Hangzhou Multi-Color Optoelectronics Co., Ltd
Address: No. 300, The 10th Avenue, East HETZ, Hangzhou, China
Tel: 0571-86708389 **Fax:** 0571-86708340 **Web**: www.mc-oe.com

MULTI-COLOR

SPECIFICATION FOR GREEN LED

MC-LG346HIBF

- Size(mm): 3.2×3.9×7.3
- RoHS Compliant
- High reliability
- High anti-oxidation
- Good UV resistance performance
- Pb-free Reflow soldering Application

1. SPECIFICATIONS

1.1 Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	I_F	30	mA
Pulse Forward Current	I_{FP}	100	mA
Reverse Voltage	V_R	5	V
Power dissipation	P_D	99.6	mW
Operating Temperature	T_{opr}	-30 to +85	°C
Storage Temperature	T_{stg}	-40 to +100	°C

* I_{FP} conditions with pulse width ≤10ms and duty cycle ≤10%.

1.2 Optical and Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	Typ.	Min.	Max.	Unit
Forward Voltage	VF	IF=20mA	3.2	2.75	3.45	V
Reverse Current	IR	VR=5V	-	-	1	μA
Wavelength	λD	IF=20mA	526	522	525	nm
				525	528	
Luminous Intensity	Iv	IF=20mA	3200	2850	3100	mcd
				3100	3400	
				3400	3700	

* Each Bin: I_V(Max):I_V(Min) ≤1.1.

* Tolerance of measurements of the Forward Voltage is ±0.05V.

* Tolerance of measurements of the Luminous Intensity is ±5%.

* Tolerance of measurements of the Wavelength is ±0.5nm.

2. RELIABILITY

2.1 Test Items and Results

Test Item	Standard Test Method	Test Conditions	Test Duration	Units Failed/Tested
Resistance to Soldering Heat	JEITA ED-4701 300 302	Tsld=260±5°C,10sec,1dip 3mm from the base of the lens		0/100
Temperature Cycle		-40°C～130°C 30min. 30min. 60min./cycle	100cycles	0/100
Temperature Cycle	JEITA ED-4701 100 105	-40°C～25°C～100°C～25°C 30min. 5min. 30min. 5min	100cycles	0/100
Moisture Resistance (Cyclic)	JEITA ED-4701 200 203	25°C～65°C～-10°C 90%RH, 24hr per cycle	10cycles	0/100
Terminal Bending Strength	JEITA ED-4701 400 401	5N,0°～90°～0°bend, 2bending cycles	No noticeable damage	0/50
Terminal Pull Strength	JEITA ED-4701 400 401	10N,10±1sec	No noticeable damage	0/50
High Temperature Storage	JEITA ED-4701 200 201	Ta=100°C	1000hrs	0/100
Temperature Humidity Storage		Ta=85°C,RH=85%	1000hrs	0/100
Low Temperature Storage	JEITA ED-4701 200 202	Ta=-40°C	1000hrs	0/100
Room Temperature Operating Life		Ta=25°C, I_F=30mA	1000hrs	0/10
Temperature Humidity Operating Life		85°C,RH=85%, I_F=30mA	500hrs	0/10
Low Temperature Operating Life		Ta=-30°C, I_F=30mA	1000hrs	0/10

NOTES:

Measurements are performed after allowing the LEDs to return to room temperature.

