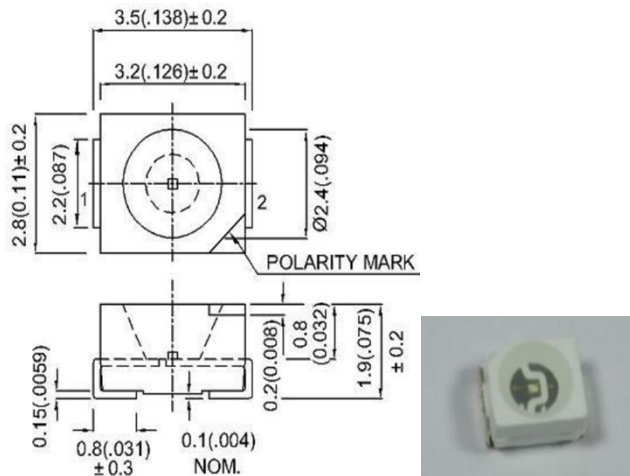




**Feature:**

- 1. Packae:3.5\*2.8\*1.9mm(TOP view blue LED)
- 2.Mono-color type
- 3.Soldering methods: All SMT assembly methods
- 4.Comply ROHS stand.

**Package Outline Dimension:**



**NOTES:**

- 1. All dimensions are in millimeters(inches).
- 2. Tolerance is ±0.10mm unless otherwish specified.
- 3. Specifications are subject to change without notice.

**Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	60	mW
Forward Current	IF	20	mA
Peak Forward Current * 1	IFP	100	mA
Reverse Voltage	VR	5	V
Soldering Temperature	Tsol	260 (for 5 seconds)	°C
Operating Temperature	Topr	-30°C~85°C	-
Storage Temperature	Tstg	-40°C~85°C	-
Electrostatic discharge	ESD	2000	V

\* 1 IFP condition: pulse of 1/10 duty and 0.1ms width.



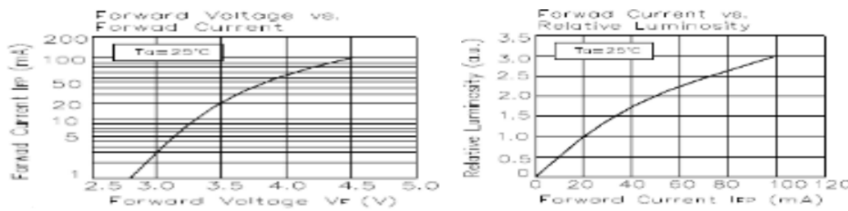
**Electrical-optical characteristics(Ta =25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward voltage	Vf	2.9		3.5	V	IF=30mA
Luminous Intensity	Lm		1.2		lm	
Luminous Intensity	Iv	300		550	mcd	
Dominant Wavelength	$\lambda D$	447		452	nm	
Viewing Angle	2 $\theta$ 1/2		120		deg	VR=5V
Reverse Current	IR			10	uA	

**Note:**

- 1.Tolerance of luminous intensity is  $\pm 10\%$
- 2.Tolerance of forward voltage is  $\pm 0.05V$

**Typical Electrical/Optical Characteristics Curves(B):**



**Judgment criteria of failure for the reliability**

- I<sub>v</sub>: Below 50% of initial values
- V<sub>f</sub>: Over 20% of upper limit value
- I<sub>R</sub>: Over 2 times of upper limit value

Note: Measurement shall be taken between 2 hours and after the test LED have been returned to normal

ambient conditions after completion of each test.

**※ Reliability Test Items and Conditions**

The reliability of products shall be satisfied with items listed below.

Confidence level: 90%

LTPD: 10%

Precautions for use :

1. Customer must apply the current limiting resistor in the circuit so as to drive the LEDs within the rated current. Otherwise slight voltage shift maybe will cause big current change and burn out will happen.
2. Also, caution should be taken not to overload the LEDs with instantaneous high voltage at the

turning ON and OFF of the circuit.

### 3. Storage:

3.1 Don't open the moisture proof bag before ready to use the LEDs.

3.2 The LEDs should be kept at 30°C or less and 60%RH or less before opening the package.

The max. storage period before opening the package is 1 year.

3.3 After opening the package, the LEDs should be kept at 30°C/35%RH or less, and it should be used within 7 days.

3.4 If the LEDs be kept over the conditions of 3.4, baking is required before mounting.

### Baking

condition as below: 60±5°C for 12 hrs.

### 4. Soldering condition:

4.1 Manual of soldering: The temp. of the iron should be lower than 280°C and soldering within 3sec per solder-pad is to be observed.

4.2 Pb-free solder temp. –time profile