

335 Series Datasheet



Features & Benefits

- Package: 4.0*1.4*0.8mm (Side view white LED)
- Emitted Color: Super Yellow-Green
- Mono-color type
- Soldering methods: All SMT assembly methods
- Extremely wide viewing angle, standard form factor design flexibility

Typical Application:

- backlight for Smart phones, GPS and Tablet PCs
- Keyboard light
- General use

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1. Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	80	mW
Forward Current	I _F	30	mA
Peak Forward Current	I _{FP}	60	mA
Soldering Temperature	Tsol	Reflow soldering (245°C for 10 ~30sec.)	°C
Operating Temperature	Topr	-30°C ~ +85°C	-
Storage Temperature	Tstg	-40°C ~ +100°C	-

* I_{FP} condition: pulse width ≤10msec, duty cycle ≤1/10

2. Electrical-optical characteristics(Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	V _f	-	2.00	-	V	IF=20mA
Luminous Flux	IV	-	90	-	mcd	
Dominant Wavelength	λ _d	-	572	-	nm	
Viewing Angle	2θ _{1/2}	-	120	-	deg	VR=5V
Reverse Current	IR	-	-	1	μA	

3. Product Binning
3.1 Luminous flux (IF =20mA,tolerance is ±3%)

BIN code	Min (mcd)	Max (mcd)
PA	60	80
PB	80	100

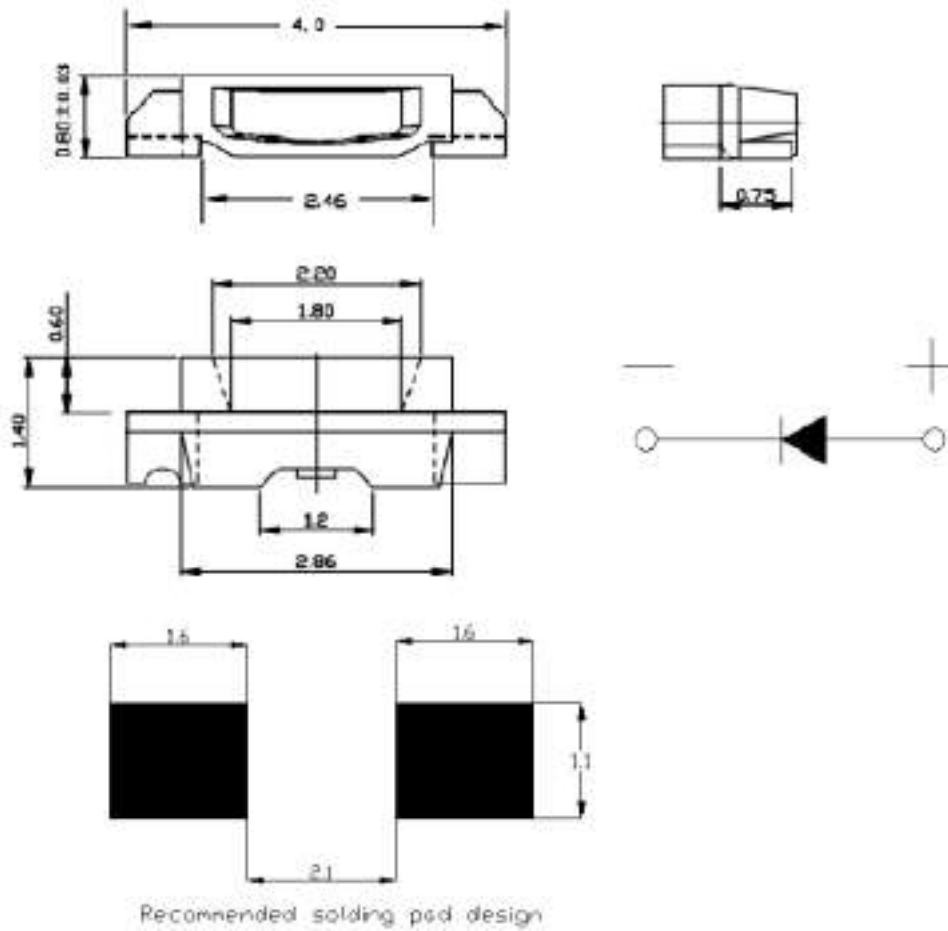
3.2 Forward voltage (IF=20mA, tolerance is ±0.03V)