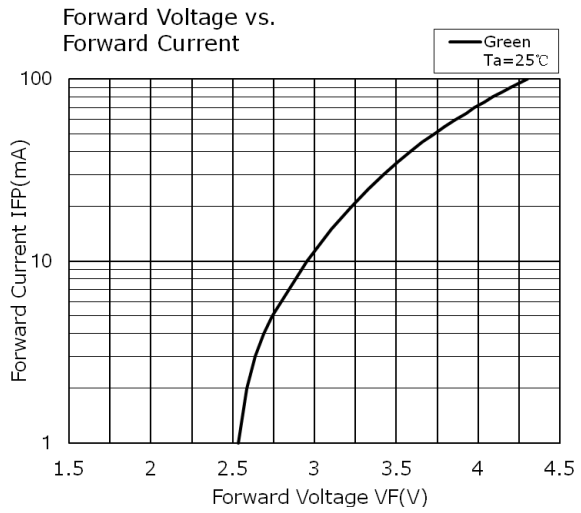
2.2 Criteria for Judging Damage

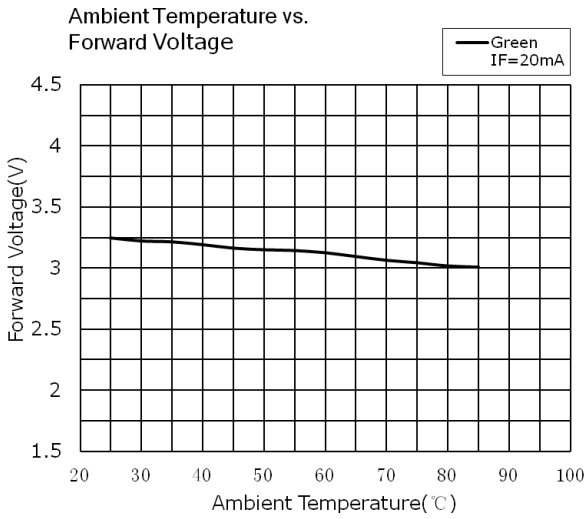
Item	Symbol	Test Conditions	Criteria for Judgement	
			Min.	Max.
Forward Voltage	V_F	I_F=20mA	--	U.S.L.×1.1
Reverse Current	I_R	V_R=5V	--	U.S.L.×2.0
Luminous Intensity	I_V	I_F=20mA	L.S.L. ×0.9	--

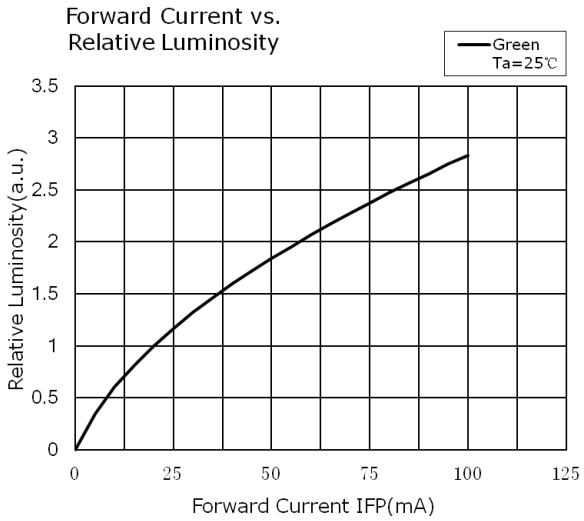
U.S.L.: Upper Standard Level L.S.L.: Lower Standard Level

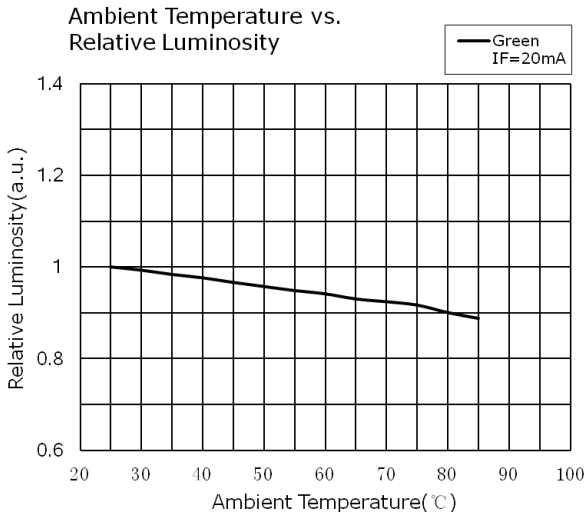
3. TYPICAL ELECTRICAL CHARACTERISTICS CURVES

