
Tolerance of Forward Voltage ±0.1V

0603 Package 0.8mm Height Super Red LED

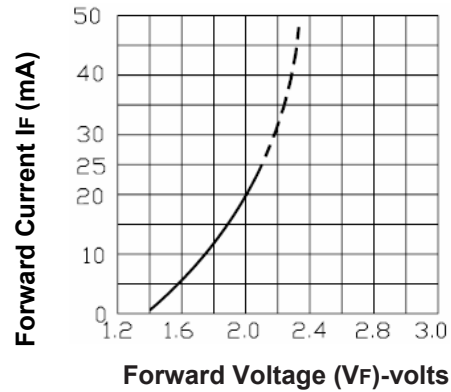
TSP1-QF1608H8-3033

Typical Electro-Optical Characteristics Curves (Ta=25°C)

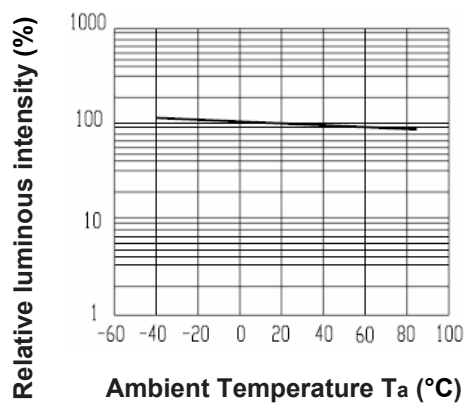
Spectrum Distribution



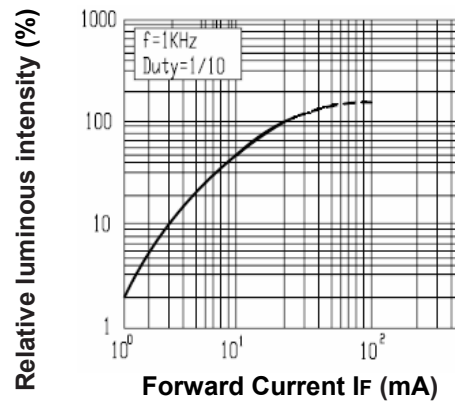
Forward Current vs. Forward Voltage



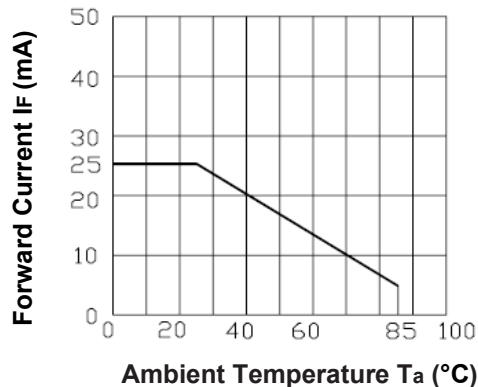
Luminous Intensity vs. Ambient Temperature