BIN Code	Min (V)	Max (V)
C1	2.0	2.1
C2	2.1	2.2
D1	2.2	2.3

3.3 Dominant Wavelength (If=20mA,tolerance is ±1nm)

BIN code	Min (nm)	Max (nm)
6A	570	571
6B	571	572
7A	572	573

4. Package Outline Dimension

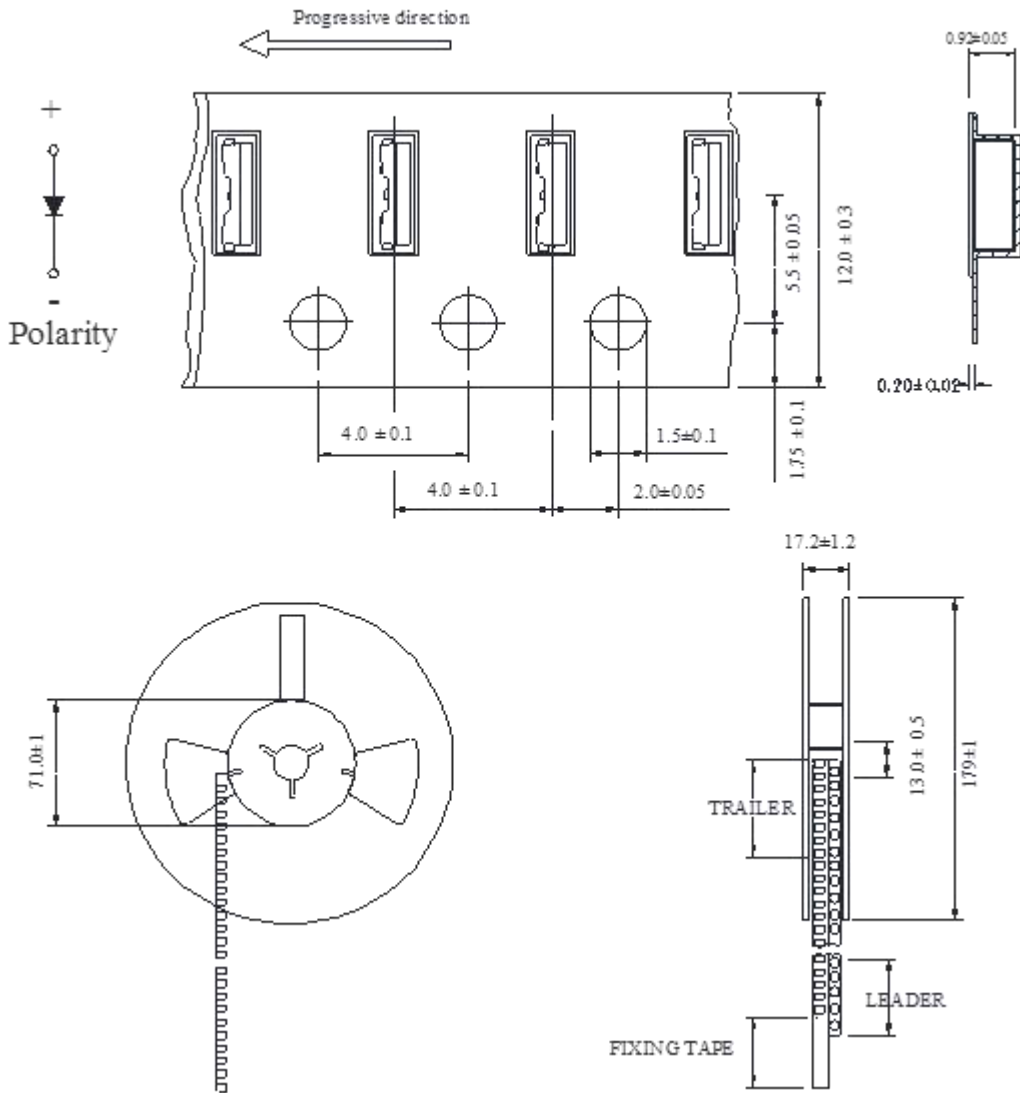


Notes:

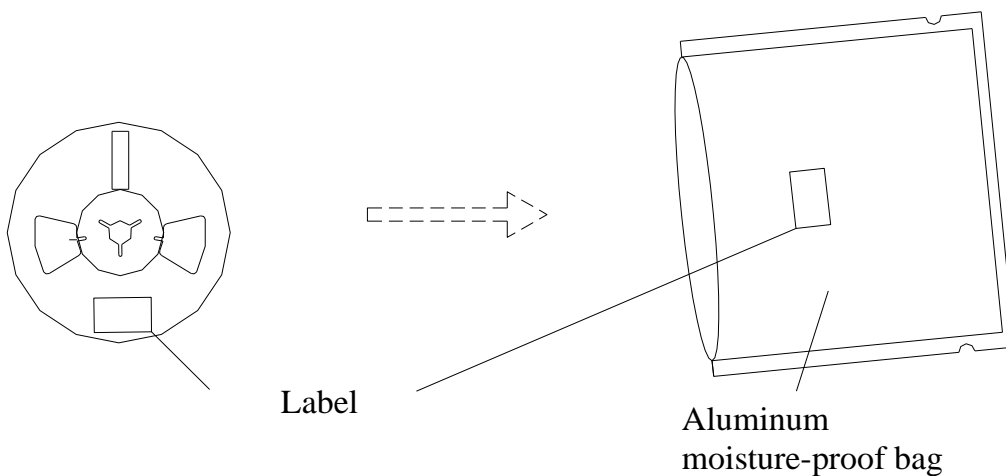
- ❶ All dimensions are in millimeters (inches).
- ❷ Tolerance is ± 0.1 mm unless otherwise specified.
- ❸ Gewicht/Approx.weight: 7.8 ± 0.5 mg.

5. Tapping specifications (unit: mm)

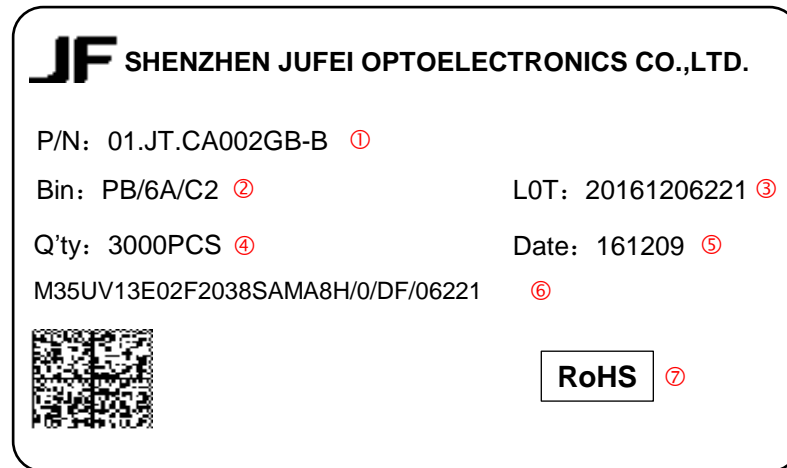
Loaded quantity: 1000 ~ 3000 pcs/reel



6. Package Method:(unit: mm)



7. Label description



7.1 Label description

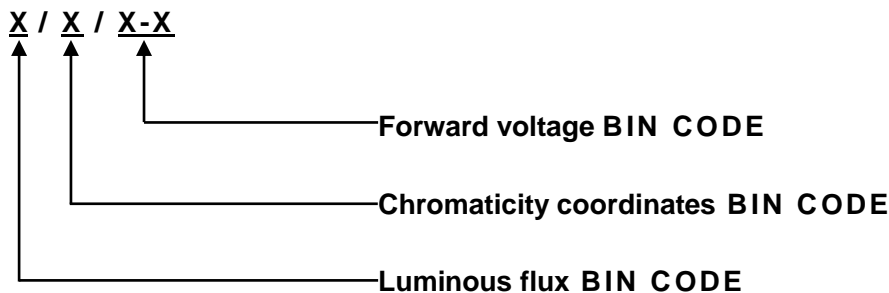
- ① Product Type
- ② Product Bin
- ③ Produce Batch
- ④ Quantity
- ⑤ Produce Date
- ⑥ Product Tracing Num
- ⑦ RoHS Sign