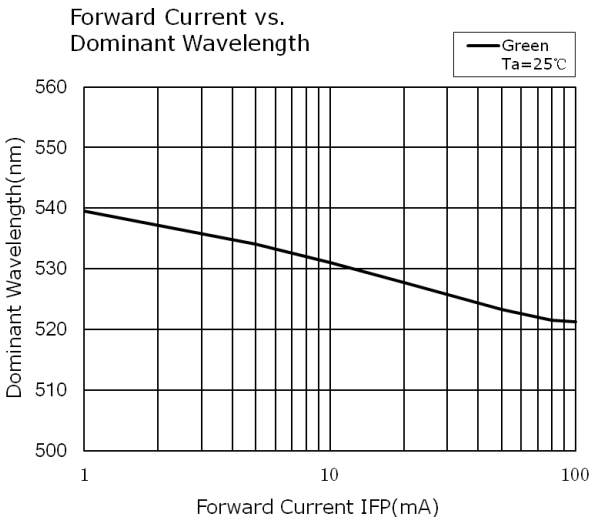
All characteristics shown are for reference only and are not guaranteed.

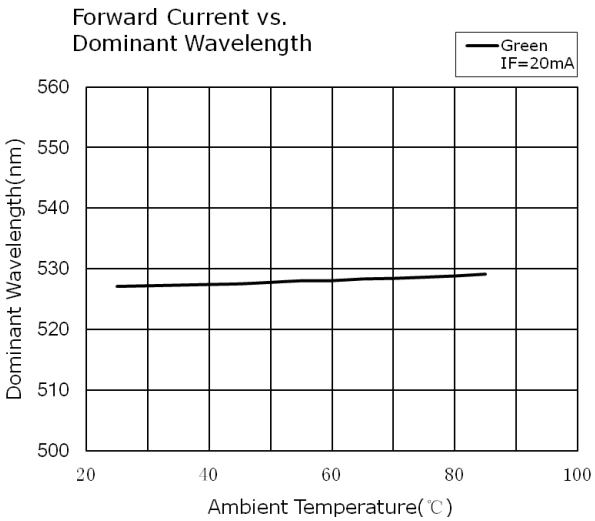






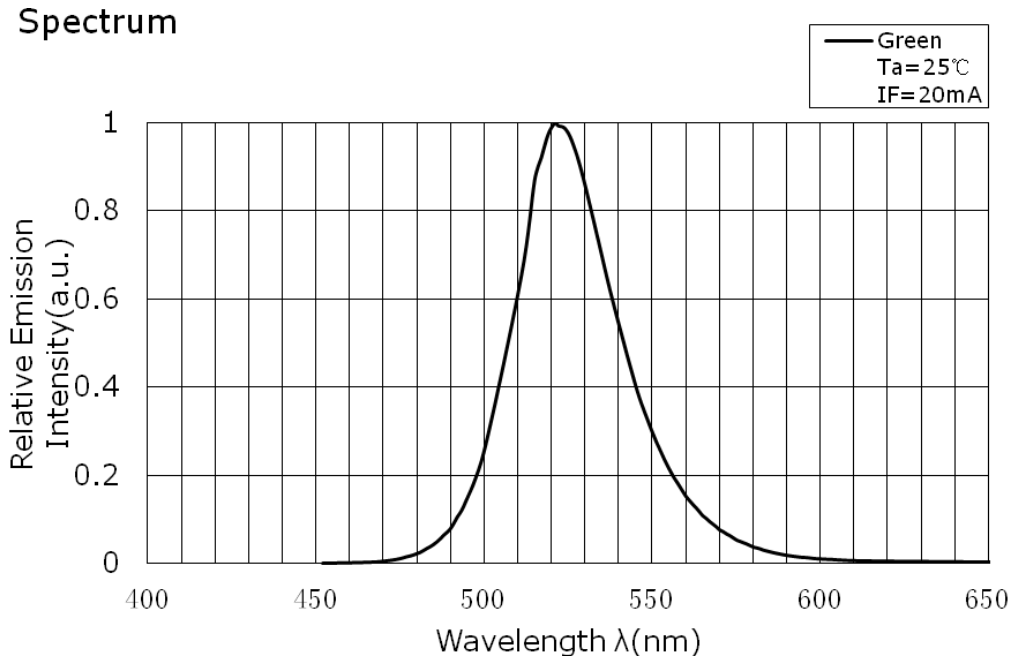


