

# Specification

## 规格书

Customer Name : \_\_\_\_\_

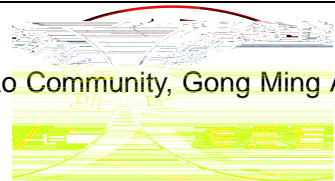
Customer P/N : \_\_\_\_\_

Refond P/N : \_\_\_\_\_

Sending Date: \_\_\_\_\_

Technical Reference			Sample		Mass Product	
Customer approval			Refond approval			
Approval	Audit	Confirmation	Approval	Audit	Confirmation	
Qualified		Disqualified		Date		

**Address:** 1-8th Floor, Building #1,10th Industrial Zone, Tian Liao Community, Gong Ming Area, G2Q TJGi91fal



## Features

- PLCC-2 Package.
- Extremely wide viewing angle.
- Suitable for all SMT assembly and solder process.
- Available on tape

SMT

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- TQ

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PQ?

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- 0? -

0? TQ7?

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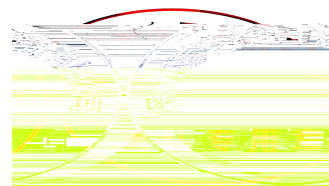
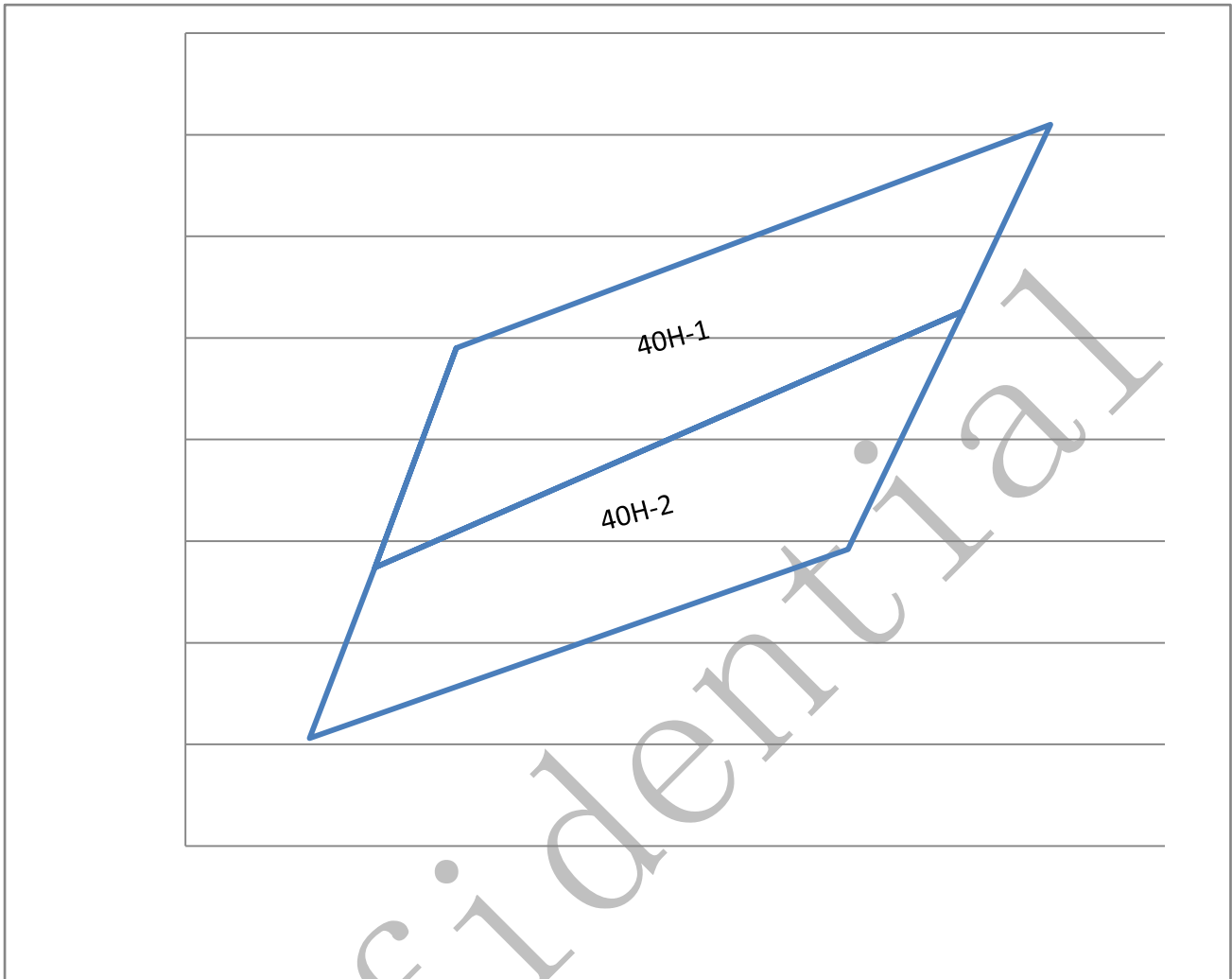
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**Electrical / Optical Characteristics at Ts=25°C**