7.2 Part Number System description

X₁X₂ · X₃X₄ · X₅X₆X₇X₈X₉X₁₀X₁₁-X₁₂

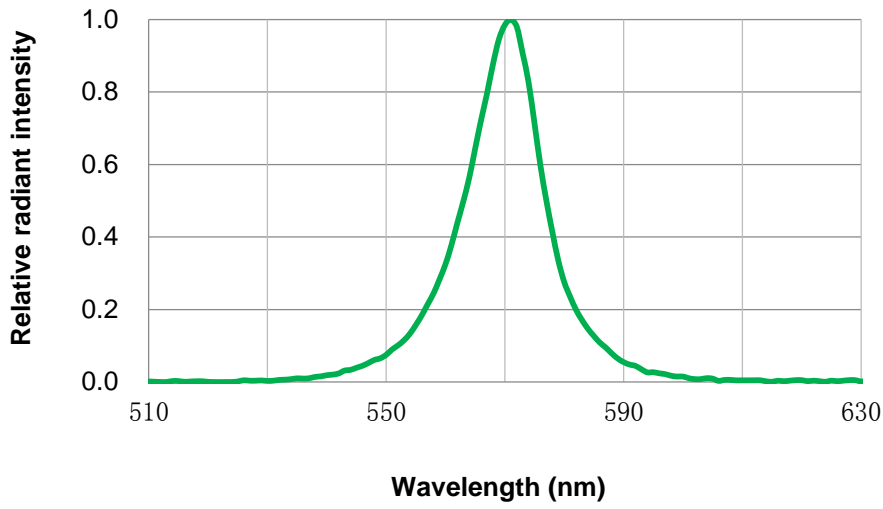
Part Number Code	Description	Part Number	Value
X ₁ X ₂	Production Type	01	-
X ₃	Company	J	JF
X ₄	Applications	T	Classification
X ₅	Type	C	Single chip
X ₆	Type of encapsulation	A	≤0.08W
X ₇ -X ₉	Product Serial number	002	335 Size
X ₁₀ -X ₁₁	Emitting Color	GB	Yellow-Green
X ₁₂	Special definition	B	Normal