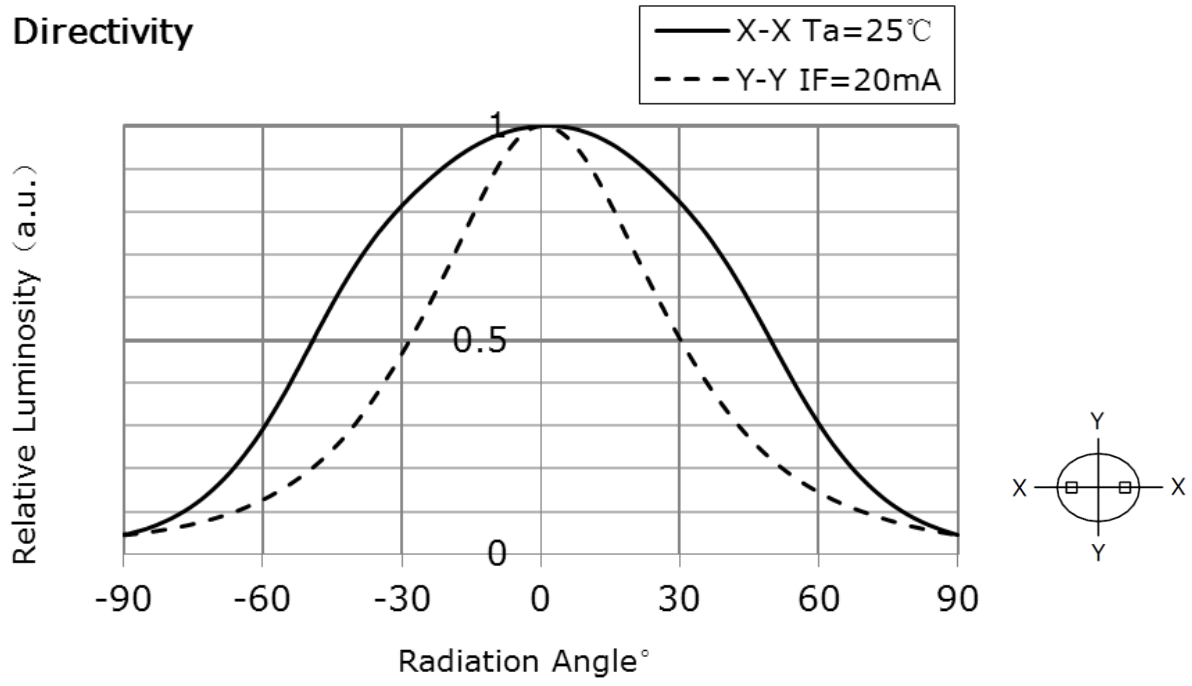




4. TYPICAL OPTICAL CHARACTERISTICS CURVES

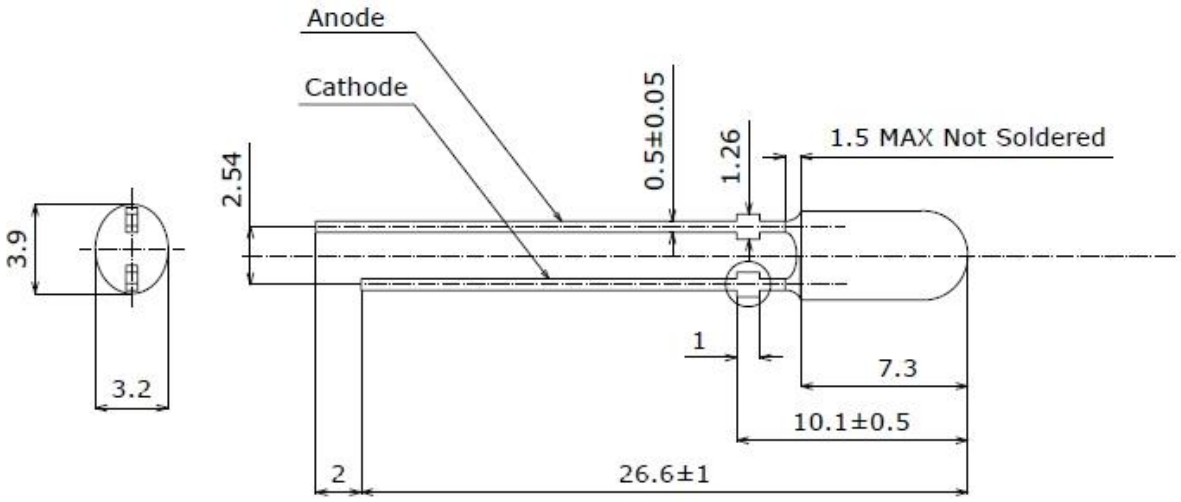
All characteristics shown are for reference only and are not guaranteed.



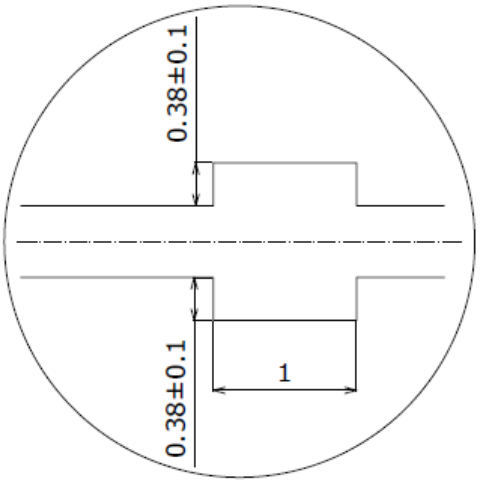


5. OUTLINE DIMENSIONS AND MATERIALS

This product complies with RoHS Directive. (Unit: mm, Tolerance: ±0.2)

