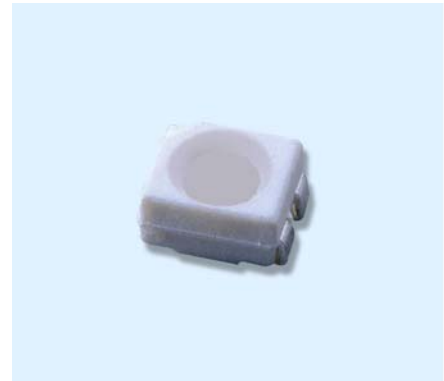


Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Features

- Pb-free.
- Inner reflector.
- White package.
- Optical indicator.
- P-LCC-4 package.
- Wide viewing angle.
- Colorless clear resin.
- Precondition : Base on JEDEC Level-2.
- ESD : Up to 2KV. (Base JESD22-A114-B)
- The product itself will remain within RoHS compliant version.
- Suitable for vapor-phase reflow, infrared reflow and wave solder processes.



Descriptions

- The 67-22 series is available for orange, green, blue and yellow or other color due to the different raw material.
- Base on the package design, the device result in wide view angle.

Applications

- Automotive backlighting or indicator : Dashboard, switch, audio and video equipments...etc.
- Backlight : LCD, switches, symbol, mobile phone and illuminated advertising.
- Display for indoor and outdoor application : Traffic...etc.
- Ideal for coupling into light guides.
- Substitution of traditional light
- Optical indicator
- General applications.

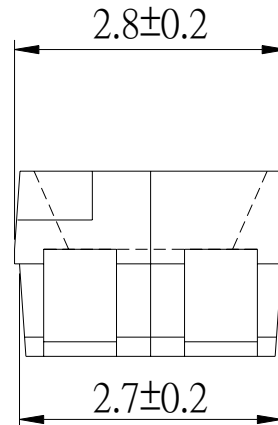
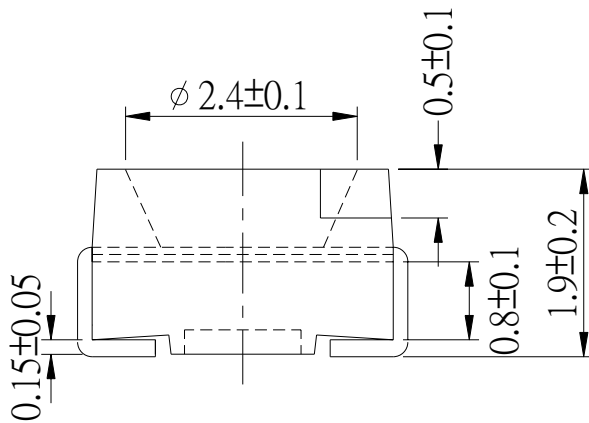
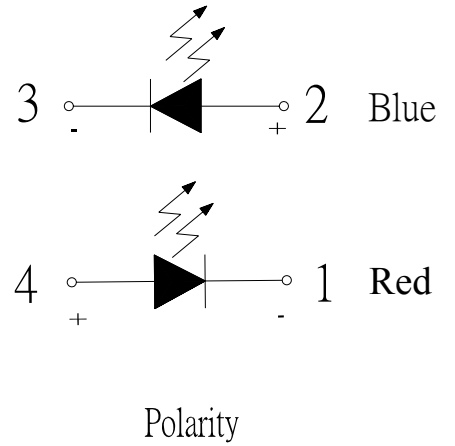
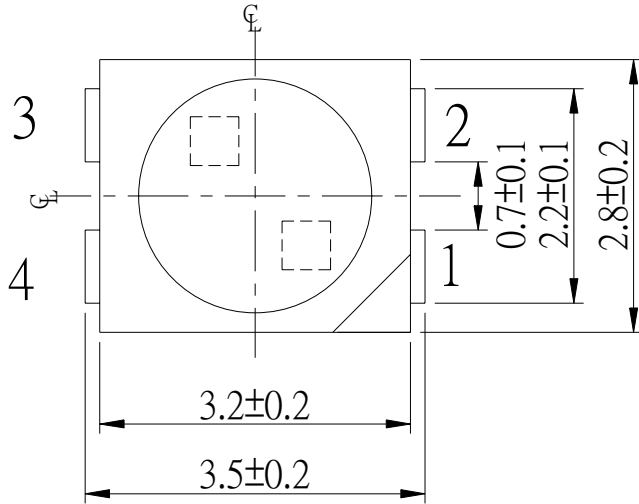
Device Selection Guide