7.3 BIN description

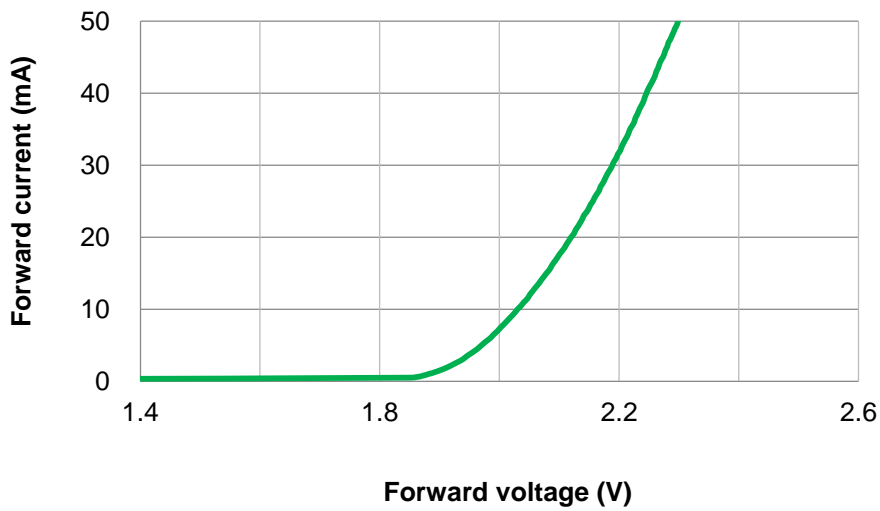


8. Typical Electro-Optical Characteristics Curves

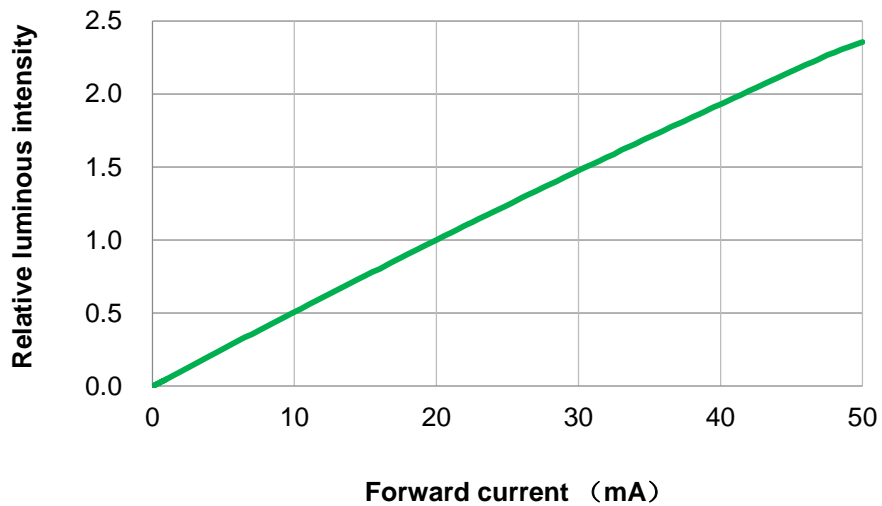
Relative intensity VS. Wavelength (Ta=25°C)



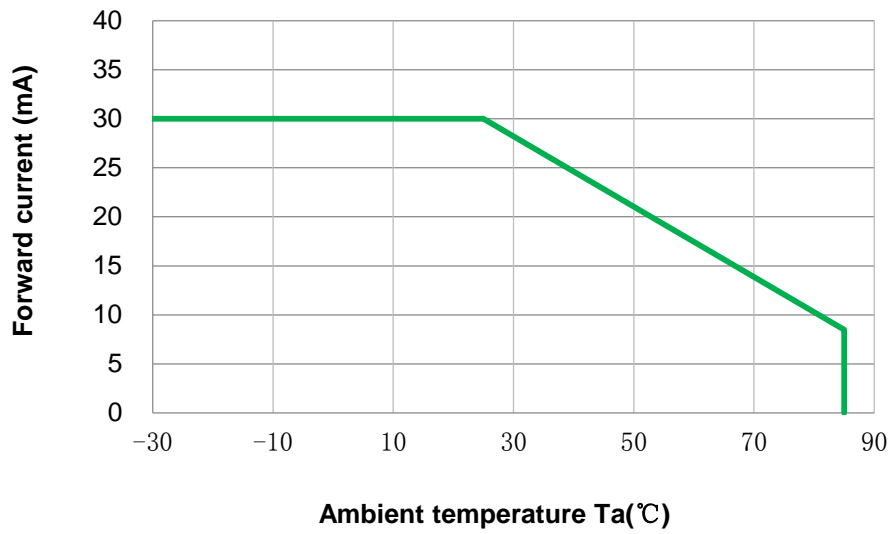
Forward current VS. Forward Voltage (Ta=25°C)



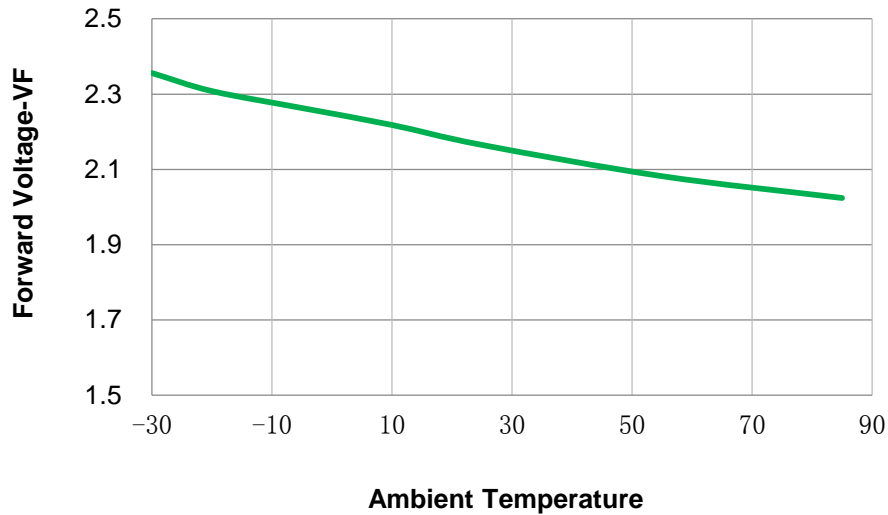
Relative luminous intensity VS. Forward current (Ta=25°C)



