



QLSP13095UOH
(0603 0.95mm 35D
Ultra Orange LED)



Product Outline:

This is the much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.

Features:

- Compatible with automatic placement equipment.
- Color: Ultra Orange
- RoHS compliant
- Compatible with infrared and vapor phase reflow solder process.
- Custom Bin available upon special request
- View angel typ. **35°**
- **0.95mm** Height

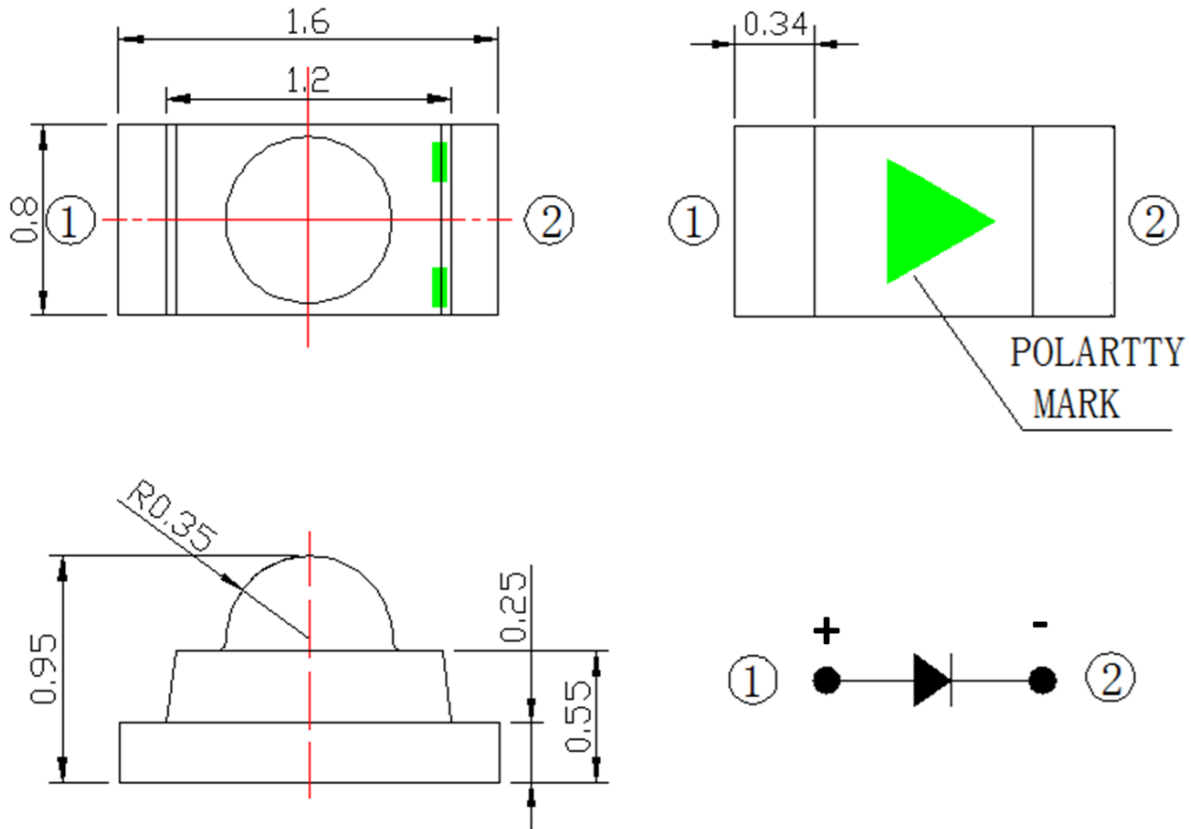
Application:

- Backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.

Compliance and Certification:

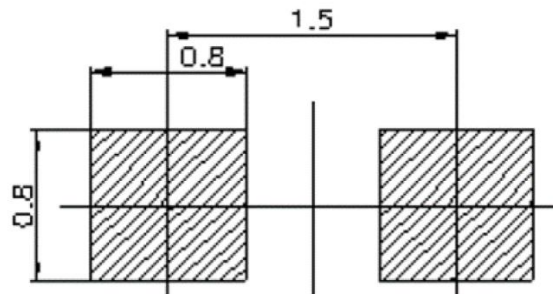


Mechanical Property: (Dimension)



* All dimensions are in millimeters,
* Tolerances are $\pm 0.10\text{mm}$.

Recommended Solder footprint:



* All dimensions are in millimeters.
* Reflow soldering must not be performed more than twice.