Chip			Lens Color
Type	Material	Emitted Color	
R8S	AlGaInP	Deep-Red	Water Clear
B3	InGaN/SiC	Blue	

Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Package Dimensions



Note : Tolerances unless dimension ± 0.1 mm. Unit = mm

Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol		Rating	Unit
Reverse Voltage	V _R	R8S	12	V
		B3	5	
Forward Current	I _F	R8S	30	mA
		B3	30	
Power Dissipation	I _{FP}	R8S	100	mW
		B3	100	
Peak Forward Current (tp ≤ 10 μs , duty ≤ 0.005)	P _d	R8S	120	mA
		B3	120	
Junction Temperature	T _j	R8S	115	°C
		B3	125	
Operating Temperature	Topr		-40 ~ +100	°C
Storage Temperature	Tstg		-40~ +110	°C
Soldering Temperature	Tsol		Reflow Soldering : 260 °C for 10 sec. Hand Soldering : 350 °C for 3 sec.	

Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition	
Luminous Intensity	I _v	R8S	57	-----	140	mcd	
		B3	57	-----	140		
Viewing Angle	2θ 1/2	-----	120	-----	deg	I _F =20mA	
Peak Wavelength	λ _p	R8S	-----	650	-----		nm
		B3	-----	468	-----		
Dominant Wavelength	λ _d	R8S	629.5	-----	645.5		nm
		B3	464.5	-----	476.5		
Spectrum Radiation Bandwidth	Δλ	R8S	-----	20	-----		nm
		B3	-----	35	-----		
Forward Voltage	V _F	R8S	1.75	-----	2.35	V	
		B3	2.75	-----	3.95		
Reverse Current	I _R	R8S	-----	-----	10	μA	V _R =12V
		B3	-----	-----	10		V _R =5V

Notes :

- 1. Tolerance of Luminous Intensity: ±11%**
- 2. Tolerance of Dominant Wavelength: ±1nm**
- 3. Tolerance of Forward Voltage: ±0.1V**

Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Bin Range of Luminous Intensity

Chip	Bin Code	Min.	Max.	Unit	Condition
R8S	P2	57.0	72.0	mcd	I _F =20mA
	Q1	72.0	90.0		
	Q2	90.0	112.0		
	R1	112.0	140.0		
B3	P2	57.0	72.0		
	Q1	72.0	90.0		
	Q2	90.0	112.0		
	R1	112.0	140.0		

Bin Range of Dominant Wavelength

Chip	Bin Code	Min.	Max.	Unit	Condition
R8S	E7	629.5	633.5	nm	I _F =20mA
	E8	633.5	637.5		
	E9	637.5	641.5		
	E10	641.5	645.5		
B3	A9	464.5	467.5		
	A10	467.5	470.5		
	A11	470.5	473.5		
	A12	473.5	476.5		

Bin Range of Forward Voltage

Chip	Bin Code	Min.	Max.	Unit	Condition
R8S	0	1.75	1.95	V	I _F =20mA
	1	1.95	2.15		
	2	2.15	2.35		
B3	5	2.75	3.05		
	6	3.05	3.35		
	7	3.35	3.65		
	8	3.65	3.95		

Notes:

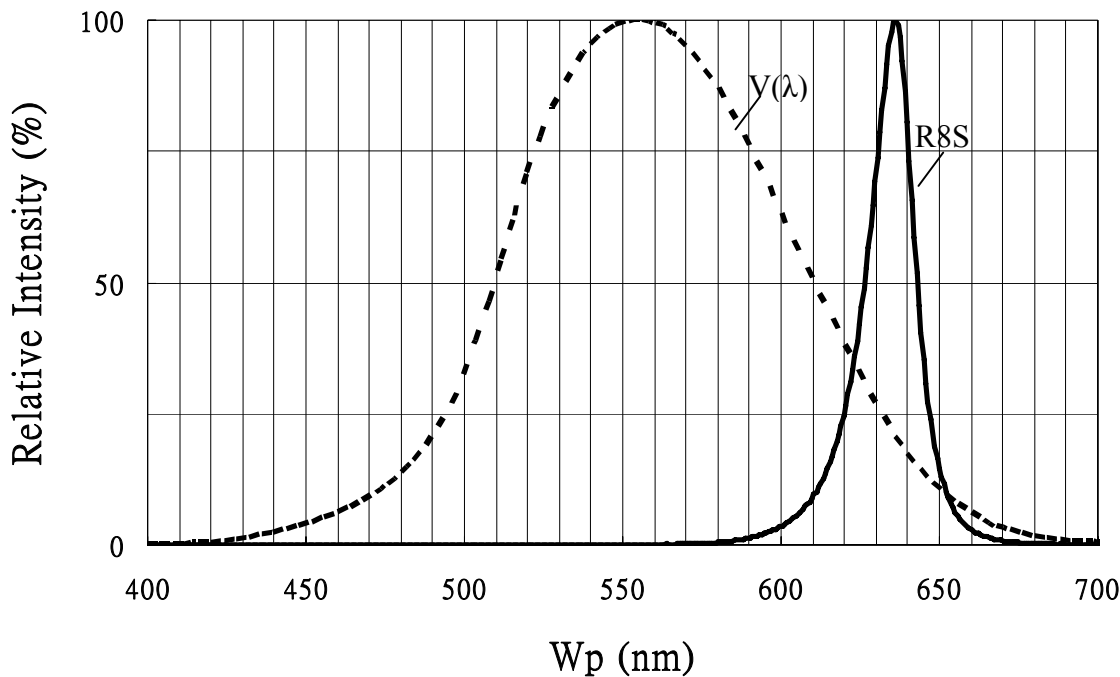
- 1.Tolerance of Luminous Intensity: ±10%**
- 2.Tolerance of Dominant Wavelength: ±1nm**
- 3.Tolerance of Forward Voltage: ±0.1V**

Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

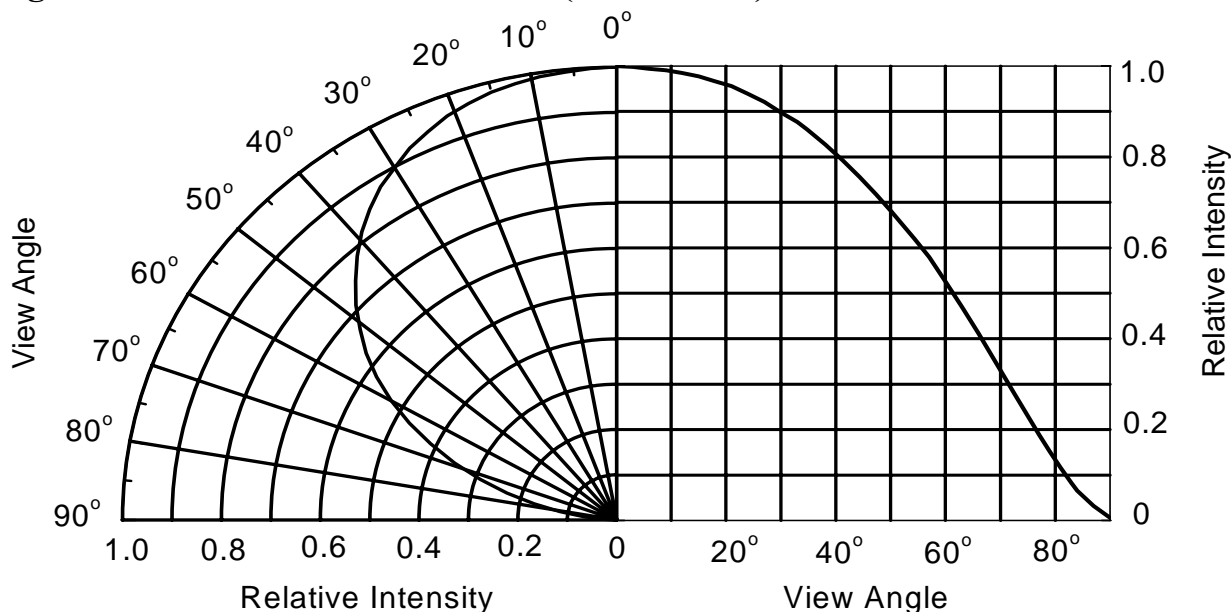
Typical Electro-Optical Characteristics Curves(R8S)

- Typical curve of spectral distribution :



