

# SPECIFICATION FOR APPROVAL

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

Customer Part No: \_\_\_\_\_

SHINING Part No: SN-NE3030QAEBY-Z

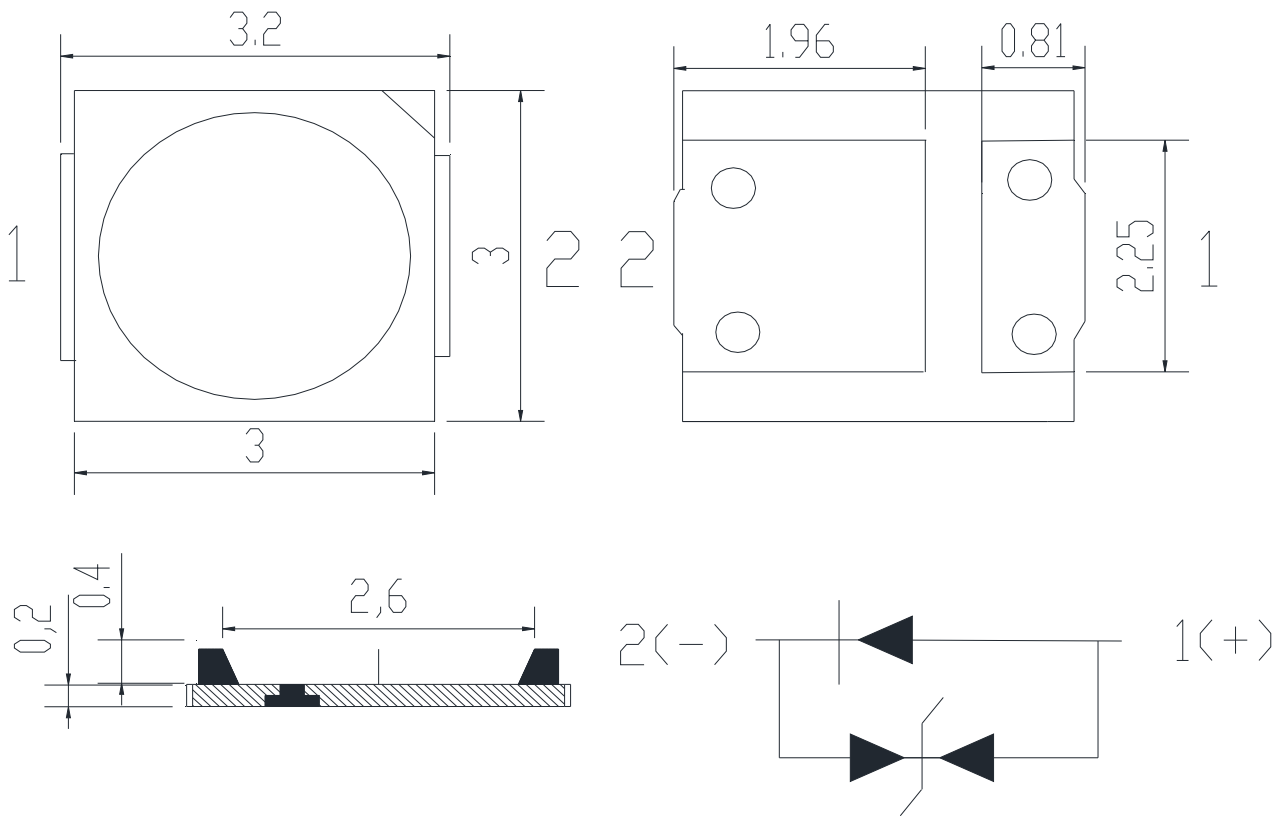
Revision History		
Date	Revision History	Prepared
2022.12.20	New Version	A/0


Confirmed By Customer	Approval by	Prepared by
	Liusan	Shaochengcheng

**Feature**

- △ Viewing angle:120 deg
- △ The materials of the LED dice is InGaN
- △ 3.20mm×3.0mm×0.6mm
- △ Pb-free
- △ RoHS compliant lead-free soldering compatible
- △ ESD protection
- △ AEC-Q102 Qualified
- △ Precondition: Bases on JEDEC J-STD 020D Level 3