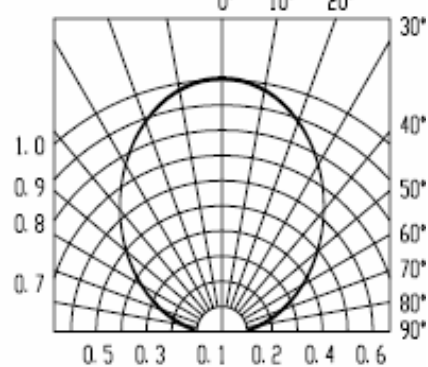
Luminous Intensity vs. Forward Current



Forward Current Derating Curve



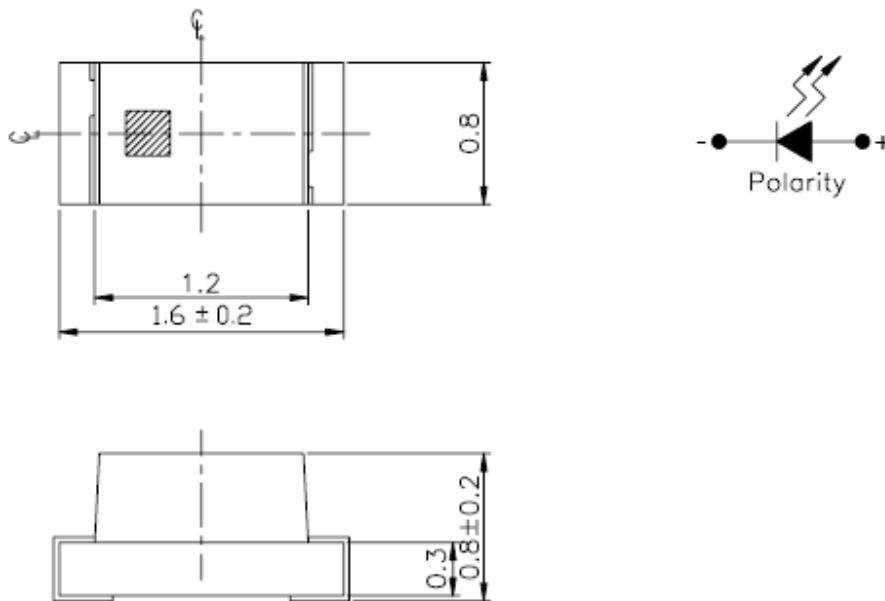
Radiation Diagram



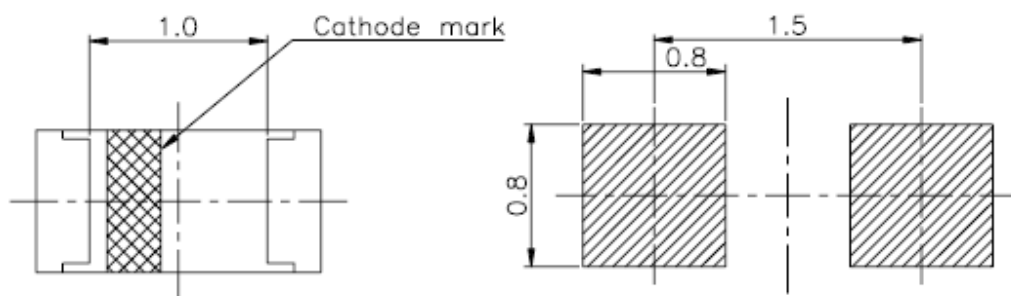
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TSP1-QF1608H8-3033

Package Outline Dimensions (Unit=mm)



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

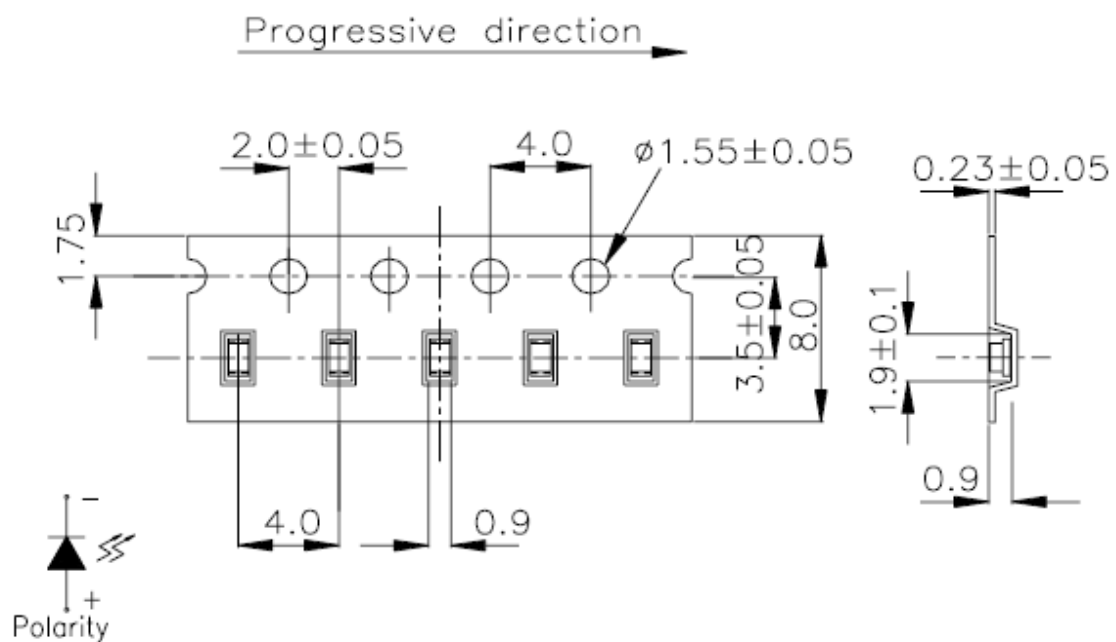


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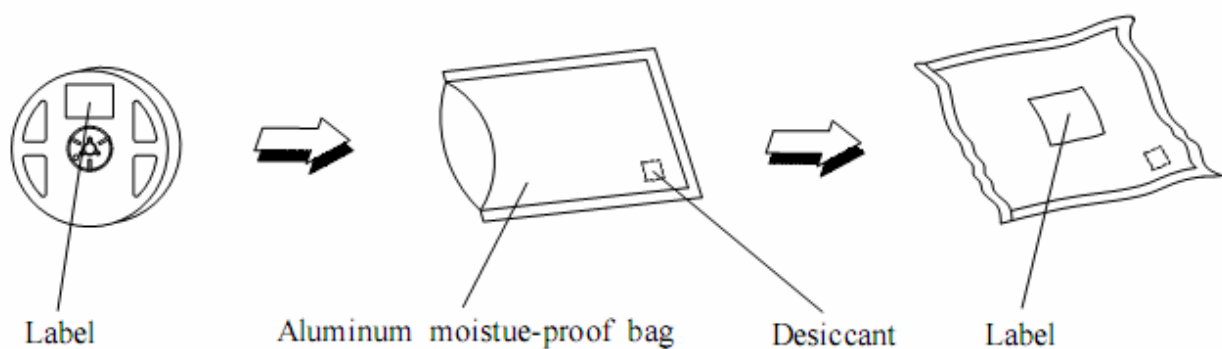
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Carrier Tape Dimensions (Unit=mm): Loaded quantity 2000pcs per reel