$V(\lambda)$ =Standard eye response curve

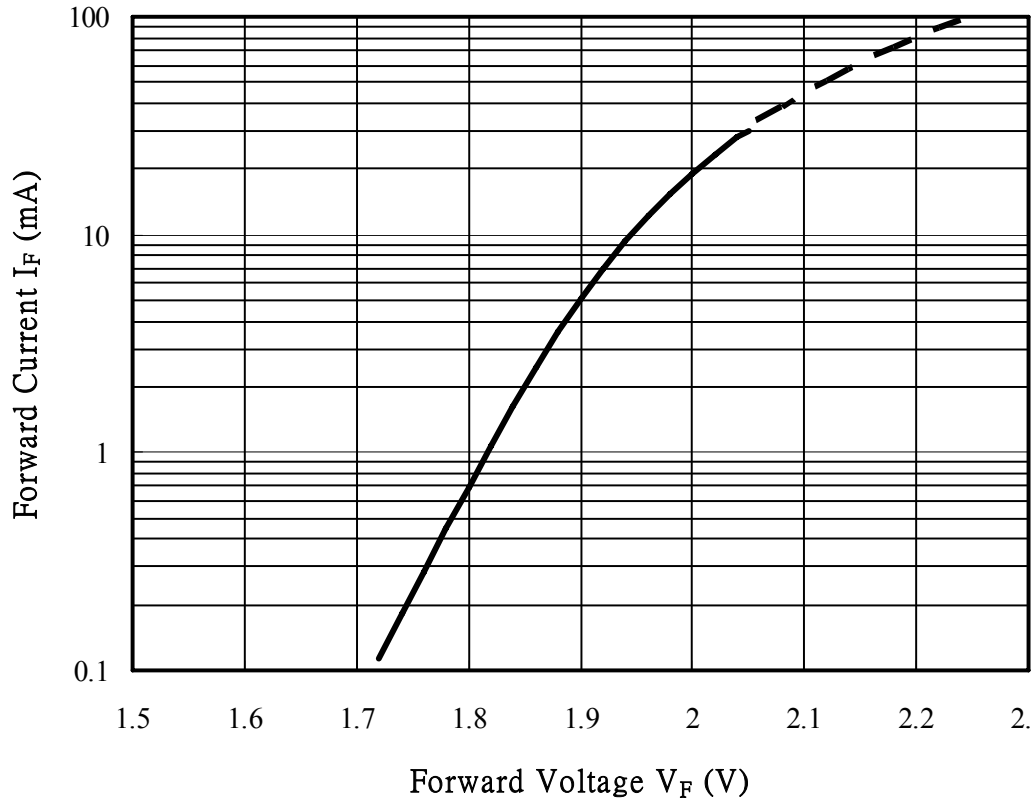
Diagram characteristics of radiation ($I_v / I_v \max$):



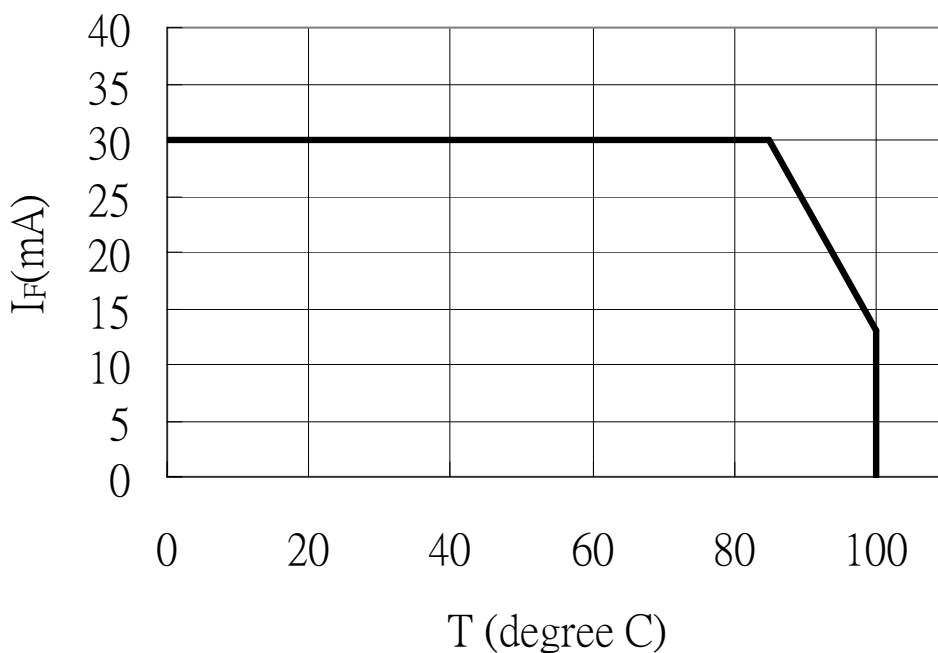
Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Forward Current vs. Forward Voltage (Ta=25°C)(R8S)



Forward current vs. Ambient Temp.