**Package Outline**





**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE DEVICES

**NOTES:**

1. All dimensions are in millimeters ;
2. Tolerances are ±0.2mm unless otherwise noted.

## Absolute maximum ratings at Ta=25°C

Parameter	Symbol	Value	Unit
Forward current	I <sub>f</sub>	160	mA
Reverse voltage	V <sub>r</sub>	5	V
Operating temperature range	T <sub>op</sub>	-40 ~+110	°C
Storage temperature range	T <sub>stg</sub>	-40~+110	°C
Pulse Forward Current (Pulse Width ≤ 1 msec. and Duty ≤ 1/10)	I <sub>fp</sub>	200	mA
Junction Temperature	T <sub>j</sub>	125	°C
Electrostatic Discharge	ESD	6000(HBM)	V

## Electro-optical characteristics at Ta=25°C

Parameter	Test Condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
Forward voltage	I <sub>f</sub> =150mA	V <sub>f</sub>	2.8	--	3.4	V
Luminous intensity	I <sub>f</sub> =150mA	Φ	50	--	75	lm
Viewing angle at 50% I <sub>v</sub>	I <sub>f</sub> =150mA	2 θ 1/2	--	120	--	Deg
Reverse current	V <sub>r</sub> =5V	I <sub>r</sub>	--	--	10	μA

NOTE: (Tolerance: Φ±10%, V<sub>f</sub>±0.1V, X/ Y ±0.01)

**Forward voltage range**

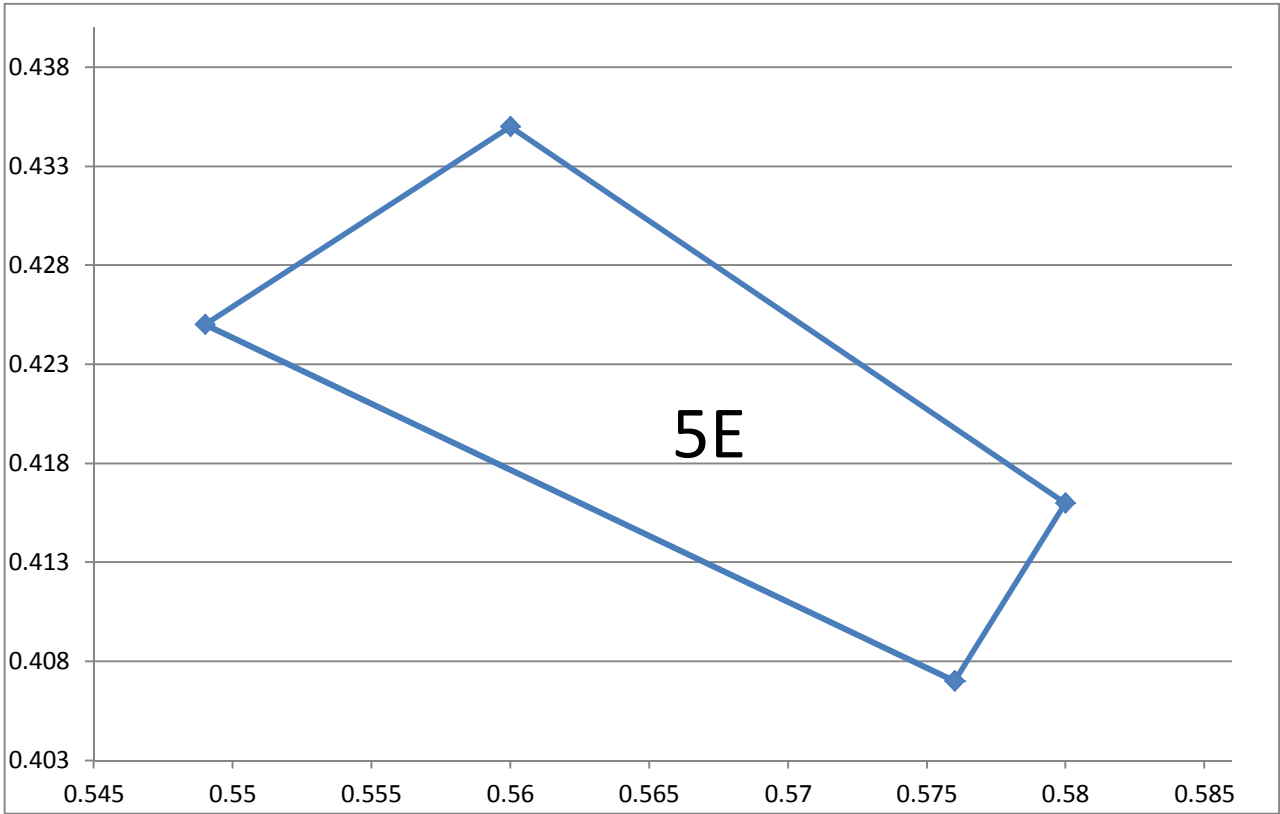
Forward Voltage Unit: V@150mA		
Bin Code	MIN	MAX
F05	2.8	3.0
F06	3.0	3.2
F07	3.2	3.4

