



QLSP05YD_B
PLCC 4 Blackface



Product Outline:

This high output reflector type 3528 LEDs are available in Yellow color. This special package is ideal for customer's application in traffic signal and sign boards. With special binning technology, Quelighting is able to provide special binning for customer's needs

Features:

- Yellow color
- High brightness output @ 50mA
- Package Dimension = 3.5mmX2.8mmX1.9mm
- PLCC-4 black face
- RoHS compliant
- Custom Bin available upon special request

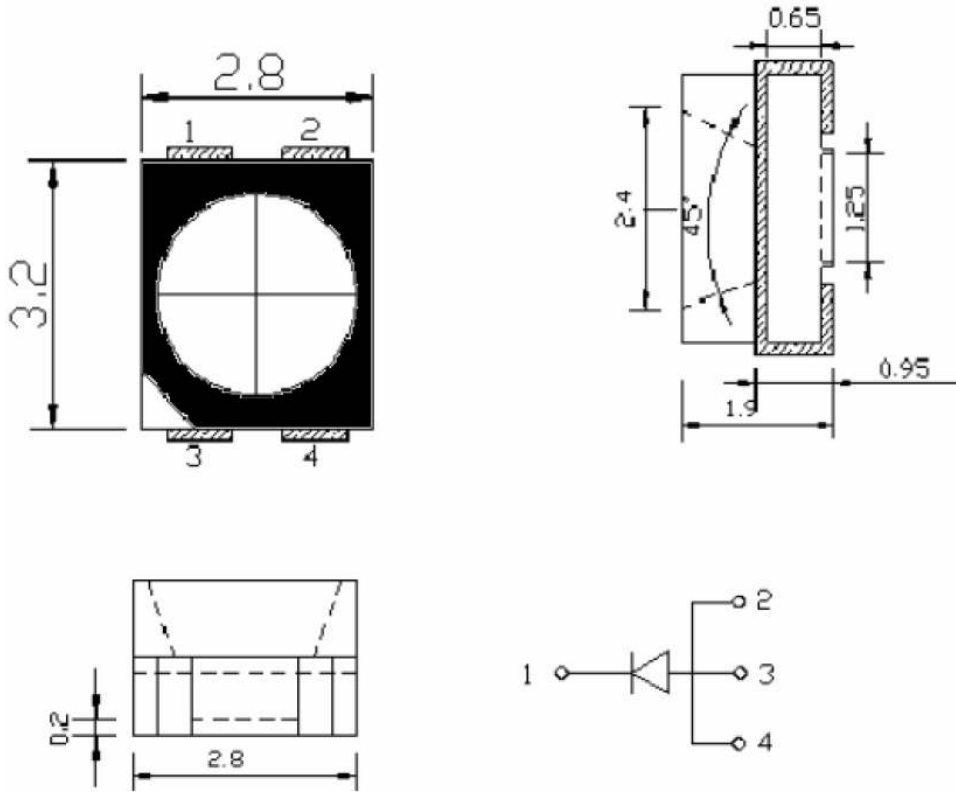
Application:

- Sign board backlighting
- Emergency vehicle lighting
- Traffic signal lighting

Compliance and Certification:

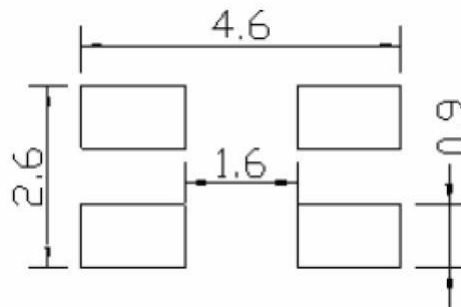


Mechanical Property: (Dimension)



Units: mm

Recommended Solder footprint:



Units: mm



Electrical / Optical Characteristic

(T=25 °C)

Product	Color	I _F (mA)	V _F (V)		λD (nm)			I _v (mcd)	
			Typ.	max	Min.	Typ.	Max.	min	typ.
QLSP05YD_B	Yellow	50	2.0	2.8	588	591	594	1440	1800

- (1) The Forward Voltage tolerance is ±0.1V
- (2) The λD tolerance is ±1nm
- (3) The I_v tolerance is ± 7%