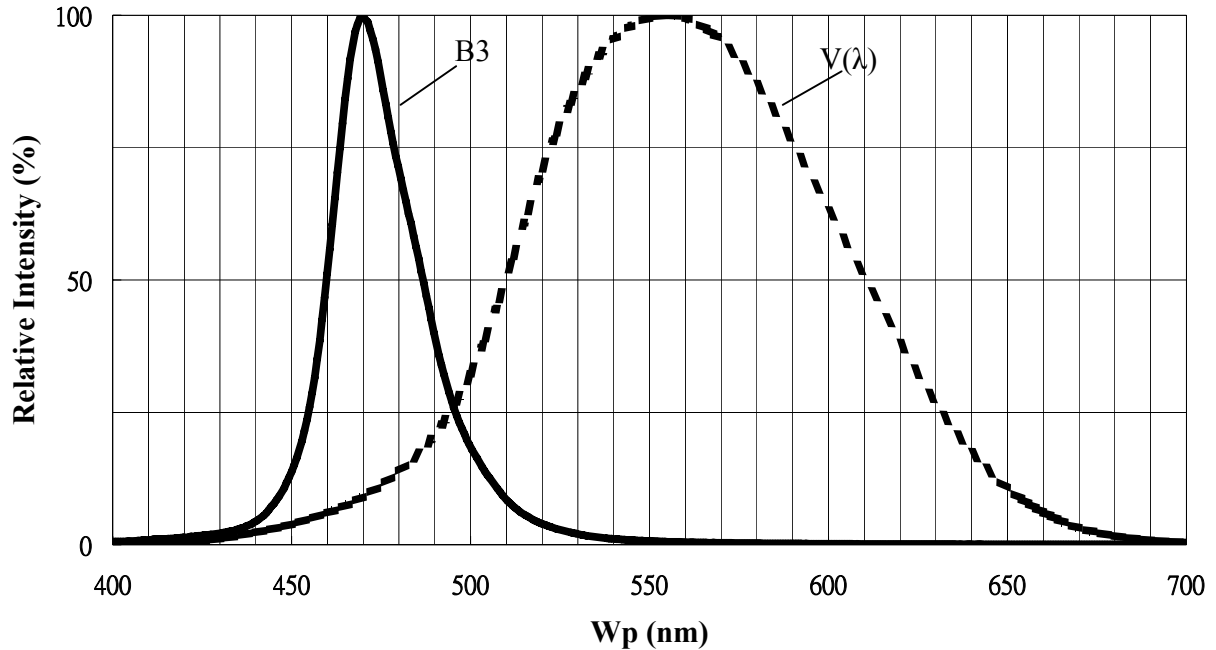


Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

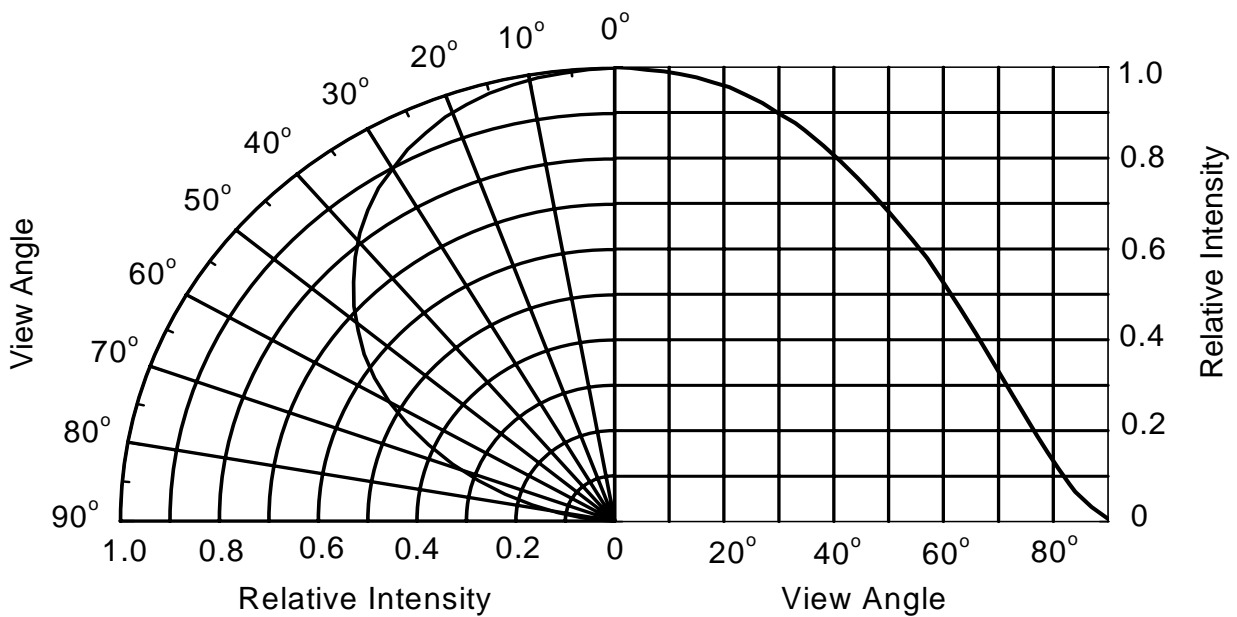
Typical Electro-Optical Characteristics Curves(B3)