Characteristics

■ Absolute Maximum Ratings

(Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	5	V
DC Forward Current	I_f	25	mA
Pulse Forward Current (Duty 1/10 @1KHz)	I_{FP}	60	mA
Total Power Dissipation	P_d	55	mW
Storage Temperature	T_{stg}	-40 ~85	°C
Operation Temperature	T_{opr}	-40 ~ 85	°C
Soldering Temperature	T_{sol}	260 < 10 sec	°C

(1) Proper current rating must be observed to maintain junction temperature below maximum at all time

■ Electrical / Optical Characteristic

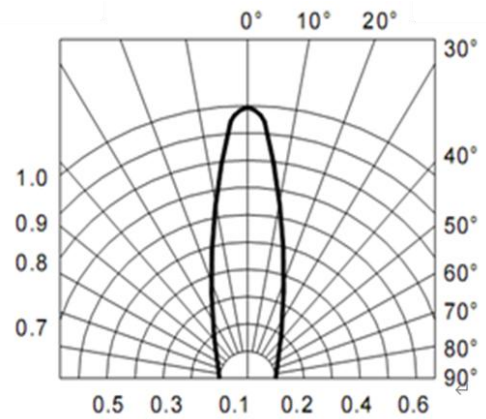
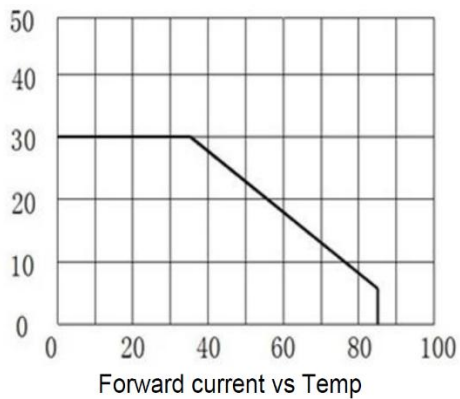
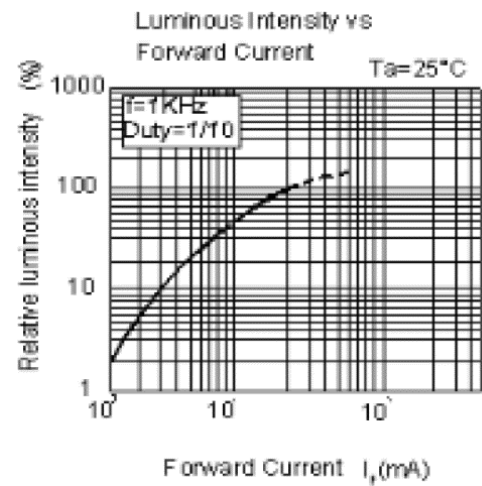
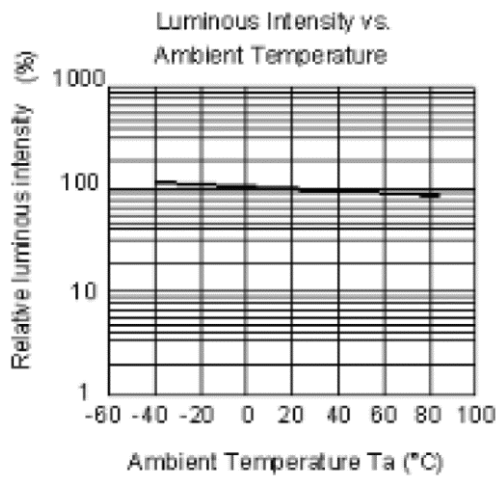
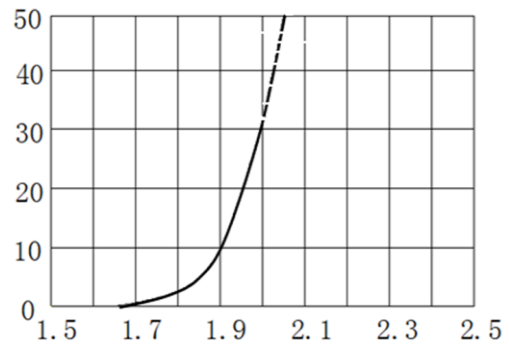
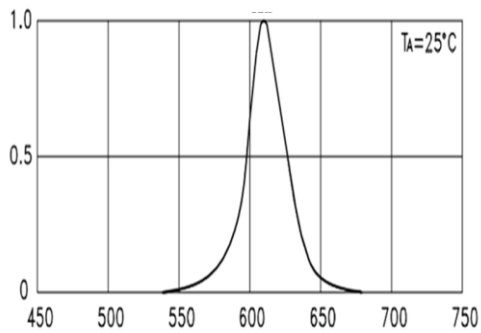
(Ta=25 oC)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I_v	500		800	mcd	$I_f=20mA$
Peak Wavelength	λ_p		604		nm	
Dominant Wavelength	λ_d	600		606	nm	
Forward Voltage	V_f	1.8		2.4	V	
View Angle	θ		35		deg	

- (1). Tolerance of Luminous Intensity: $\pm 11\%$
- (2). Tolerance of Dominant Wavelength $\pm 1nm$
- (3). Tolerance of measurement: $V_f = \pm 0.1V$



