QueLighting

QLSP27TG_B
PLCC 2
30 degree
(Black housing)

Product Outline:

This high output reflector type 3528 LEDs are available in Traffic Green 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:

- High brightness output @ 20mA
- Package Dimension = 3.5mmX2.8mmX3.5mm
- PLCC-2 30 degree viewing angle
- Black Housing
- RoHS compliant
- Custom Bin available upon special request

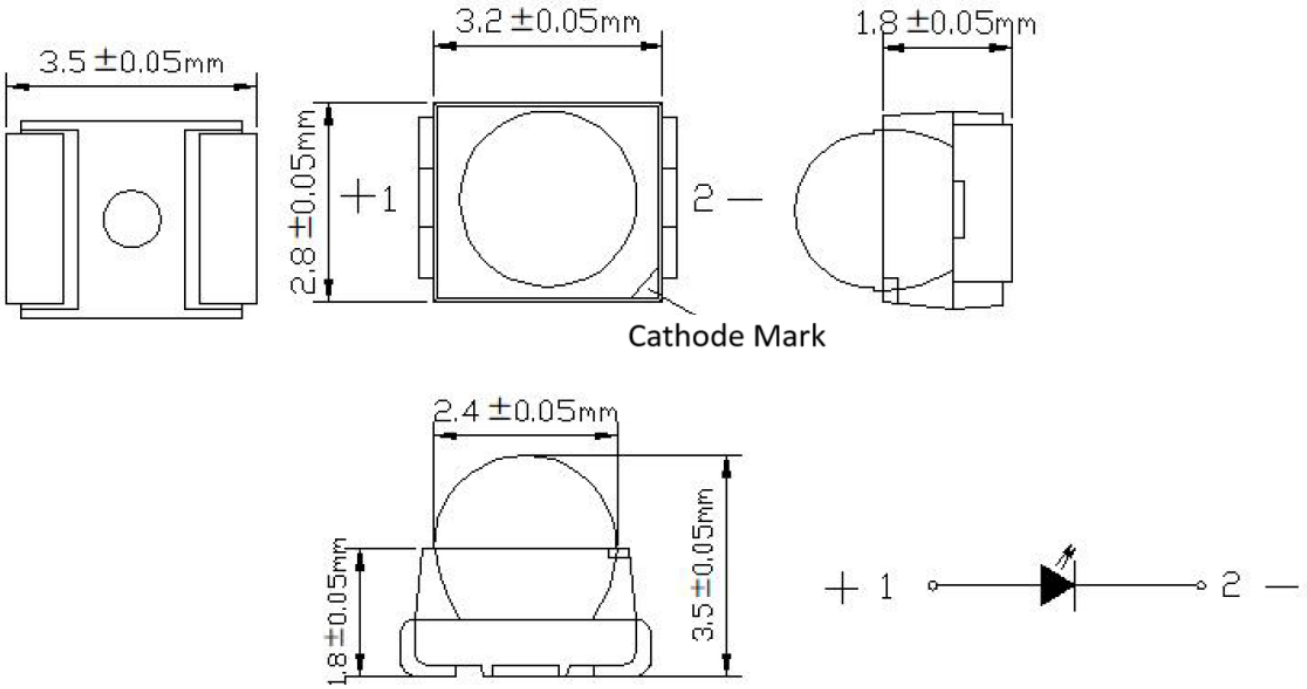
Application:

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

Compliance and Certification:

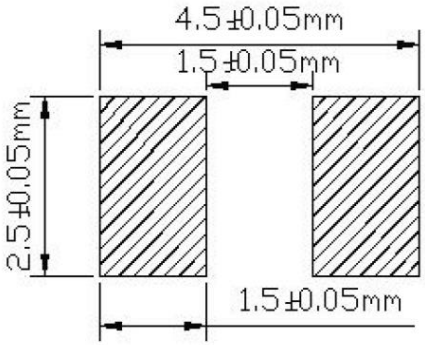
Mechanical Property:

(Dimension)



Units: mm

Recommended Solder footprint:



Units: mm

Electrical / Optical Characteristic

(T=25 °C)

Product	Color	I_F(mA)	V_F(V)		λD (nm)			Iv(mcd)	
			Typ.	max	Min.	Typ.	Max.	min	typ.
QLSP27TG_B	Traffic Green	20	3.0	3.4	500		510	4000	6000

(1) The Forward Voltage tolerance is ±0.1V
(2) The λD tolerance is ±1nm
(3) The Iv 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)**	ESD HBM (V)
QLSP27TG_B	60	20	40	5	-40 – 85	-40 - 100	260	3000

