

## Chip LED with Bi-Color (Multi-Color)

### Features

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



**M3025**



### Descriptions

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

### Applications

- 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
	Color Code	Material	Emitted Color	
TBP2-QFLT3025	Q	AllnGaP	Super Red	Water Clear
	F	AllnGaP	Yellowish Green	

# Bi-Color (Multi-Color) Chip LED

## TBP2-QFLT3025

### Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Unit
Reverse Voltage	VR	5	V
Forward Current	IF	Super Red:25	mA
		Yellowish Green:25	
Peak Forward Current (Duty 1/10 @ 1KHz)	IFP	Super Red:60	mA
		Yellowish Green:60	
Power Dissipation	Pd	Super Red:60	mW
		Yellowish Green:60	
Electrostatic Discharge (HBM)	ESD	Super Red:2000	V
		Yellowish Green:2000	
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +90	°C
Soldering Temperature	Tsol	Reflow Soldering: 260 °C for 10 seconds Hand Soldering: 350 °C for 3 seconds	

### Electro-Optical Characteristics (Ta=25°C)

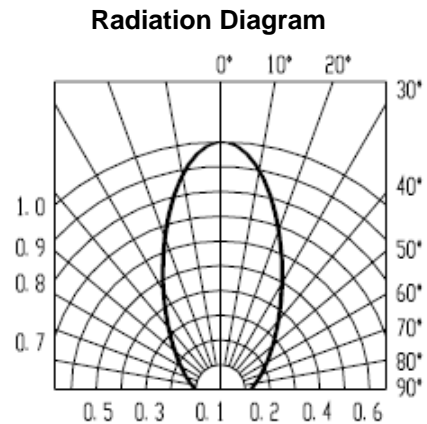
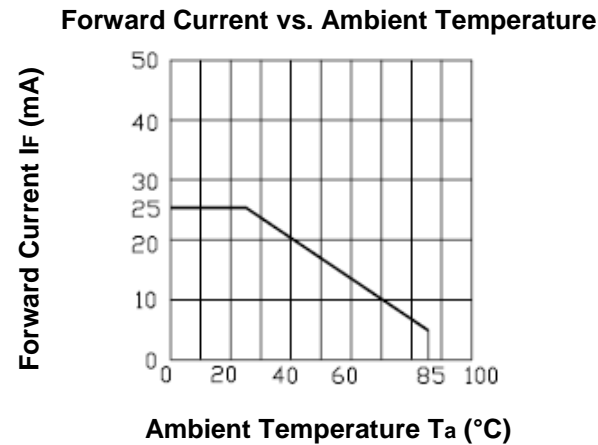
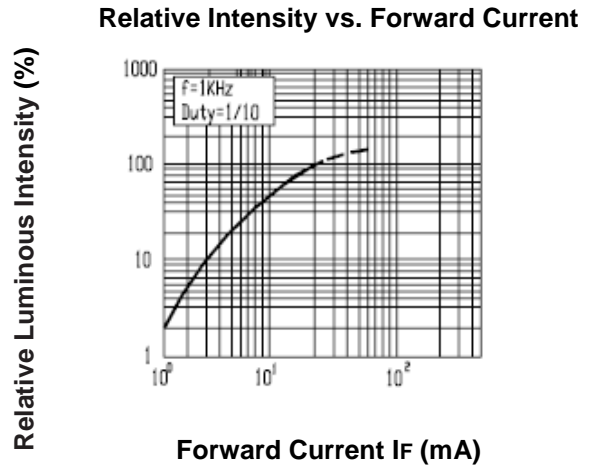
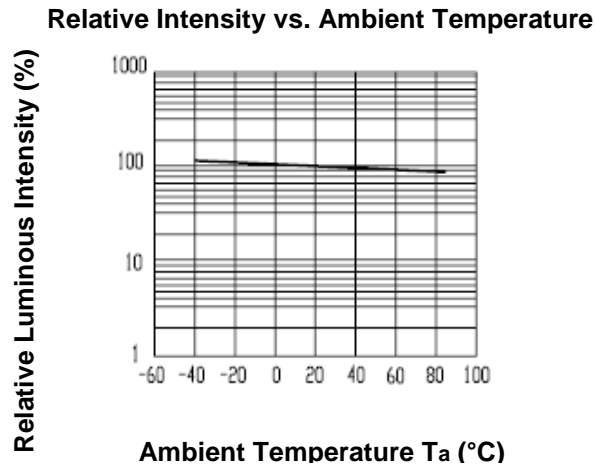
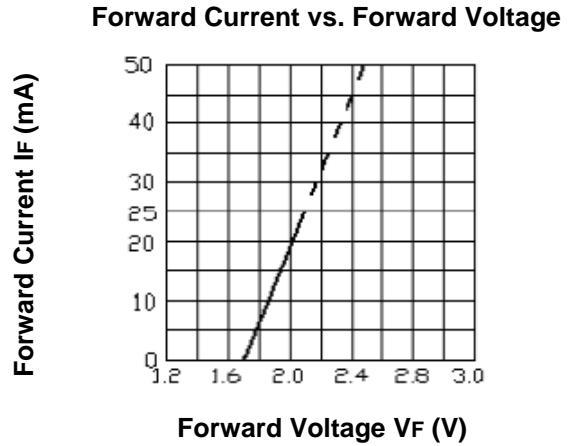
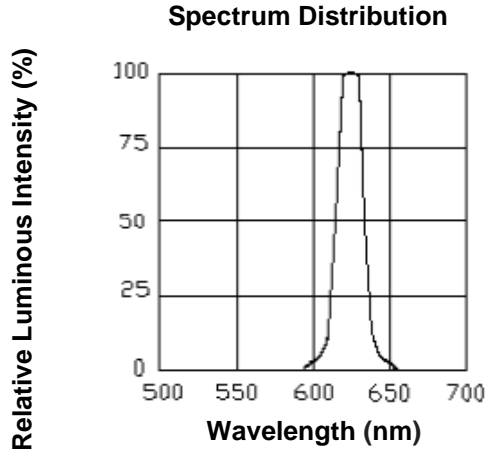
Parameter	Symbol	Emitted Color	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	IV	Super Red	180	-----	450	mcd	IF=20mA
		Yellowish Green	90	-----	225		
Viewing Angle	2θ1/2	-----	-----	60	-----	deg	
Peak Wavelength	λp	Super Red	-----	632	-----	nm	
		Yellowish Green	-----	575	-----		
Dominant Wavelength	λd	Super Red	-----	624	-----	nm	
		Yellowish Green	-----	573	-----		
Spectrum Radiation Bandwidth	Δλ	Super Red	-----	20	-----	nm	
		Yellowish Green	-----	20	-----		
Forward Voltage	VF	Super Red	1.7	2.0	2.4	V	
		Yellowish Green	1.7	2.0	2.4		
Reverse Current	IR	Super Red	-----	-----	10	μA	VR=5V
		Yellowish Green	-----	-----	10		