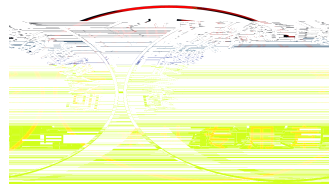
**Absolute Maximum Ratings at Ts=25°C**

Parameter	Symbol	Rating	Units
Power Dissipation	Pd	612	mW
Forward Current	IF	180	mA
Peak Forward Current	IFP	240	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge(HBM)	ESD	2000	V
Operating Temperature	Topr	-40 ~ +85	
Storage Temperature	Tstg	-40 ~ +100	
Junction Temperature	Tj	95	

### The Chromaticity Diagram

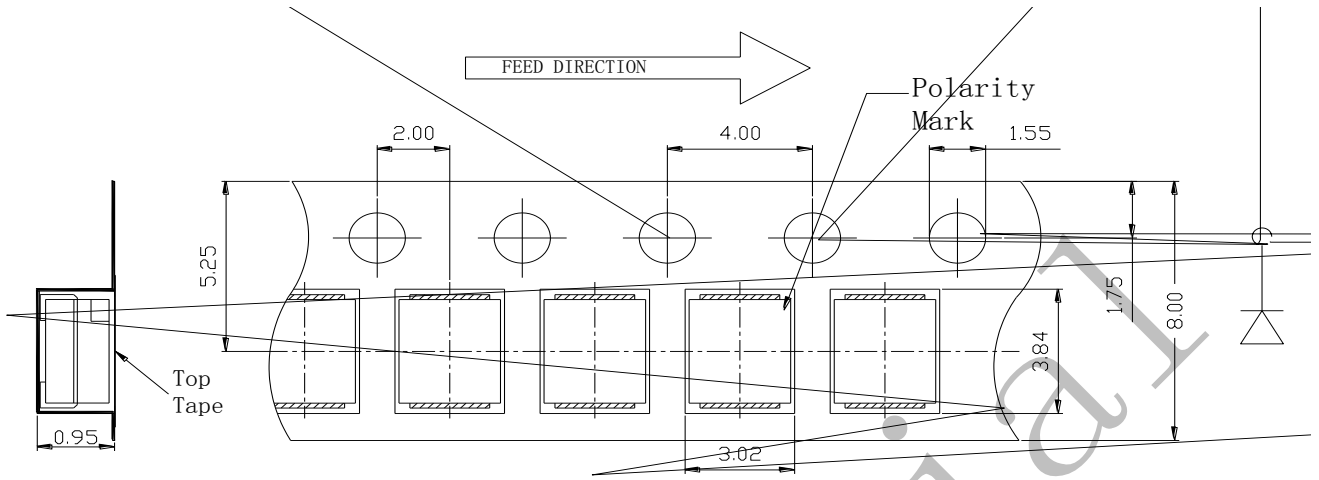