*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 @ 20mA			
Code name	**Min.**	**Max.**	**Unit**
Z1	2.8	3.0	V
23	3.0	3.2	
45	3.2	3.4	

The forward voltage tolerance is ± 0.1V

Luminous Intensity Bin:

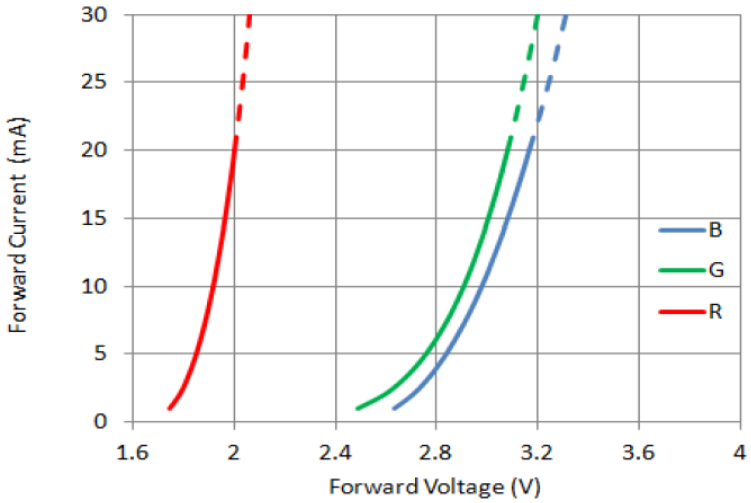
Iv rank @ 20mA			
Code name	**Min.**	**Max.**	**Unit**
X45	4000	6000	mcd
X67	6000	8000	

luminous intensity tolerance is ± 7%

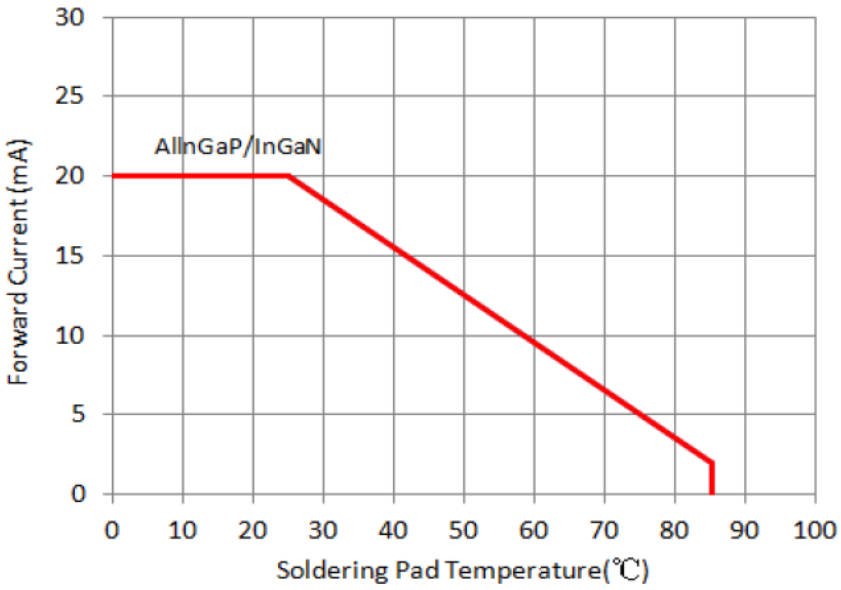
Dominant Wavelength Bin:

λD @ IF=20mA			
Code name	**Min.**	**Max.**	**Unit**
DJ	500	505	nm
DK	505	510	

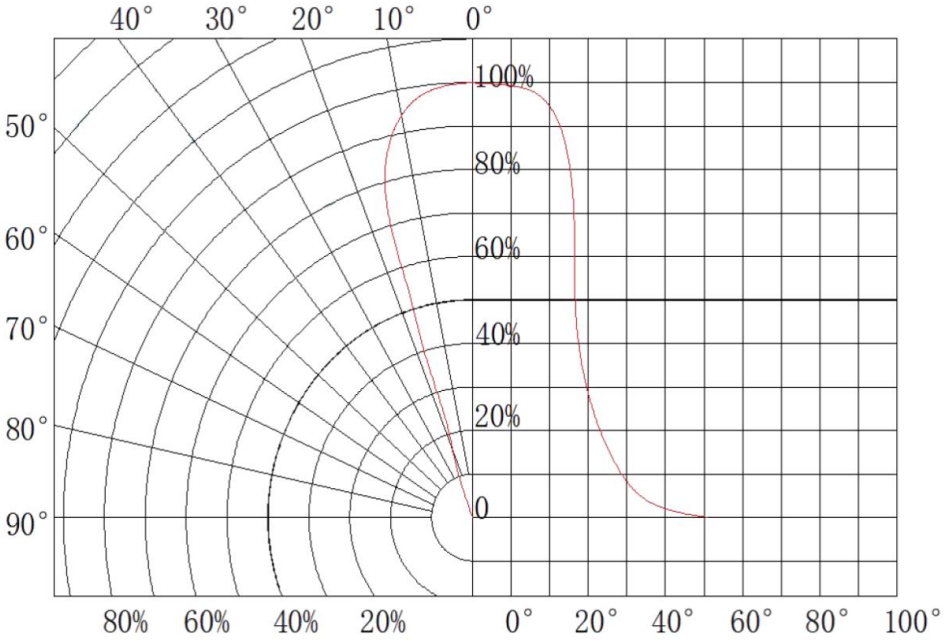
Characteristic Curves



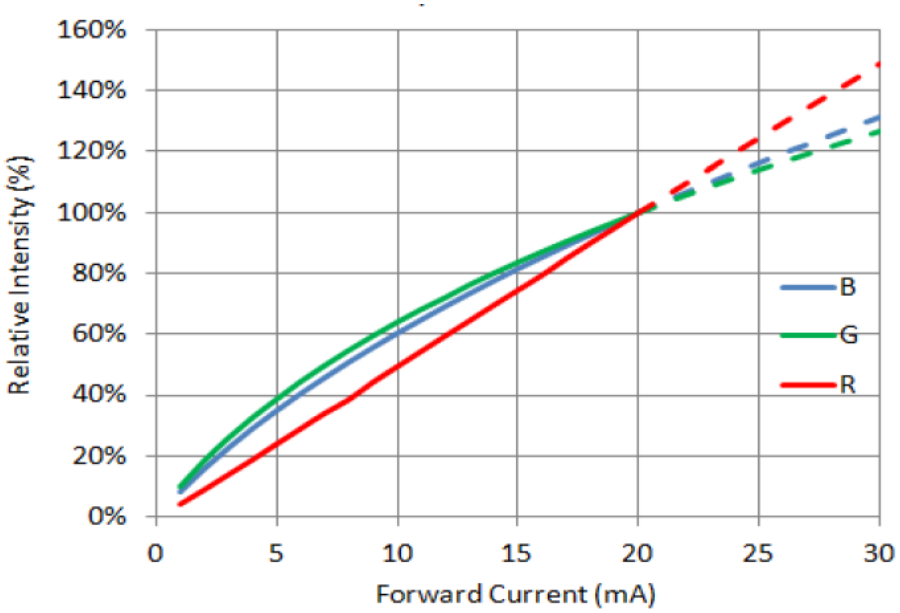
Forward Voltage vs. Forward Current



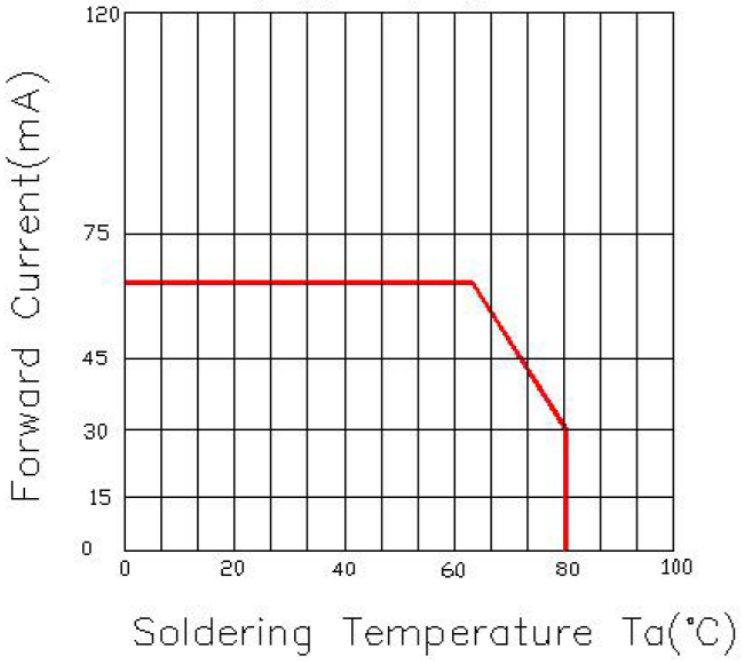
Forward current vs. Temp



Radiation Pattern



Intensity vs Forward current



Relative Forward Voltage vs Ambient Temperature

Solder Profile:

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

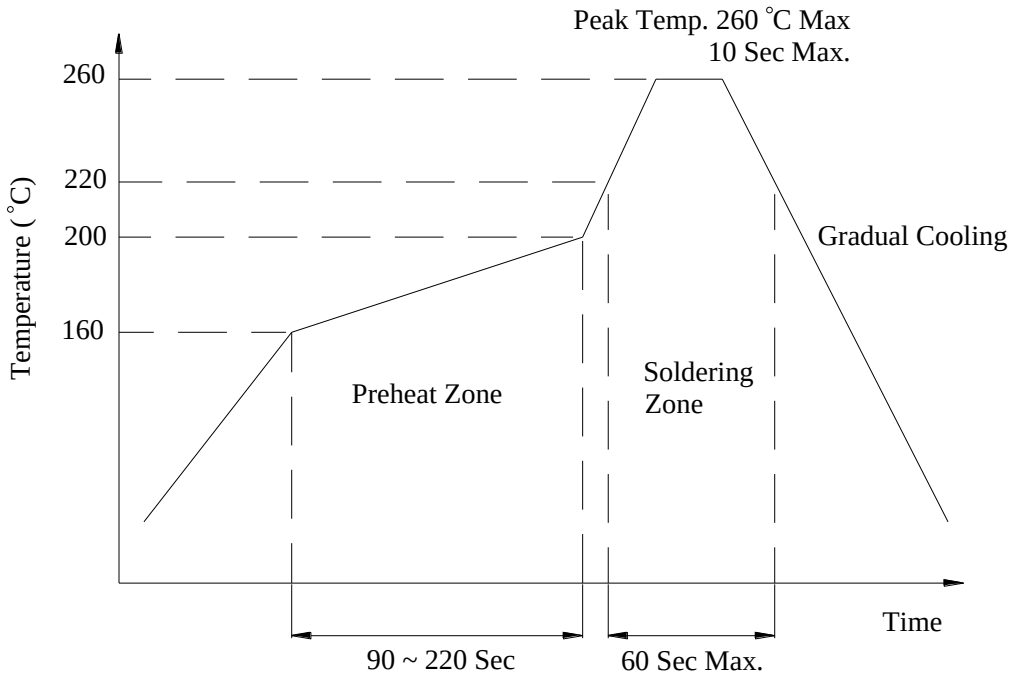
- When soldering LEDs,
- Do not solder/reflow the same LED over two times.
- Recommend soldering conditions:

  Hand soldering: 300 ℃ max , 3 sec. max.

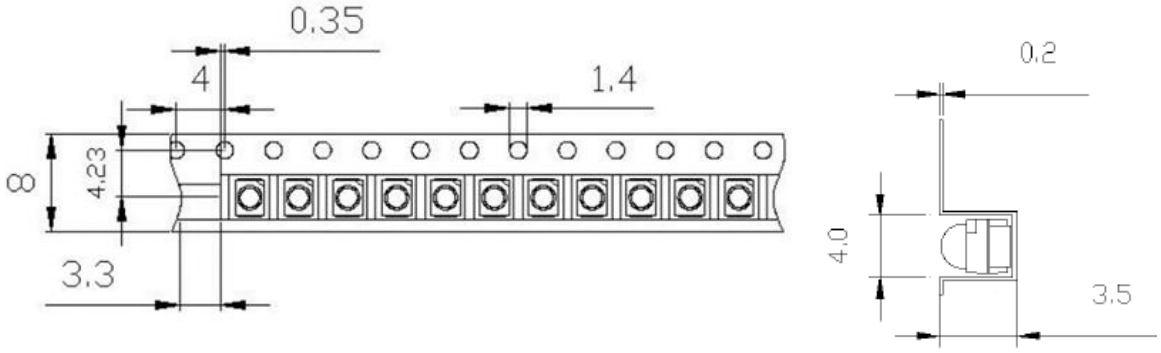
  Reflow soldering: Pre-heat 150 max , 180 sec. max. ℃