Absolute Maximum Rating

(T=25 °C)

Part #	P _d (mW)	I _F (mA)	I _{FP} (mA)*	V _R (V)	T _{OP} (°C)	T _{ST} (°C)	T _{SOL} (°C)**
All Yellow	210	70	100	5	-40 – 85	-40 - 100	260

*Duty 1/10 @ 10Khz

** Junction Temperature

*** IR Reflow for no more than 10 sec @ 260 °C

**** Thermal resistance is calculated from junction to solder



Forward Voltage (V_F) Bin:

VF rank @ 50mA			
Code name	Min.	Max.	Unit
A	1.6	1.8	V
B	1.8	2.0	
C	2.0	2.2	
D	2.2	2.4	
E	2.4	2.6	

The forward voltage tolerance is $\pm 0.1V$

Luminous Intensity Bin:

Iv rank @ 50mA			
Code name	Min.	Max.	Unit
X5	1440	1800	mcd
X6	1800	2250	

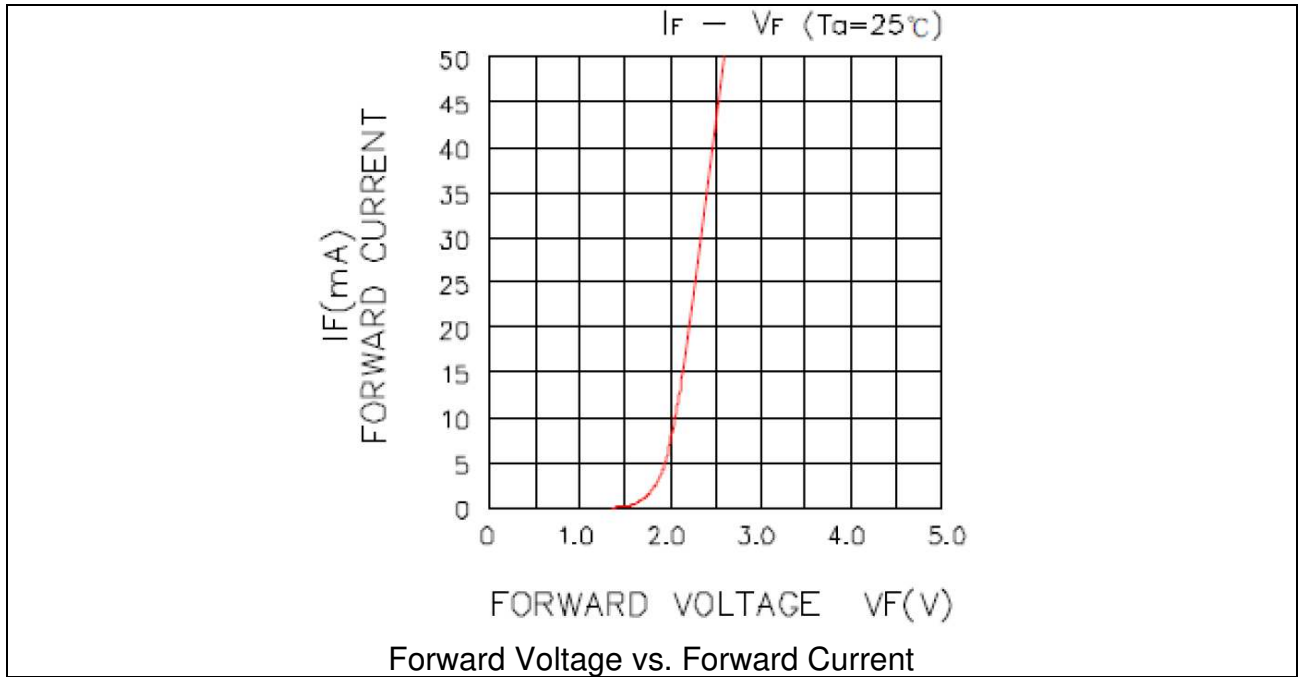
luminous intensity tolerance is $\pm 7\%$

Dominant Wavelength Bin:

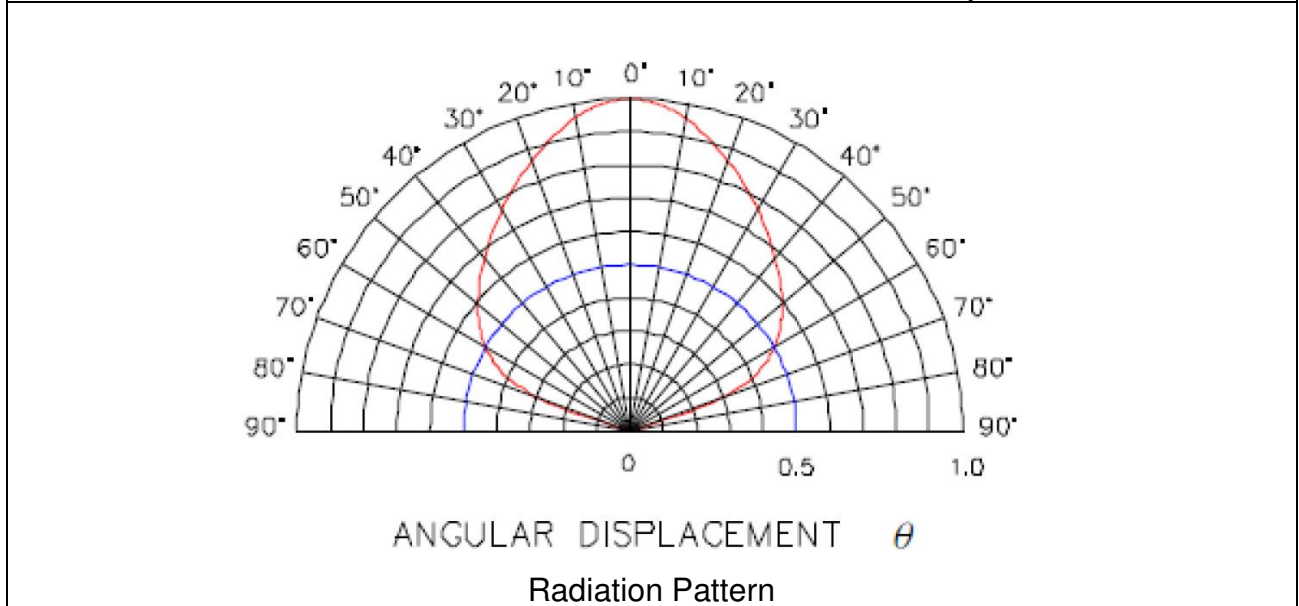
λ_D @ IF=50mA			
Code name	Min.	Max.	Unit
A1	588	591	nm
A2	591	594	