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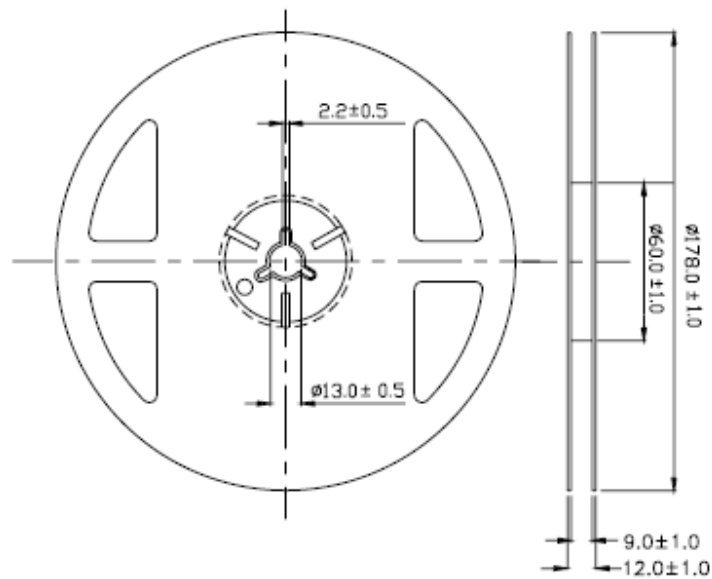
Moisture Resistant Packaging



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TSP1-QF1608H8-3033

Reel Dimensions (Unit=mm):

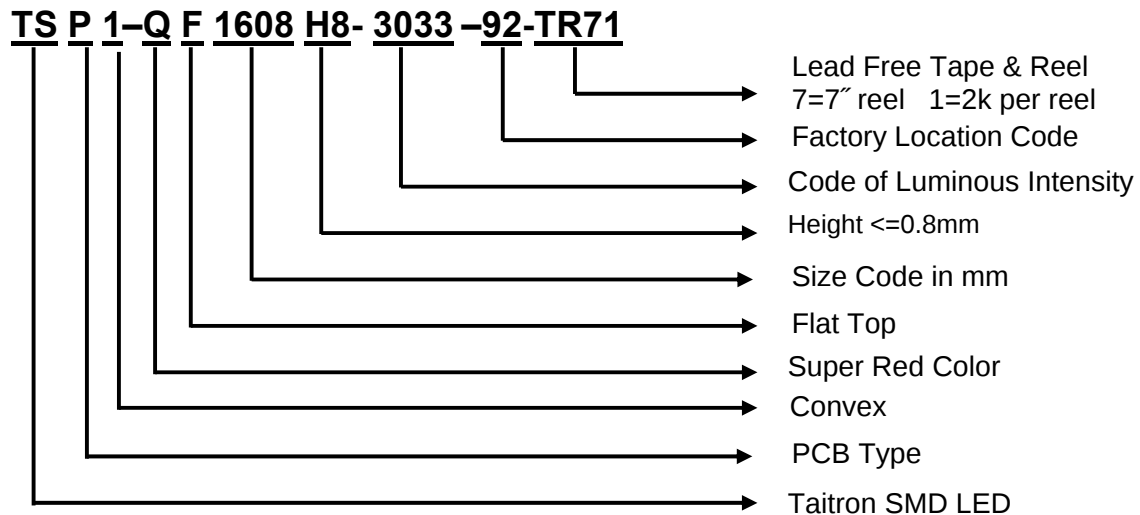


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TSP1-QF1608H8-3033

Ordering Information



Label Explanation

CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank



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TSP1-QF1608H8-3033

Bin Range of HUE

Groups	Bin Code	Min	Max	Unit	Condition
F	FF1	621	626	nm	IF=20mA
	FF2	626	631		

Bin Range of Luminous Intensity

Bin Code	Min	Max	Unit	Condition
30	61.5	70.7	mcd	IF=20mA
31	70.7	81.3		
32	81.3	93.5		
33	93.5	108.0		

Bin Range of Forward Voltage

Groups	Bin Code	Min	Max	Unit	Condition
B	0	1.75	1.95	V	IF=20mA
	1	1.95	2.15		
	2	2.15	2.35		

Notes: Tolerance of Luminous Intensity $\pm 10\%$

Tolerance of Dominant wavelength $\pm 1\text{nm}$

Tolerance of Forward Voltage $\pm 0.1\text{V}$

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