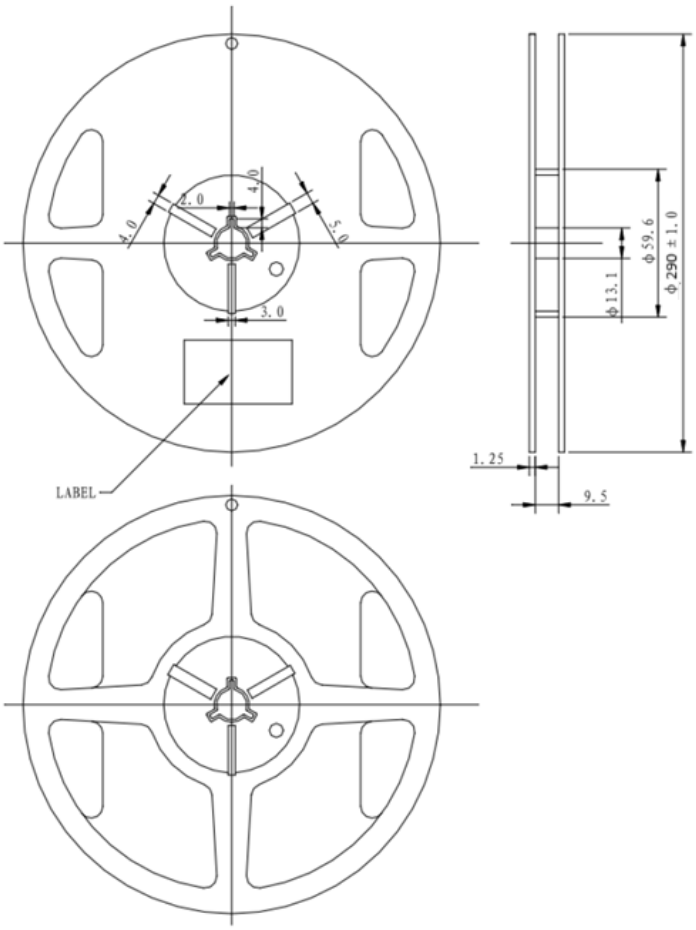
  Peak 260 ma ℃ x , 5 sec. max.

- Reflow temperature profile as below: (lead-free solder)