Characteristic Curves



■ Reliability test:

No	Item	Condition	Time/Cycle	Sample size
1	Steady State Operating Life of Room Temperature	25°C Operating	1000 Hrs	20 pcs
2	Steady State Operating Life of Low Temperature -40°C	-40°C Operating	1000 Hrs	20 pcs
3	Steady State Operating Life of Low Temperature 60°C	60°C Operating	1000 Hrs	20 pcs
4	Steady State Operating Life of Low Temperature 85°C	85°C Operating	1000 Hrs	20 pcs
5	Low temperature storage -40°C	-40°C Storage	1000 Hrs	20 pcs
6	High temperature storage 100°C	100°C Storage	1000 Hrs	20 pcs
7	Steady State Operating Life of High Humidity Heat 60°C 90%	60°C/90% Operating	1000 Hrs	20 pcs
8	Steady State Pulse Operating Life Condition	25°C 10Hz duty=1/10 Operating	200 Cycle	20 pcs
9	Resistance to soldering heat on PCB (JEDEC MSL3)	pre-store@60°C, 60%RH for 52hrs Tslid max.=260 10sec	3 Times	20 pcs
10	Heat Cycle Test (JEDEC MRC)	25°C~65°C~-10°C, 90%RH, 24hr/1cycle	10 Cycle	20 pcs
11	Thermal shock	-40°C/ 20min~ 5min~100°C /20min	300 Cycle	20 pcs

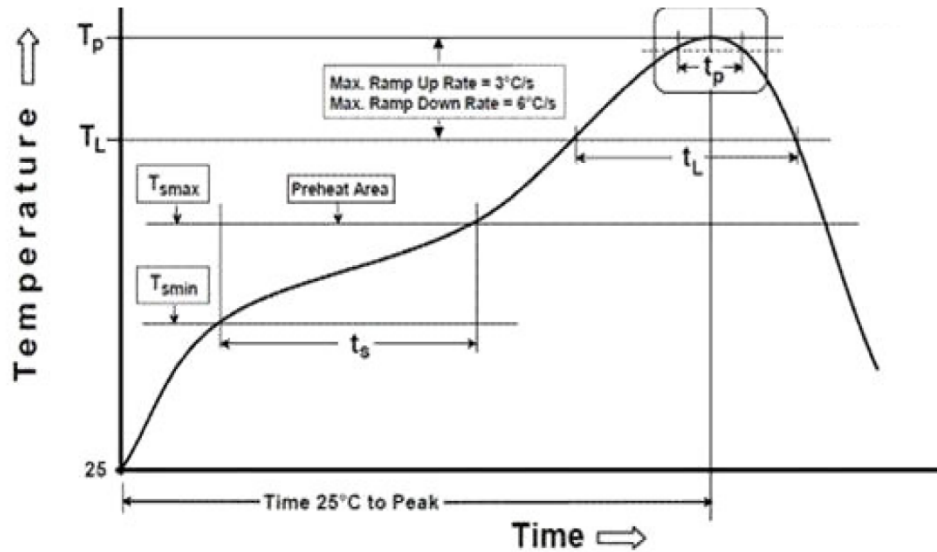
■ Judgment Criteria:

Item	Symbol	Test Condition	Judgment Criteria
Forward Voltage	Vf	IF=20 mA	$\Delta Vf < 10\%$
Luminous Flux	Iv		$\Delta Iv < 30\%$



Solder Profile:

-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):

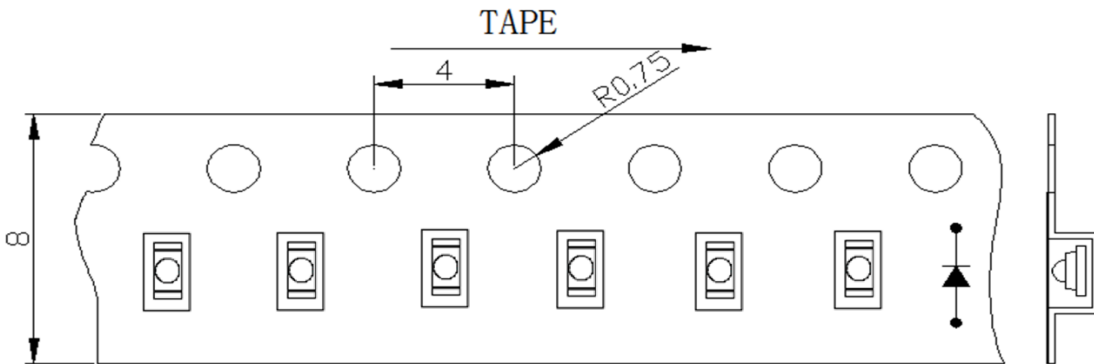


Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Temperature Min(T_{smin})	100°C	150°C
Temperature Max(T_{smax})	150°C	200°C
Time(t_a) from (T_{smin} to T_{smax})	60-120 seconds	60-120 seconds
Ramp-up rate(T_L to T_p)	3°C/second max.	3°C/second max.
Liquidous Temperature(T_L)	183°C	217°C
Time(t_L) maintained above T_L	60-150 seconds	60-150 seconds
Peak package body temperature(T_p)	235°C	260°C
Time within 5°C of Actual Peak temperature (t_p)	20seconds*	30 seconds*
Ramp-down rate(T_p to T_L)	6°C/second max.	6°C/second max.
Time 25°C to peak temperature	6 minutes max.	8 minutes max.