**Notes:** Tolerance of Luminous Intensity: ±10%

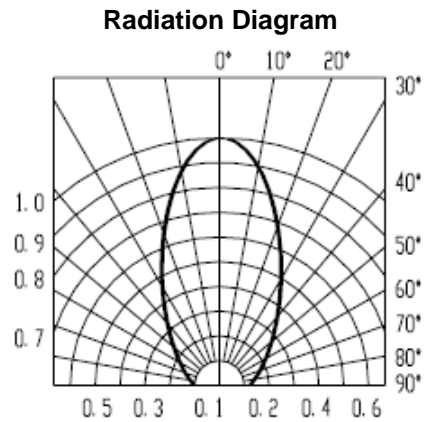
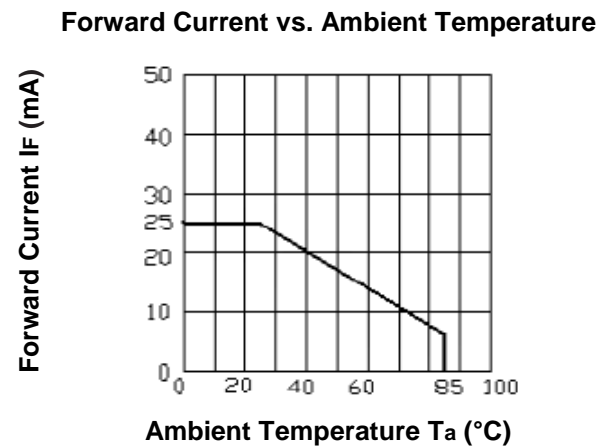
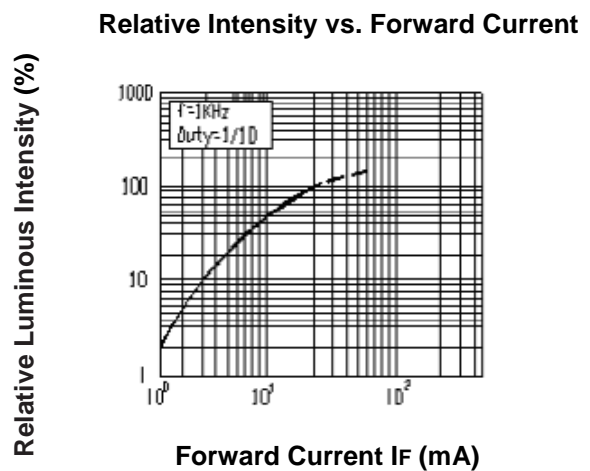
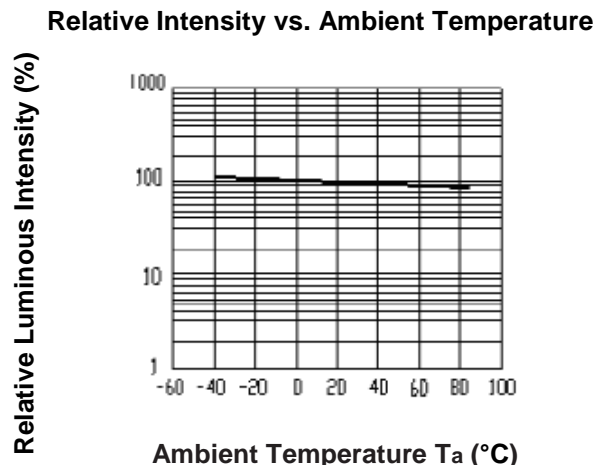
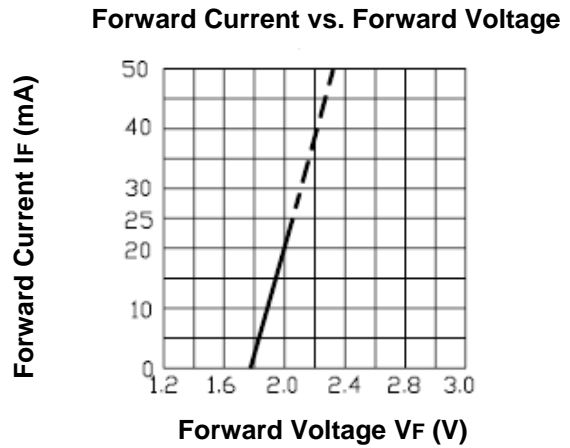
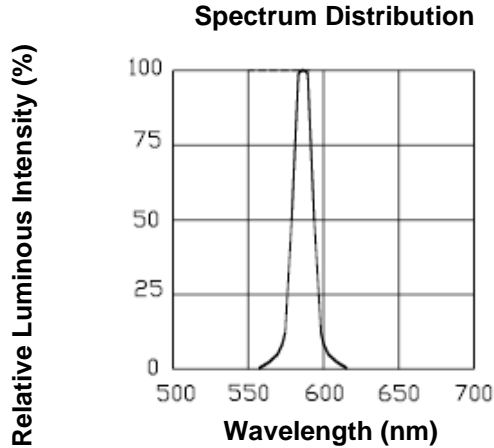
Tolerance of Dominant wavelength: ±1.0nm