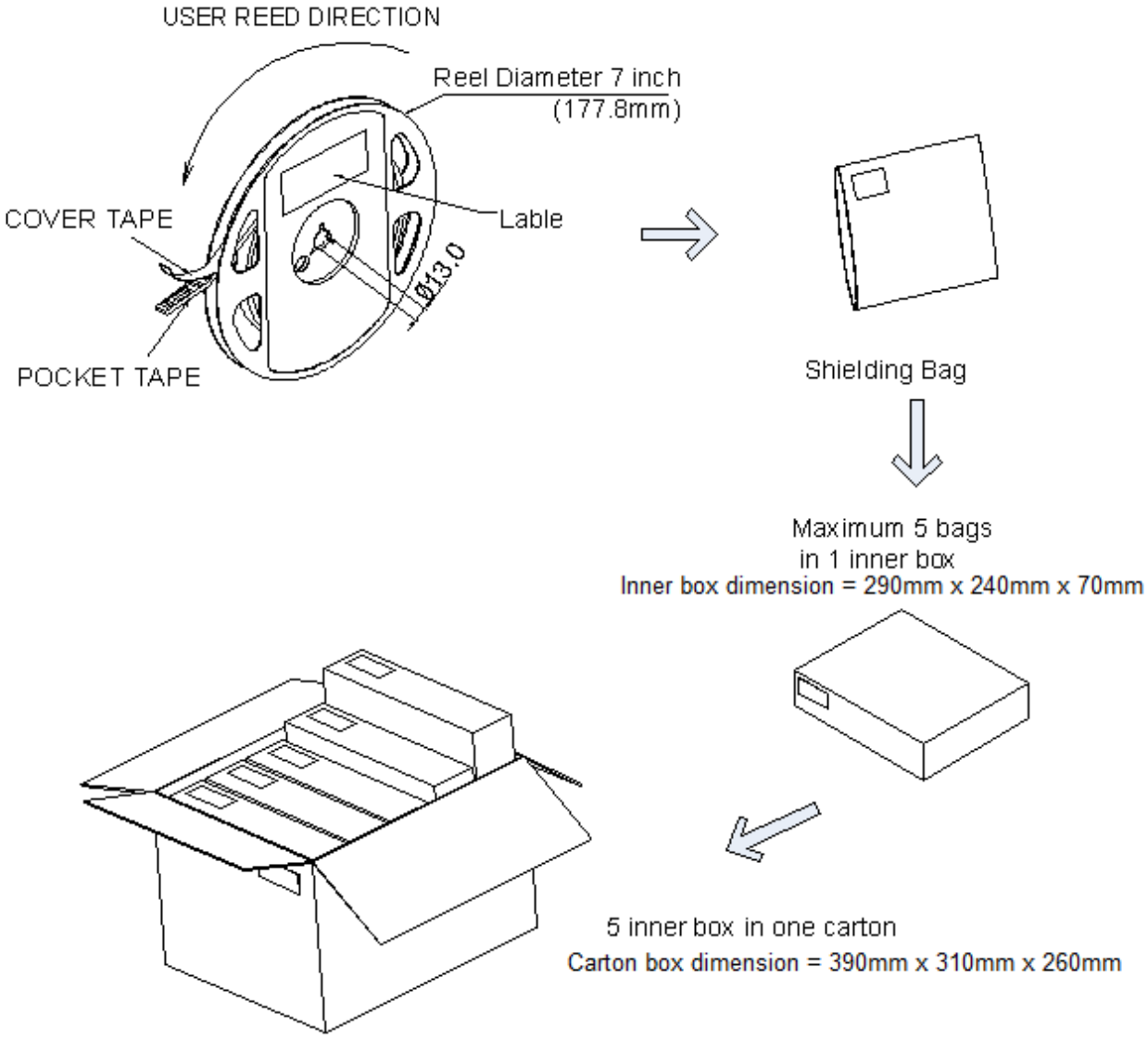


Taping & Packing:

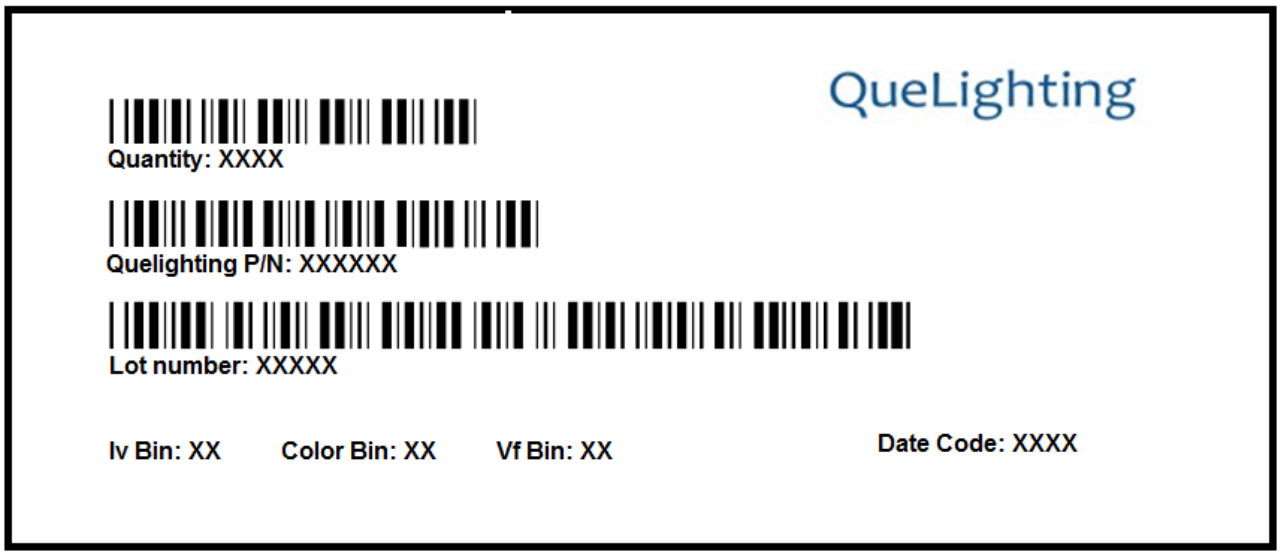




Unit : mm


USER REED DIRECTION
Reel Diameter 7 inch
(177.8mm)
COVER TAPE
Lable
ϕ13.0
POCKET TAPE
Shielding Bag
Maximum 5 bags
in 1 inner box
Inner box dimension = 290mm x 240mm x 70mm
5 inner box in one carton
Carton box dimension = 390mm x 310mm x 260mm

Labeling



Ordering Information:

Part #	Multiple Quantities	Quantity per Reel
QLSP27TG_B		2000 pcs

Revision History:

Revision Date:	Changes:	Version #:
11-01-2024	Initial release	1.0