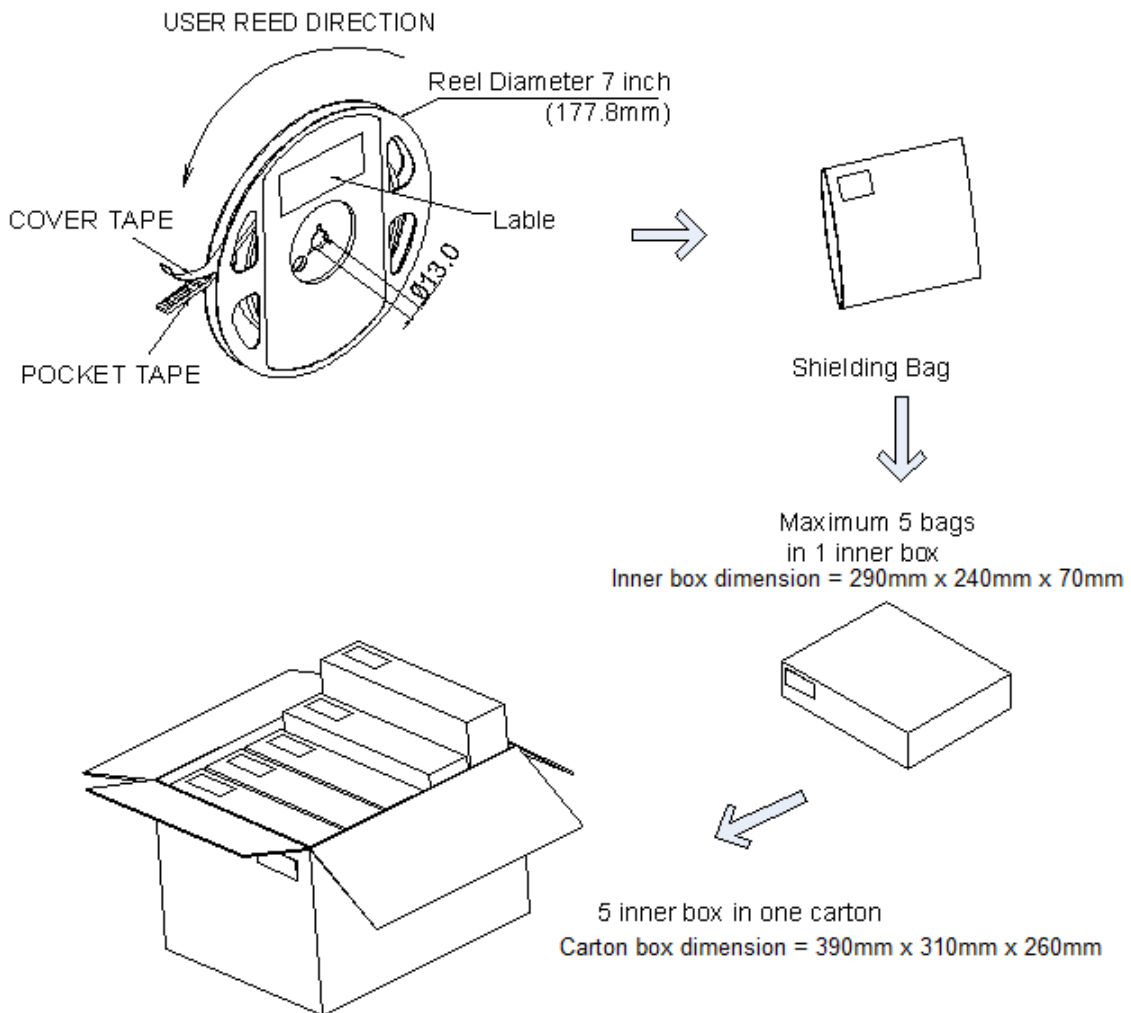
* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.



Taping & Packing:



Unit : mm



Labeling



Ordering Information:

Part #	Multiple Quantities	Quantity per Reel
QLSP13095UOH		3000 pcs



Revision History:

Revision Date:	Changes:	Version #:
02-10-2026	Initial release	1.0