Tolerance of Forward Voltage: ±0.1V

### Typical Electro-Optical Characteristics Curves ( $T_a=25^\circ\text{C}$ ) Super Red



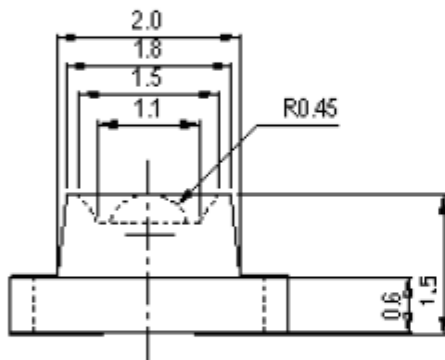
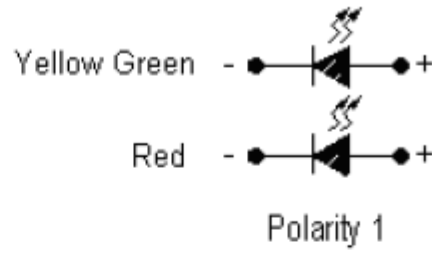
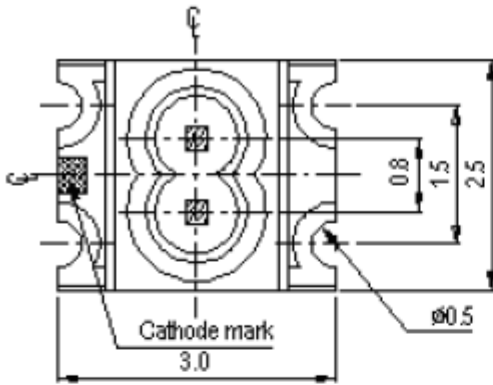
### Typical Electro-Optical Characteristics Curves ( $T_a=25^\circ\text{C}$ ) Yellowish Green



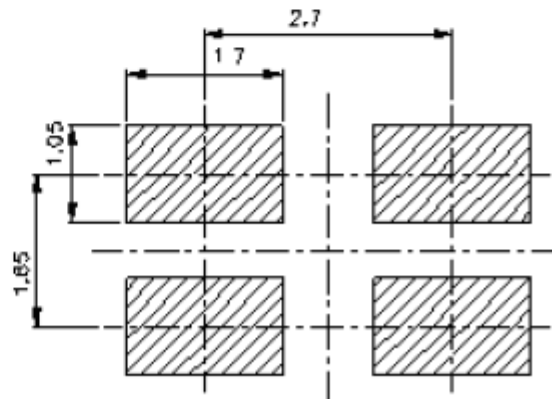
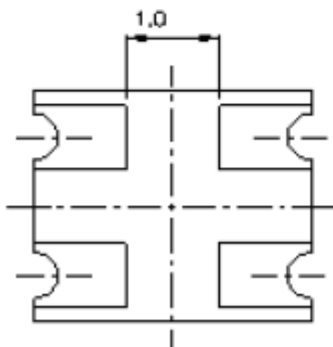
# Bi-Color (Multi-Color) Chip LED