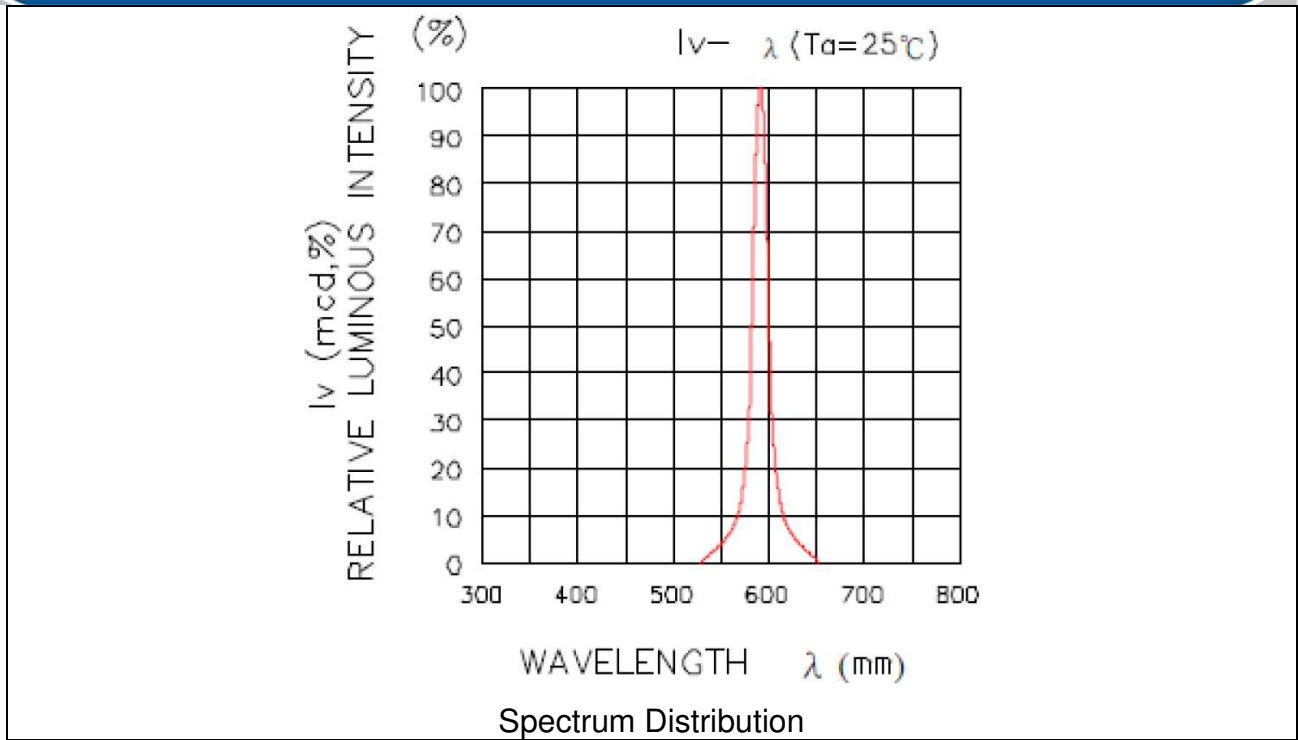


Characteristic Curves



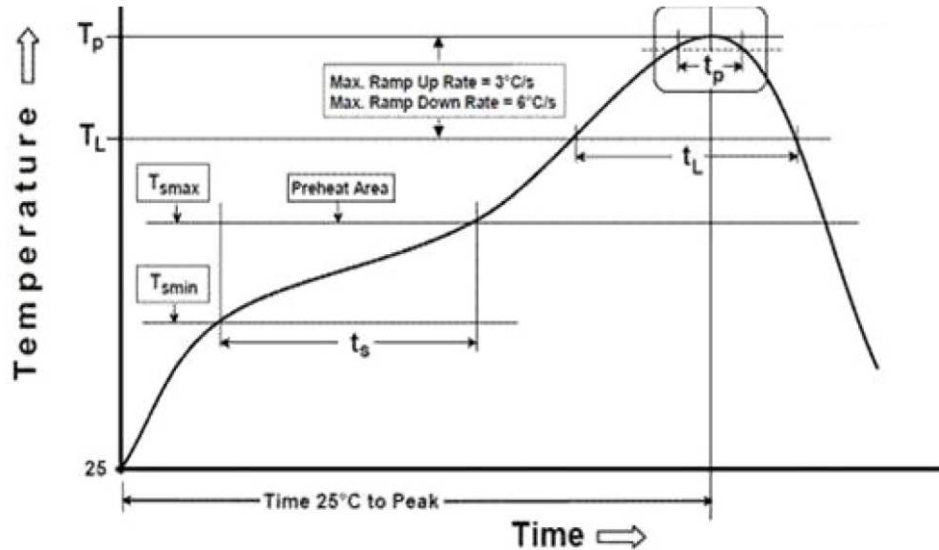
Forward current vs. Relative luminous intensity