**Luminous intensity range**

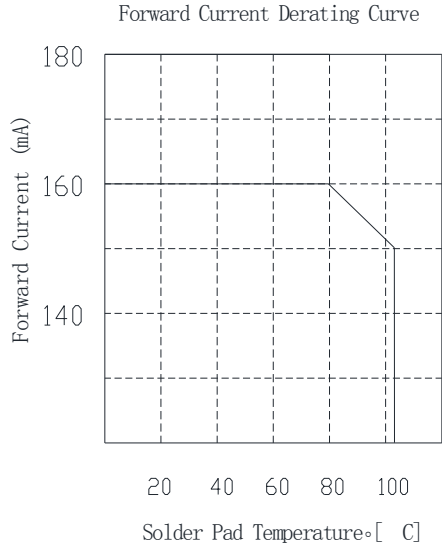
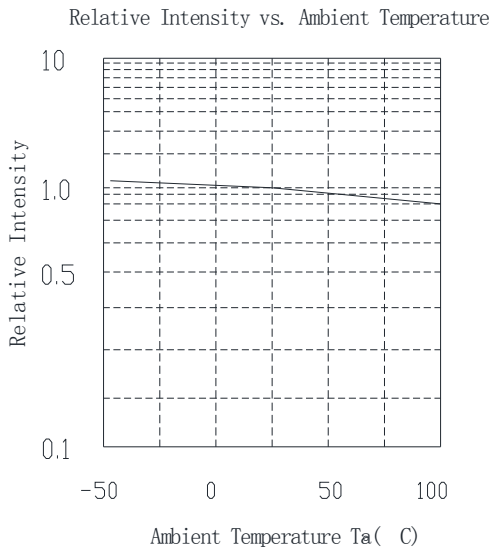
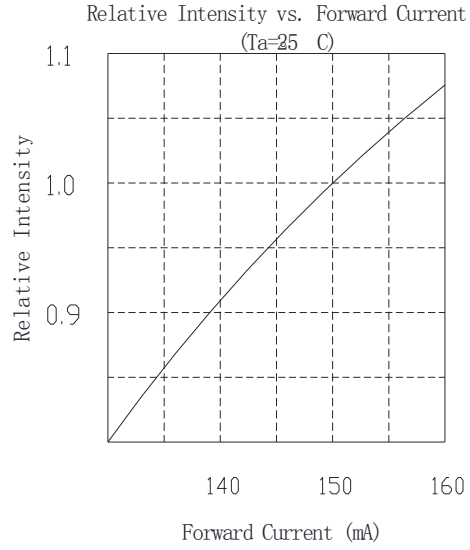
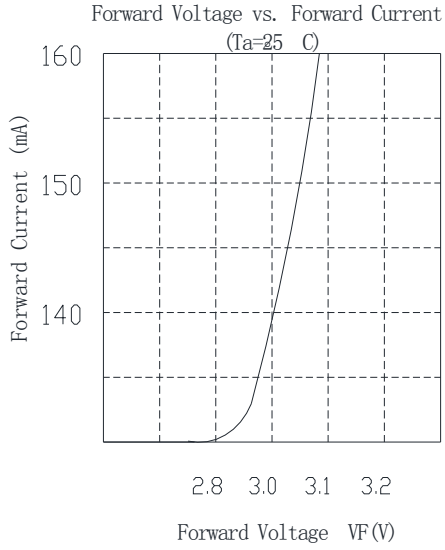
Luminous Intensity Unit: lm@150mA		
Bin Code	MIN	MAX
D50	50	55
D55	55	60
D60	60	65
D65	65	70
D70	70	75