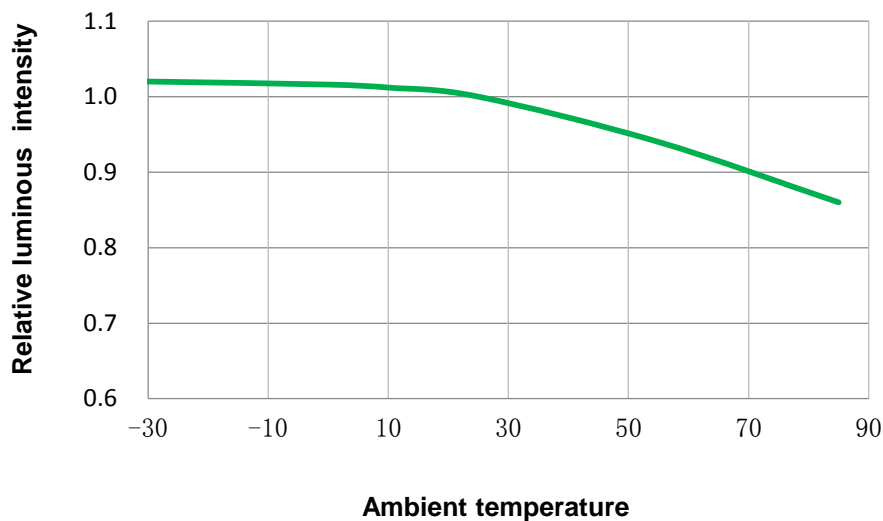
Forward current VS. Ambient temperature



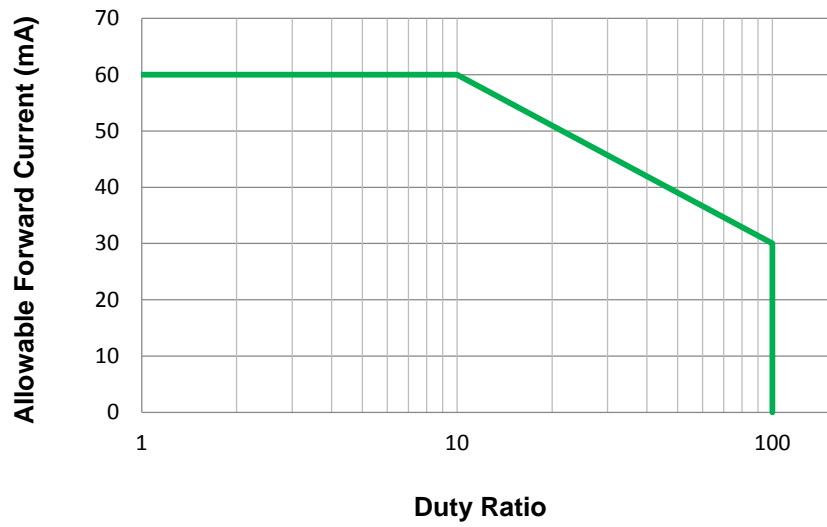
Forward Voltage Change VS. Ambient Temperature(IF=20mA)



Luminous intensity VS.Ambient temperature (Normalized @20mA)



Allowable Forward Current VS. Duty Ratio



Radiation diagram(Ta=25°C IF=20mA)