■ **Solder Profile:**

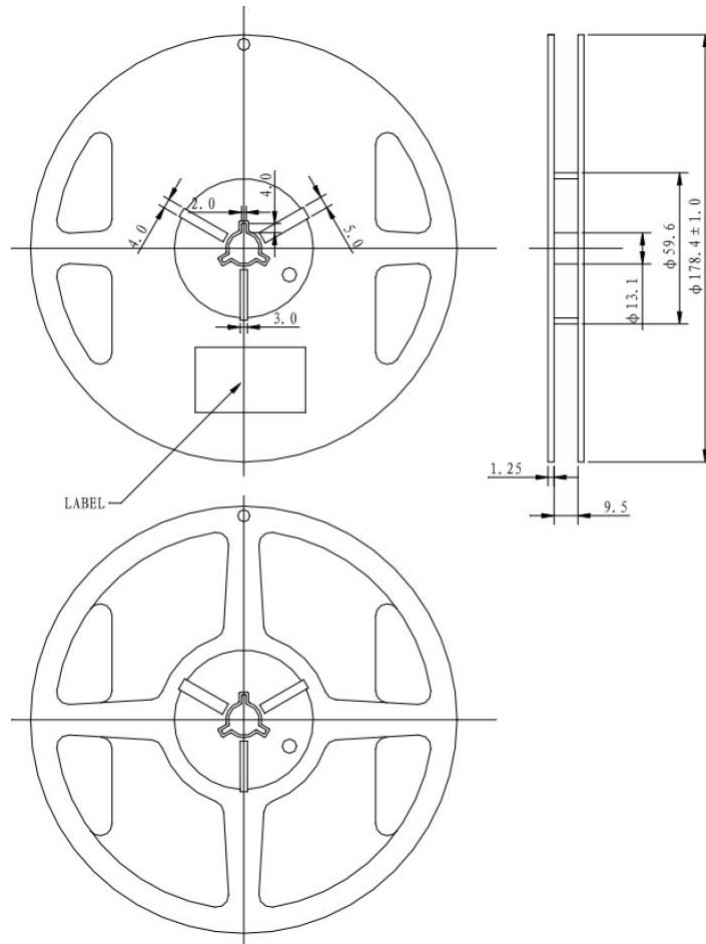
-The recommended reflow soldering profile is as follows (temperatures indicated are as measured on the surface of the LED resin):



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.		