**Chromaticity range**

Bin	X	Y
5E	0.576	0.407
	0.549	0.425
	0.56	0.435
	0.58	0.416



Typical optical characteristics curves



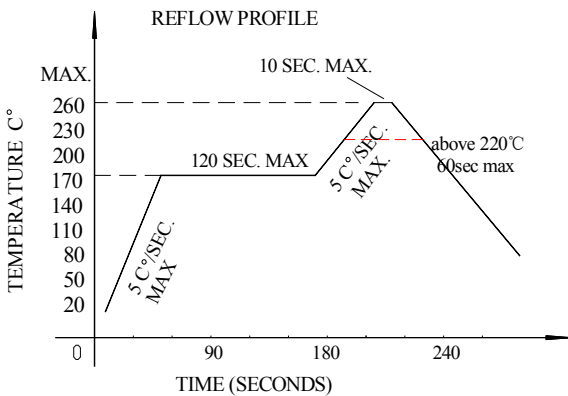
**Reflow profile**

- Soldering condition
  - Recommended soldering conditions

Reflow Soldering		Hand Soldering	
Pre-heat	160~180℃	Temperature	300℃ Max.
Pre-heat time	120 seconds Max.	Soldering time	3 second Max. (one time only)
Peak temperature	260℃ Max.		
Soldering time	10 seconds Max.		
Condition	Refer to Temperature-profile		

- After reflow soldering rapid cooling should be avoided

- Temperature-profile (Surface of circuit board)  
Use the following conditions shown in the figure.



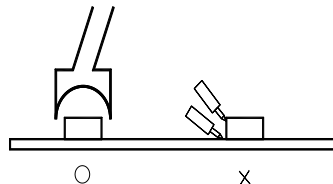
1. Reflow soldering should not be done more than two times
2. When soldering ,do not put stress on the LEDs during heating

■ Soldering iron

1. When hand soldering, keep the temperature of the iron under 300℃, and at that temperature keep the time under 3 sec.
2. The hand soldering should be done only a time
3. The basic spec is ≤5 sec. when the temperature of 260℃, do not contact the resin when hand soldering

■ Rework

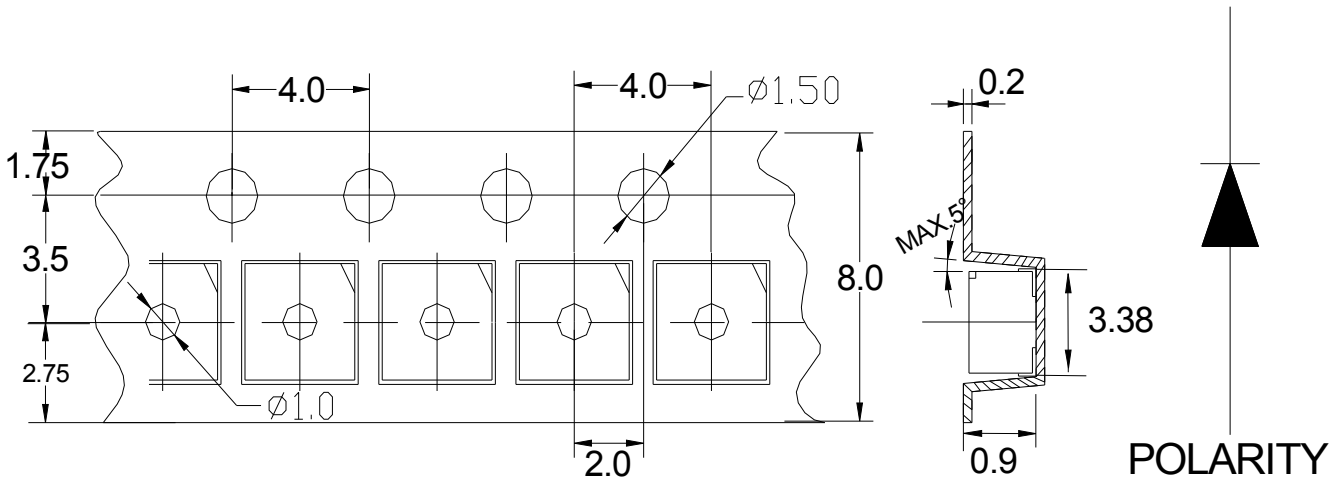
1. Customer must finish rework within 5 sec und
2. The head of iron can not touch the resin
3. Twin-head type is preferred.