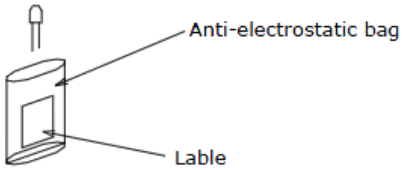


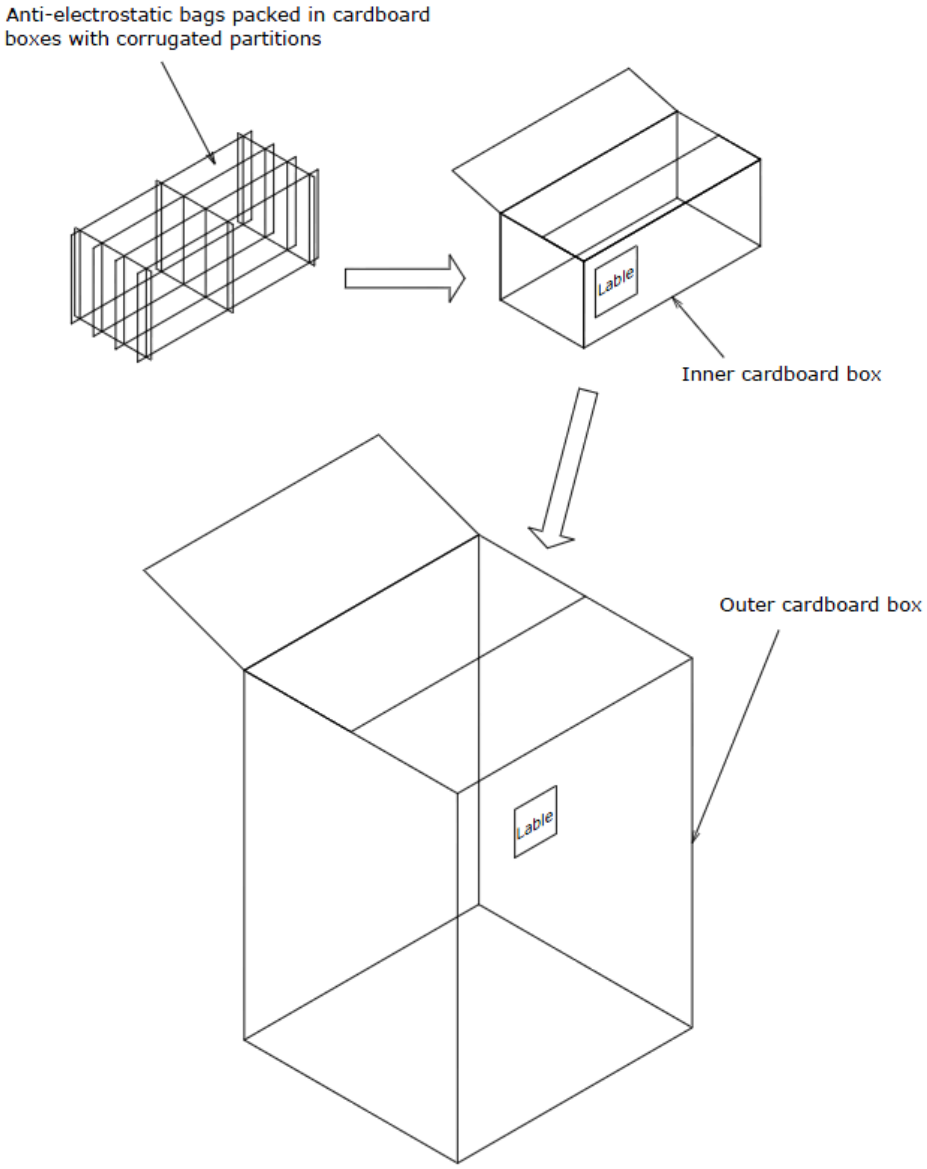
Lead Standoff



Item	Description
Resin Materials	Epoxy Resin
Lens Color	Green(with diffuser)
Lead Frame Materials	Ag-plated and lead-free Solder-plated Iron

6. PACKING-BULK



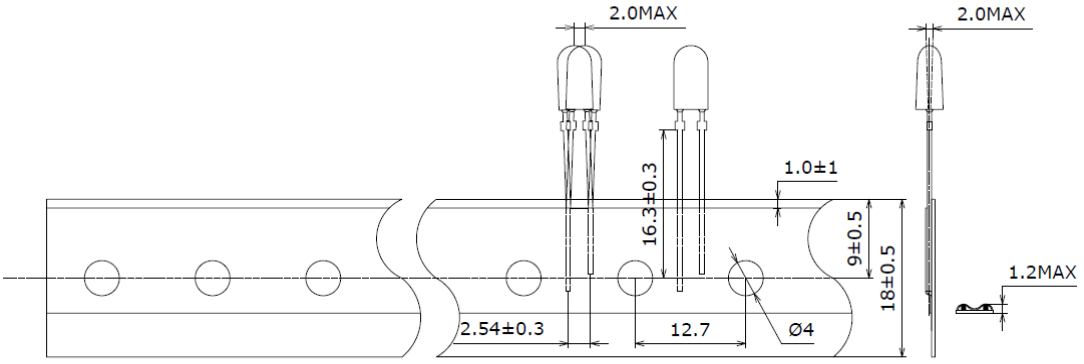


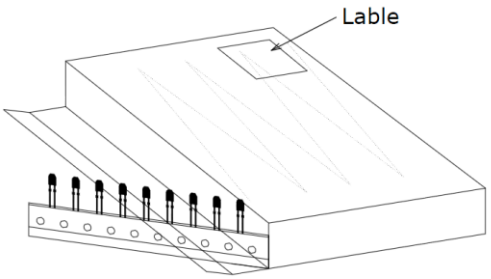
* The Label shows: TYPE, QTY, IV, VF, WLD.
* The Products are places loose in anti-static bags.