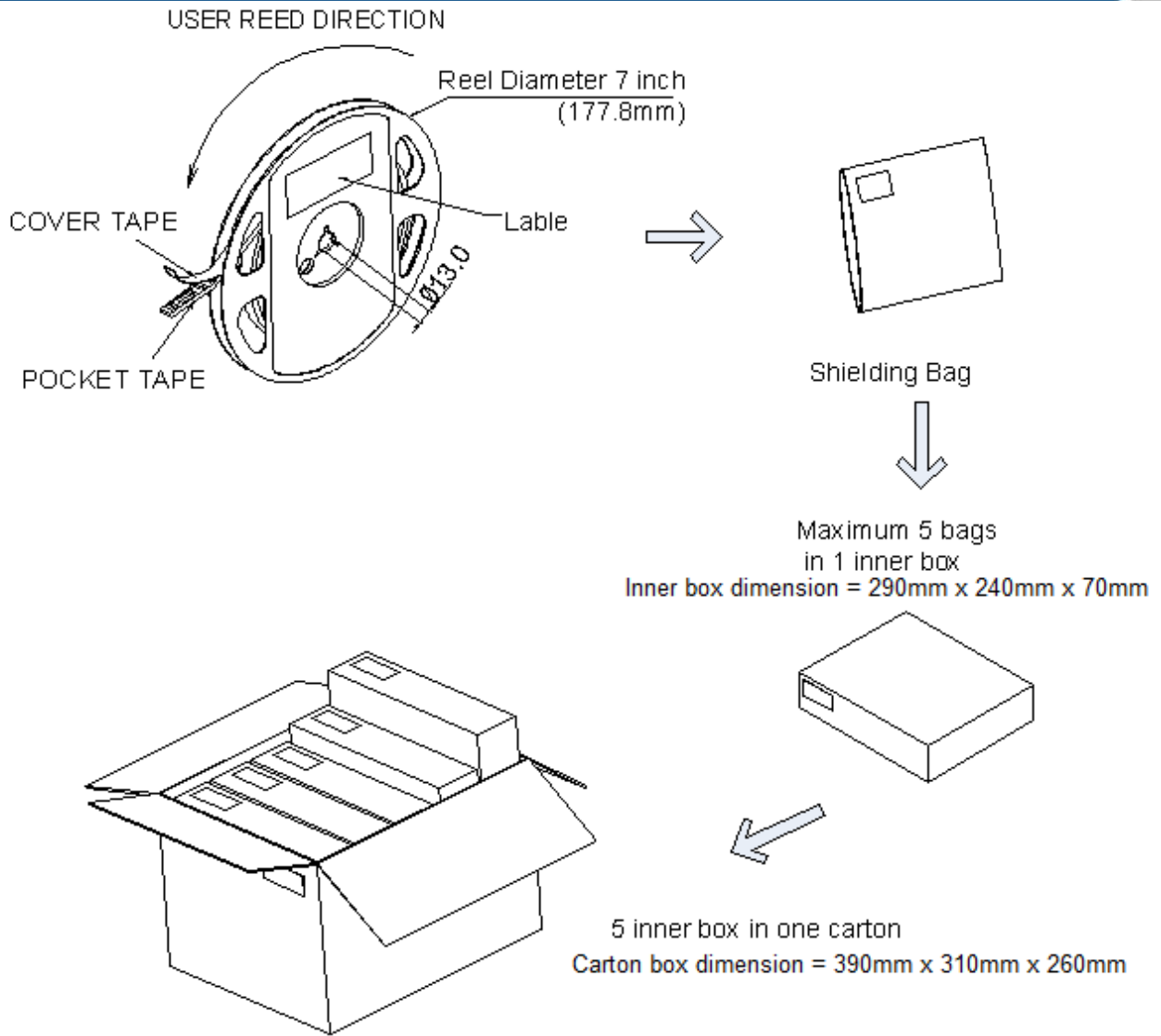


Taping & Packing:

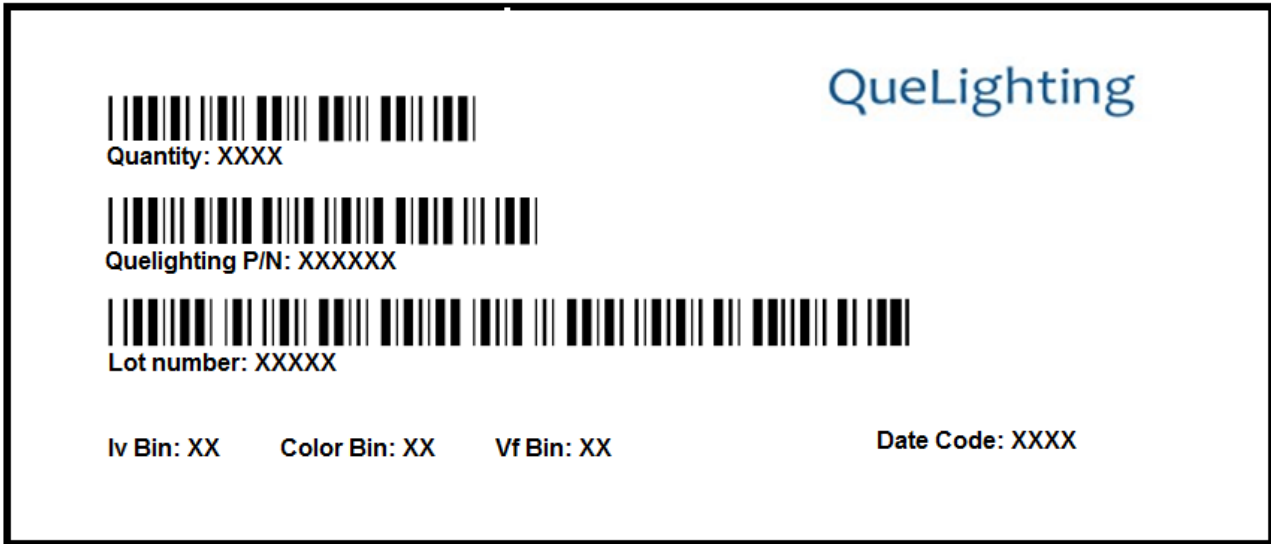


Unit : mm





Labeling



Ordering Information:

Part #	Multiple Quantities	Quantity per Reel
QLSP05YD_B		1000, 2000 pcs



Revision History:

Revision Date:	Changes:	Version #:
09-27-2016	Initial release	1.0
10-10-2020	Update performance	