- Typical curve of spectral distribution :



Note : $V(\lambda)$ =Standard eye response curve

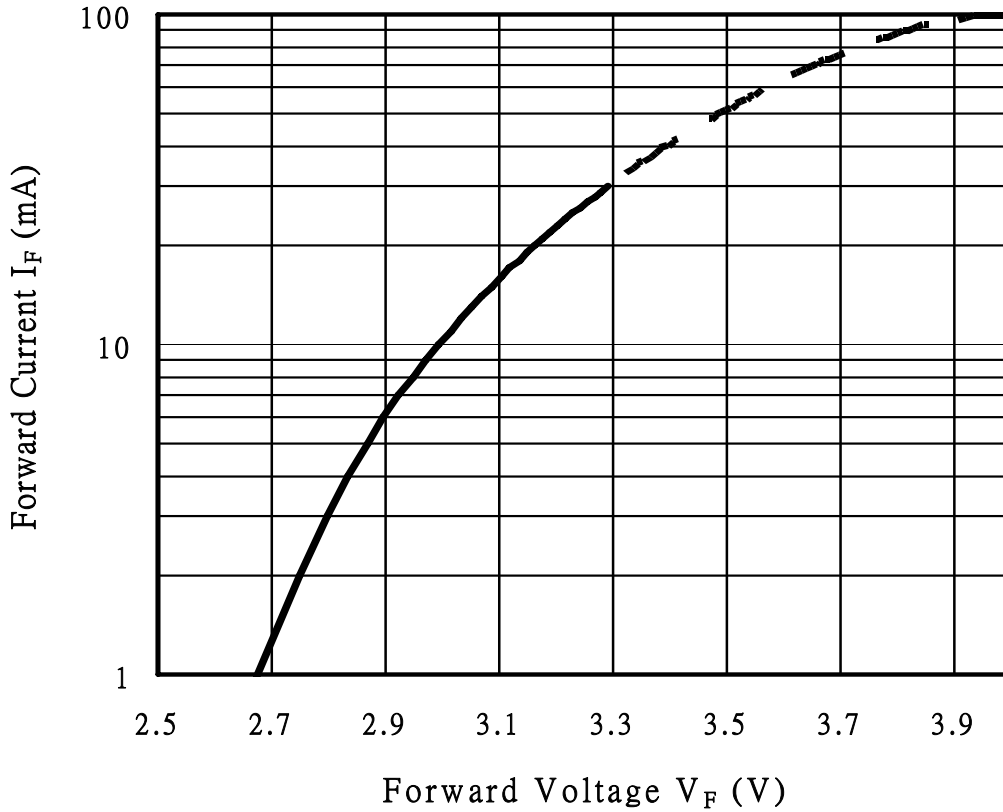
Diagram characteristics of radiation



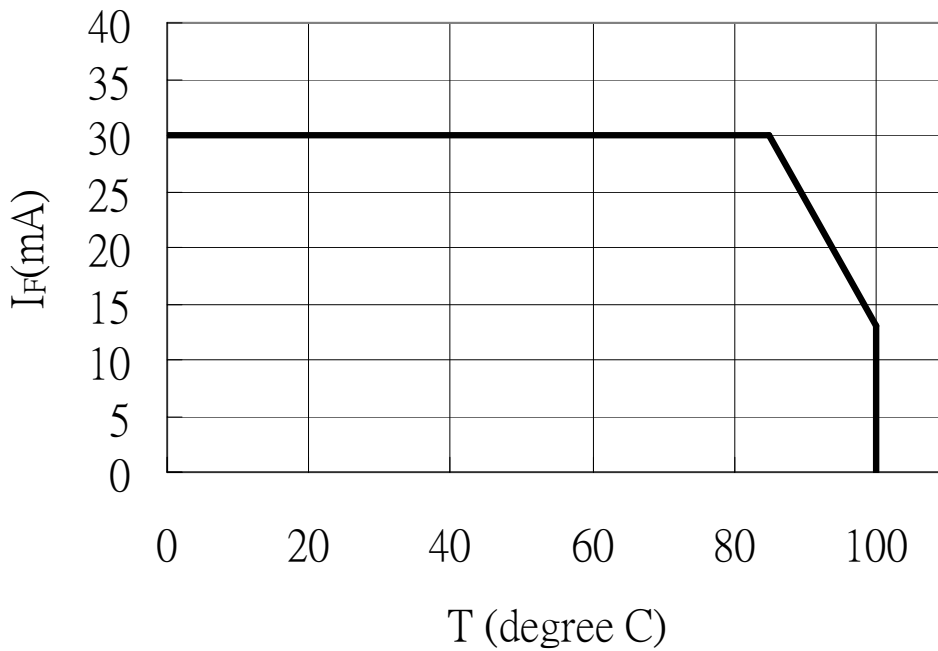
Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Forward Current vs. Forward Voltage (Ta=25°C)(B3)



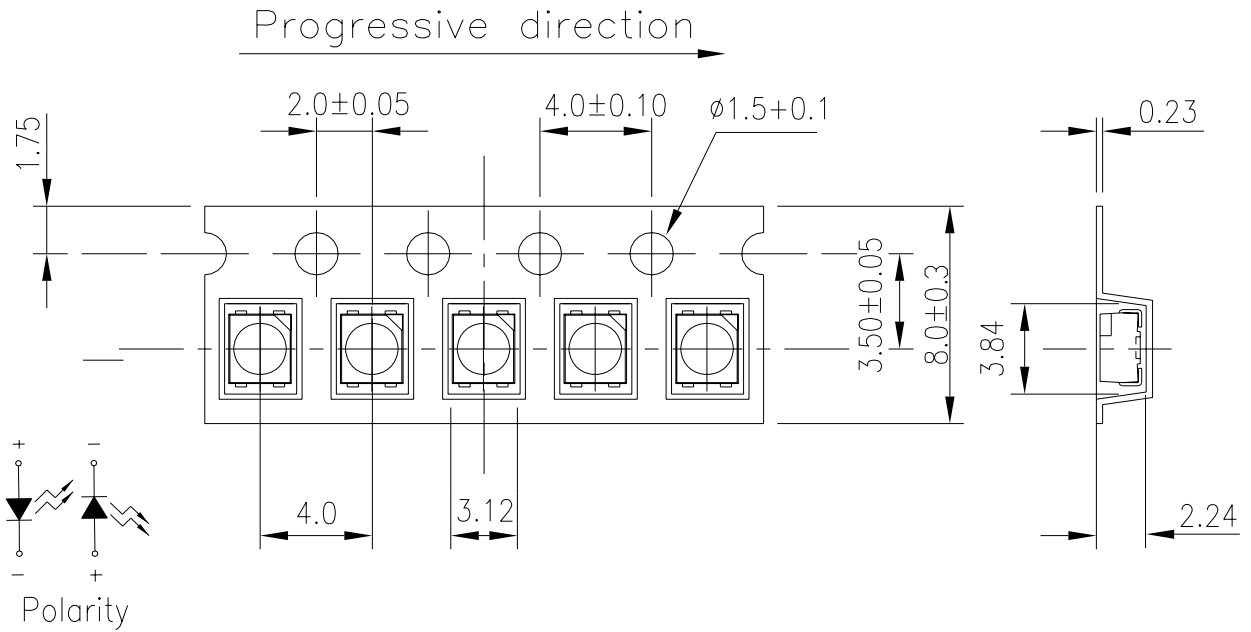
Forward current vs. Ambient Temp.