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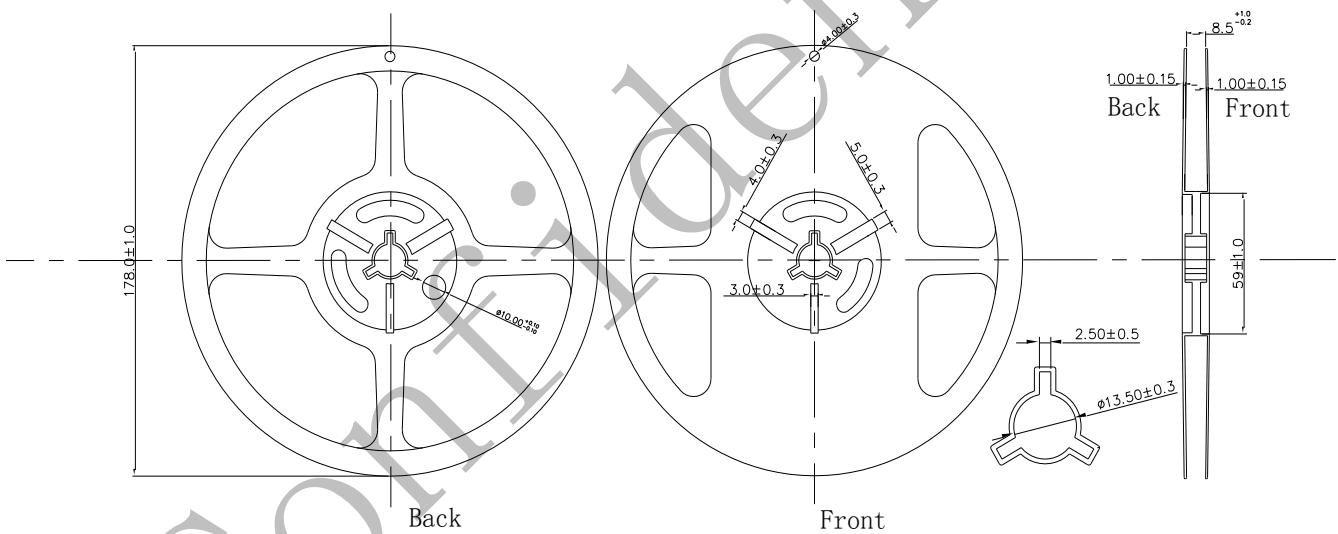


## Packaging Specifications

### Carrier Tape Dimensions

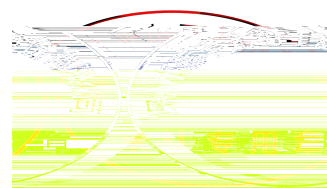


### Reel Dimension






Note:

The tolerances unless mentioned  $\pm 0.1$ mm. Unit : mm



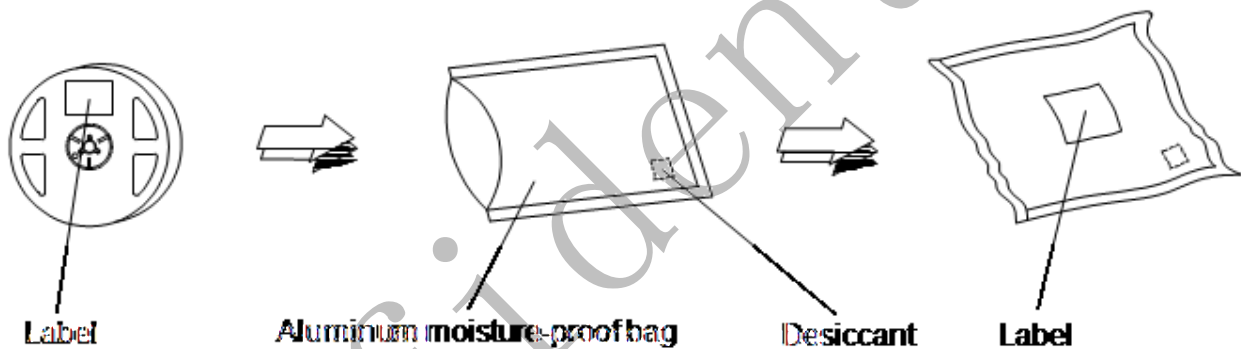
$\pm 0.1$

■ Label Form Specification

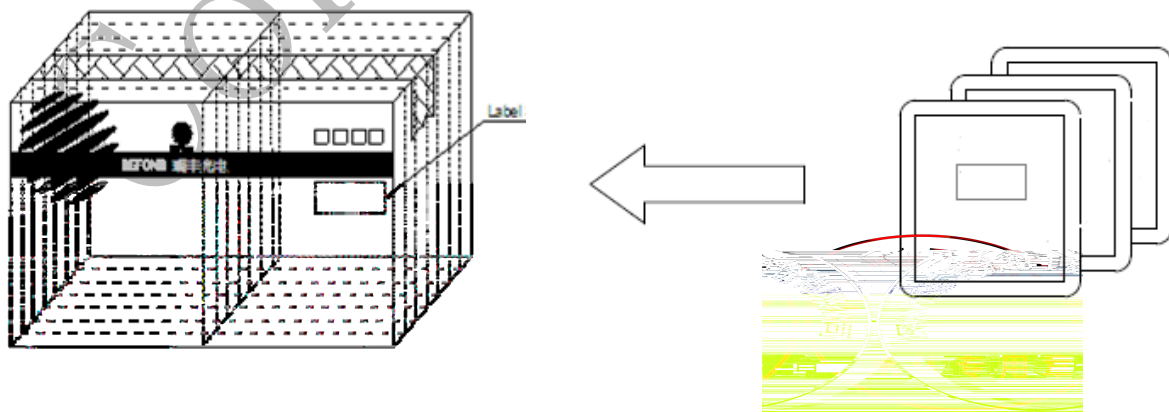
PART NO.	
SPEC NO.	
LOT NO.	
BIN CODE	
Φ	XY
VF	
	QTY:
	DATE:

PART NO.	Part Number
SPEC	SpecNumber
LOT NO.	Lot Number
BIN CODE	Bin Code
Φ	Luminous flux
X/Y	Chromaticity Bin
VF	Forward Voltage
QTY	Packing Quantity
DATE	Made Date

■ Moisture Resistant Packing Process



■ Cardboard Box

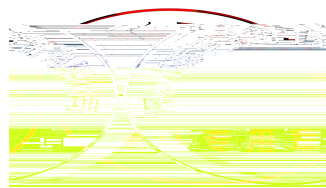


**Reliability Test Items And Conditions**

Test Items	Ref.Standard	Test Condition	Time	Quantity	Ac/Re
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## Handling Precautions

1>.LED operating environment and sulfur element composition cannot be over 100PPM in the LED mating usage material. This is provided for informational purposes only and is not a warranty or endorsement.LED

LED	100PPM	900PPM
900PPM	1500PPM	LED

2>.VOCs (Volatile organic compounds) emitted from materials used in the construction of fixtures can penetrate silicone encapsulants of LEDs and discolor when exposed to heat and photonic energy. The result can be a significant loss of light output from the fixture. Knowledge of the properties of the materials selected to be used in the construction of fixtures can help prevent these issues. Refond advises against the use of any chemicals or materials that have been found or are suspected to have an adverse affect on device performance or reliability. To verify compatibility, Refond recommends that all chemicals and materials be tested in the specific application and environment for which they are intended to be used. Attaching LEDs, do not use adhesives that outgas organic vapor.

LED LED

3>.Handle the component along the side surface by using forceps or appropriate tools; do not directly touch or Handle the silicone lens surface, it may damage the internal circuitry.

4>.In designing a circuit,the current through each LED must be exceed the absolute maximum rating specified for each LED.In the meanwhile,resistors for protection should be applied,otherwise slight voltage shift will cause big current change,burn out may happen. The driving circuit must be designed to allow forward voltage only when it is ON or OFF.If the reverse voltage is applied to LED, migration can be generated resulting in LED damage.

LED

LED

5>.

6>.Compared to standard encapsulants, silicone is generally softer, and the surface is more likely to attract dust requiring special care during processing. In cases where a minimal level of dirt and dust particles cannot be guaranteed, a suitable cleaning solution must be applied to the surface after the soldering of components. Refond suggests using isopropyl alcohol for cleaning. In case other solvents are used, it must be assured that these solvents do not dissolve the package or resin. Ultrasonic cleaning is not recommended. Ultrasonic cleaning may cause damage to the LED.

LED

7>. Storage

Conditions		Temperature	Humidity	Time
Storage	Before Opening Aluminum Bag	≤30	≤75%	Within 1 Year from Delivery Date
	After Opening Aluminum Bag	≤30	≤60%	24hours 24
Baking		60±5	-	≥24hours 24

If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed after unpacking and based on the following condition: (60 ± 5) for above 24 hours

: 60 ± 5 24

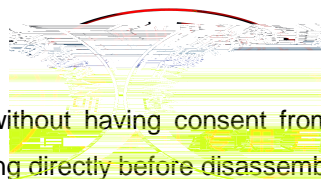
If the package is flatulence or damaged, please notify the sales staff to assist

8>.Similar to most Solid state devices; LEDs are sensitive to Electro-Static Discharge (ESD) and Electrical Over Stress (EOS). LED

9>.There should be

.When you have special quality requirement for the product, please kindly contact to our sales.

11>.When using LED, clients shall pay attention to the defined specs and using environment requires.Refond will give no quality guarantee on the situation: if using in conditions that out of specs or over reference conditions which without verifying, LED



12>.The customer shall not disassemble or analyze the LEDs without having consent from Refond. When defective LEDs are found, the customer shall inform Refond in writing directly before disassembling or analysis.

13>.Other points for attention, please refer to our LED user manual.

LED

### Declare

This specification is written both in English and in Chinese and the latter is formal.

Both the customers and Refond will agree on official specifications of supplied products before a customer's volume production.

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