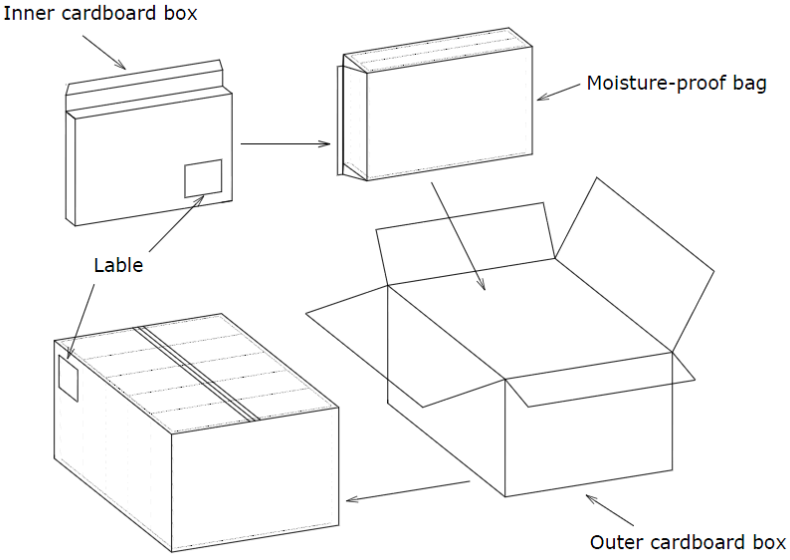
  The anti-static bags are packed in cardboard boxes to prevent damage during shipment.
* Do not drop the cardboard box or expose it to shock. If the box falls, the products could be damaged.
* The cardboard box is not water-resistant. Do not expose to water.

7. PACKING-(TAPING OUTLINE)

(Unit: mm)







* The Label shows: TYPE, QTY, IV, VF, WLD.
* The Products are ammo packing in Inner cardboard box to prevent damage during shipment.
  The Inner cardboard boxes are packing in Moisture-proof bag.
* Do not drop the cardboard box or expose it to shock. If the box falls, the products could be damaged.
* The cardboard box is not water-resistant. Do not expose to water.

8. LEAD FORMING

- When forming leads, the leads should be bent at a point at least 3mm from the base of the epoxy bulb. Do not use the base of the lead frame as a fulcrum during lead forming.
- Lead forming should be done before soldering.
- Do not apply any bending stress to the base of the lead. The stress to the base may damage the LED's characteristics or it may break the LEDs.
- When mounting the LEDs onto a printed circuit board. The holes on the circuit board should be exactly aligned with the leads of the LEDs. If the LEDs are mounted with stress at the leads, it causes deterioration of the epoxy resin and this will degrade the LEDs.

9. STORAGE

- The LEDs should be stored at 30℃ or less and 60%RH or less after being shipped from Multi-Color and the storage life limits are 3 months. If the LEDs are stored for 3 months or more, they can be stored for a year in a sealed container with a nitrogen atmosphere and moisture absorbent material (silica gel desiccants).
- The lead part may be affected by environments which contain corrosive substances . Please avoid conditions which may cause the LED to corrode, tarnish or discolor. This corrosion or discoloration may cause difficulty during soldering operations. It is recommended that the LEDs be used as soon as possible.
- Please avoid rapid transitions in ambient temperature, especially in high humidity environments where condensation can occur.

10. STATIC ELECTRICITY

- Static electricity or surge voltage damages the LEDs.
  It is recommended that a wrist band or an anti-electrostatic glove be used when handing the LEDs.
- All devices equipment and machinery must be properly grounded. It is recommended that precautions be taken against surge voltage to the equipment that mounts the LEDs.