## TBP2-QFLT3025

### Package Dimensions (In mm)

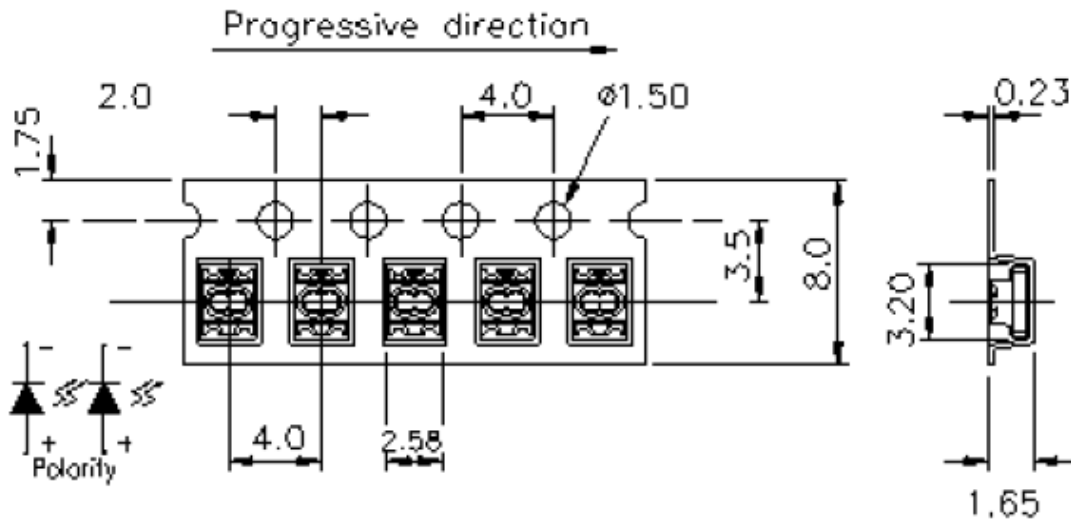


For reflow soldering (propose)



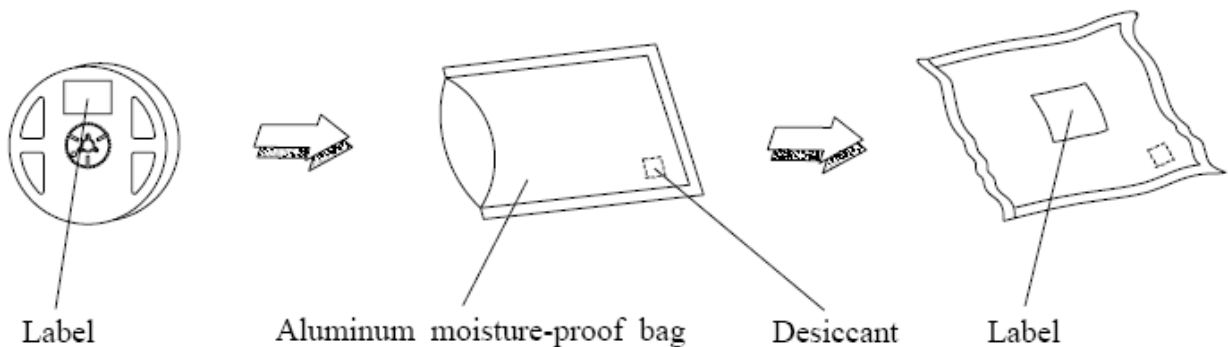
**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm, Unit = mm