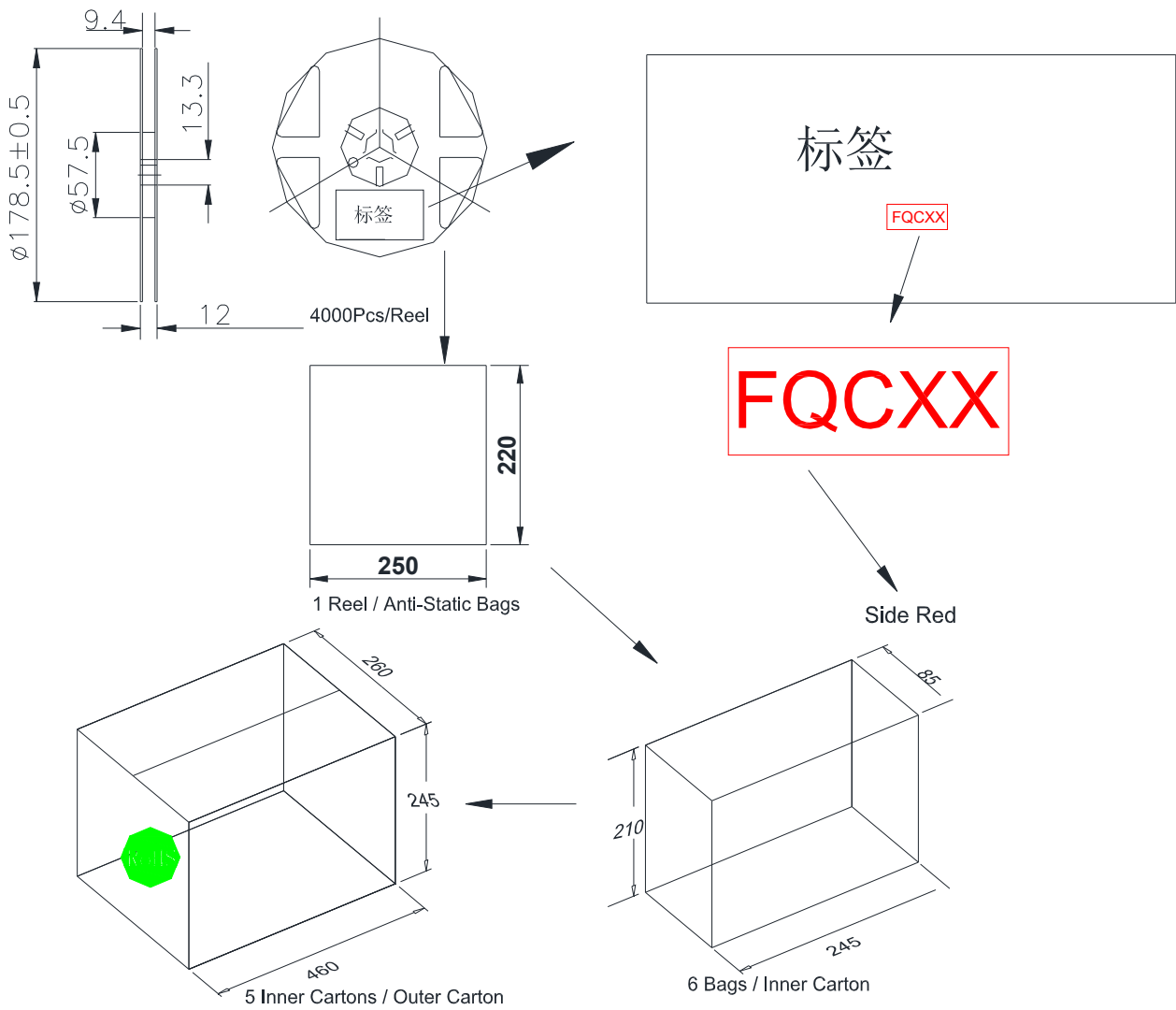
■ CAUTIONS

The encapsulated material of the LEDs is silicone . Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when using the picking up nozzle, the pressure on the silicone resin should be proper.

Packaging Specifications



Packaging specifications





## CAUTIONS

### Storage conditions

#### Before opening the package:

The LEDs should be kept at 30°C or less and 70%RH or less. The LEDs should be used within a year. When storing the LEDs, moisture proof packaging with absorbent material (silica gel) is recommended.

#### After opening the package:

The LEDs should be kept at 30°C or less and 50%RH or less. The LEDs should be soldered within 24 hours (1days) after opening the package. If unused LEDs remain, they should be stored in moisture proof packages, such as sealed containers with packages of moisture absorbent material (silica gel). It is also recommended to return the LEDs to the original moisture proof bag and to reseal the moisture proof bag again.

This specification shining has the right of final interpretation