Technical Data Sheet –Top View LED With Bi-Color

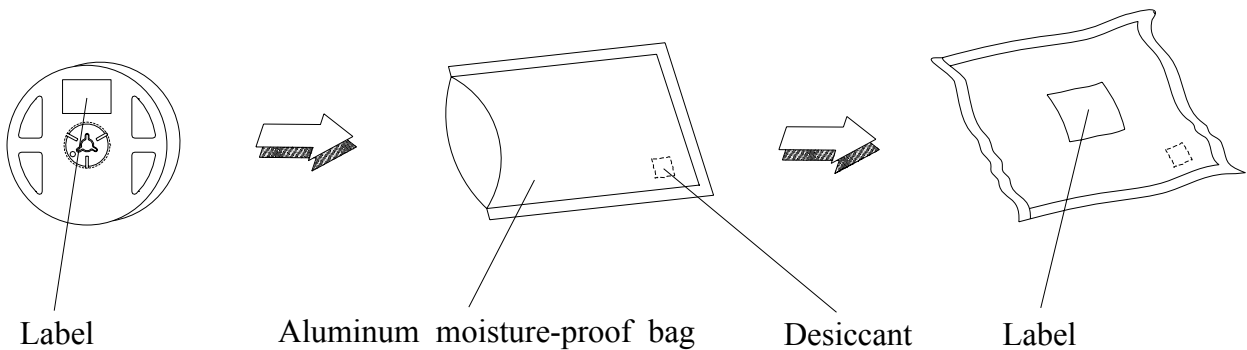
67-22/R8SB3C-B10/2T/AM

Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel



Note : Tolerances unless dimension ± 0.1 mm. Unit = mm

Moisture Resistant Packaging



Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

Precautions for Use

1. Over-current-proof

Customer must apply resistors for protection, otherwise slight voltage shift will cause big current change (Burn out will happen).

2. Storage

2.1 Do not open moisture proof bag before the products are ready to use.

2.2 Before opening the package: The LED should be kept at 30°C or less and 90%RH or less.

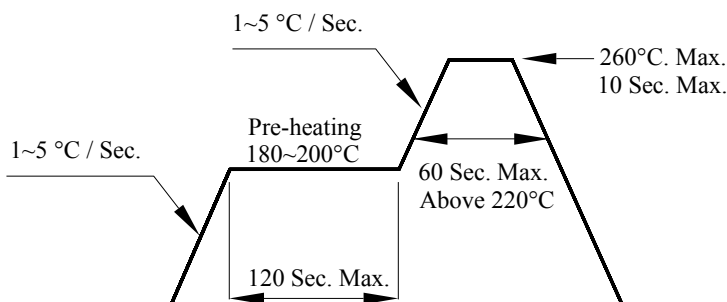
2.3 After opening the package: The LED floor life is 1 year under 30°C or less and 60% RH or less. If unused LED remain, it should be stored in moisture proof packages.

2.4 If the moisture absorbent material (silica gel) has faded away or the LED have exceeded the storage time, baking treatment should be performed using the following conditions.

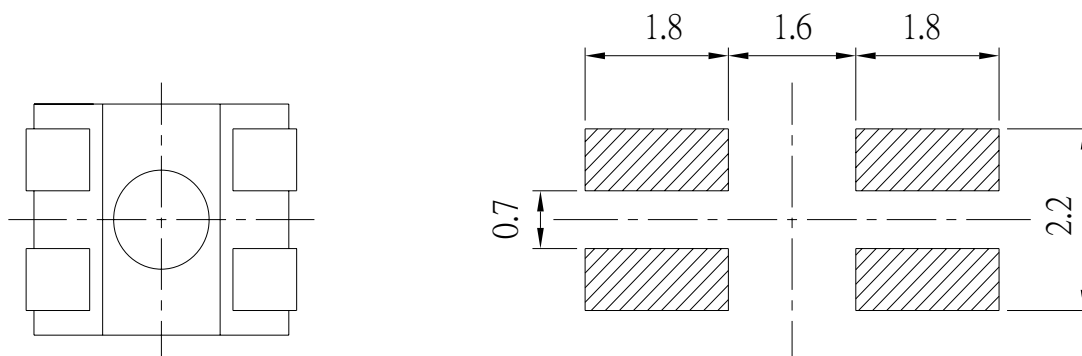
Baking treatment : 60±5°C for 24 hours.

3. Soldering Condition

3.1 (A) Pb-free solder temperature profile



(B) Recommend soldering pad





Technical Data Sheet –Top View LED With Bi-Color

67-22/R8SB3C-B10/2T/AM

3.3 When soldering, do not put stress on the LED during heating.

3.4 After soldering, do not warp the circuit board.

4.Soldering Iron

Each terminal is to go to the tip of soldering iron temperature less than 350°C for 3 seconds within once in less than the soldering iron capacity 25W. Leave two seconds and more intervals, and do soldering of each terminal. Be careful because the damage of the product is often started at the time of the hand solder.