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

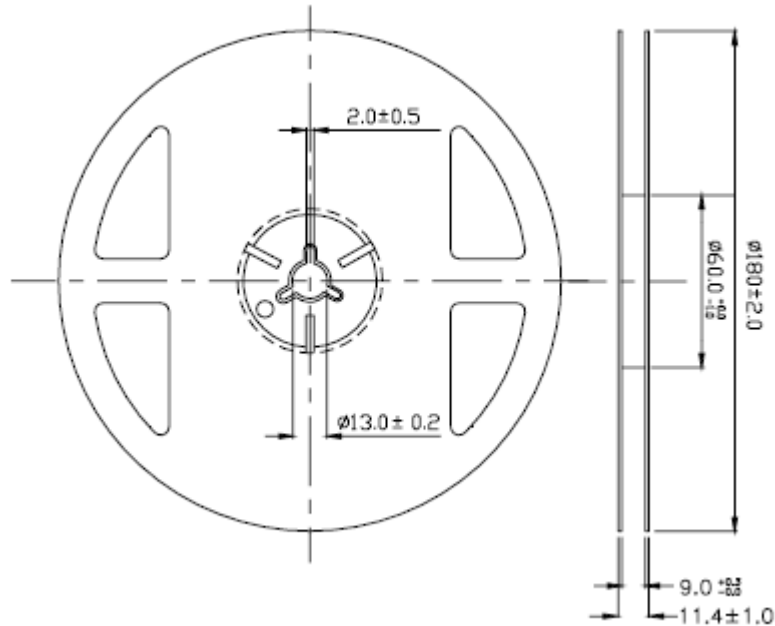


**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm.

### Moisture Resistant Packaging



### Reel Dimensions (Unit=mm):



**Note:** The tolerances unless mentioned is  $\pm 0.1$ mm.

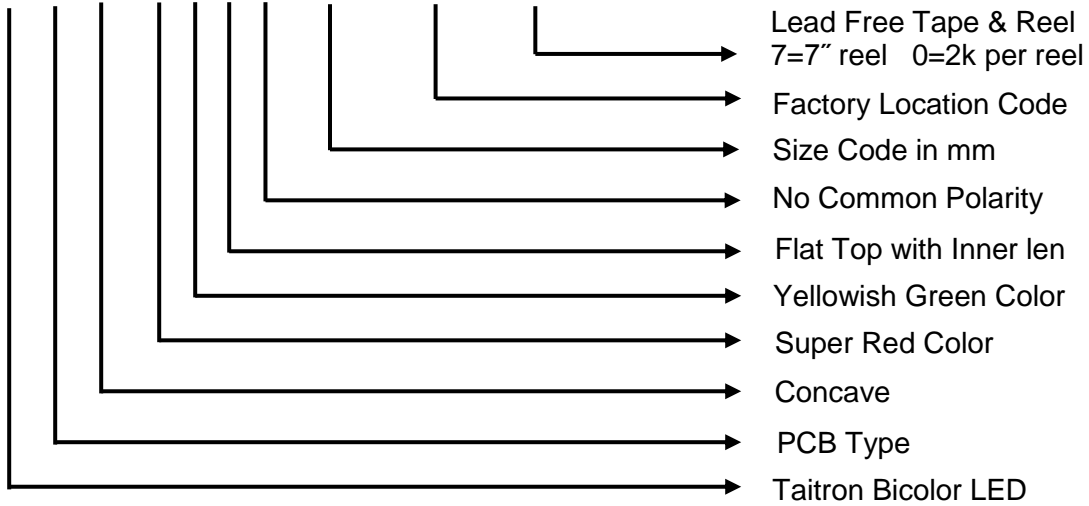


# Bi-Color (Multi-Color) Chip LED

## TBP2-QFLT3025

### Ordering Information

**T B P 2 - Q F L T 3025 - 92 -TR70**

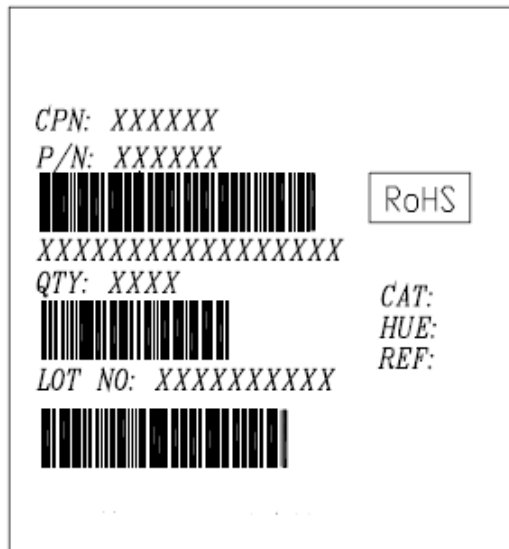


### Label Explanation

**CAT:** Luminous Intensity Rank

**HUE:** Dominant Wavelength Rank

**REF:** Forward Voltage Rank



### Rank Combinations

#### Bin Range of Luminous Intensity

##### Super Red

Bin Code	Min	Max	Unit	Condition
1	180	285	mcd	IF=20mA
2	285	450		

##### Yellowish Green

Bin Code	Min	Max	Unit	Condition
1	90	140	mcd	IF=20mA
2	140	225		

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

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