9. Reliability test items and conditions

No.	Test Item	Applicable Standard	Test Conditions	Sample size	Ac/Re
1	Operation Life Condition 1	JF Standard	Test If=DC20mA Temp: Room temperature Test time=1000hrs	22	0/1
2	Low Temperature Operation Life	JF Standard	Test If=DC20mA Low Ta=-40℃ Test time=1000hrs	22	0/1
3	High Temperature Operation Life	JF Standard	Test If=DC8.5mA Low Ta=85℃ Test time=1000hrs	22	0/1
4	Temperature Humidity Operation Life	JF Standard	Ta=60℃ , RH=90% Test If=DC15mA Test time=500hrs	22	0/1
5	High Temperature High Humidity	JF Standard	Temp. =+60℃ , RH=90% Test time=240hrs	22	0/1
6	Thermal Shock	JF Standard	-40℃ ~ +100℃ 20min 10s 20min Test Time=100 cycles	22	0/1
7	High Temperature Storage	JF Standard	High Temp. =+100℃ Test time=1000hrs	22	0/1
8	Low Temperature Storage	JF Standard	Low Ta=-40℃ Test time=1000hrs	22	0/1
9	Temperature Cycle	JF Standard	-40℃ ~ +100℃ 60min 20min 60min Test Time=20cycle	22	0/1
10	Reflow Soldering	JF Standard	Operation heating: 260℃ (Max.), within 10seconds. (Max.)	22	0/1

※ Judgment criteria of failure for the reliability

- Flux: Below 70% of initial values
- Vf: Over 20% of upper limit value

Note:

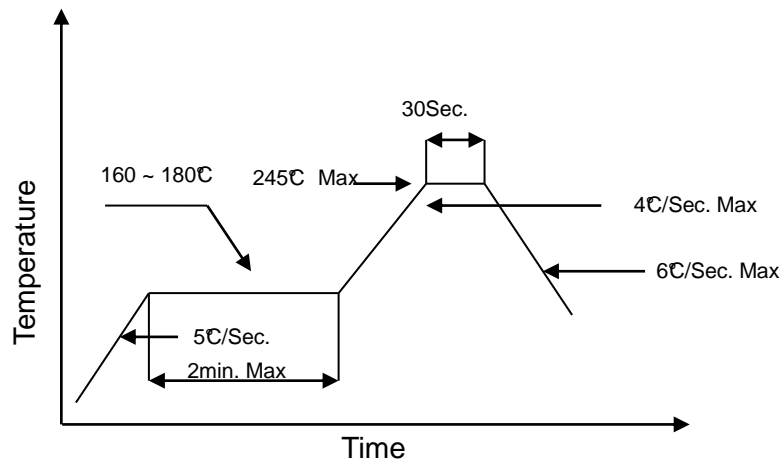
- ① The tested LED have been returned to normal ambient conditions before testing
- ② Measurement shall be taken within 2 hours

10. Precautions for use

10.1 Soldering

SMD LED encapsulation is very flexible, outside forces easily demolish radiant surface and plastic, As soldering, Please handle with care!

- a. With No-clean Flux, according to reflow soldering cure condition when soldering, Reflow soldering should not be done more than two times, simultaneity you must insure clean on the radiant surface. Otherwise, foreign objects can affect radiant color.
- b. Don't process manual soldering except repair. Recommended to be soldered with 25W Anti-static iron. The temperature of the iron should be lower than 300°C and soldering time should not be done more than three seconds, at the same time iron can't touch radiant surface and plastic.
- c. Don't twist LED in course of manual soldering and experiment. Otherwise, the lights will not work possibly.
- d. Please use the same BIN grade in one panel, and don't mix the difference BIN grade in one panel when soldering. Otherwise, it will cause a serious uneven color problem.
- e. Please control the sulfur content of solder paste and PCB.
- f. Pb-free solder temp.-time profile as below: 245°C Max.



10.2 Cleaning

- a. Don't be cleaned with ultrasonic. Recommended to be wiped with isopropyl alcohol or pure alcohol, wiping time should not be more than one minute. LED must be placed at room temperature for fifteen minutes before producing .you must insure clean on the radiant surface. Otherwise, foreign objects can affect radiant color.
- b. LED can't be in contact with acetate, trichloroethylene, acetone, sulfur, nitride, acid, alkali, salt. These matters can destroy LED.

10.3 Sealing

- a. Sealing glue can't contain sulfur, because these matters can affect fluorescence powder poisoning.
- b. When using normal sealing glue, recommended will be operated life for 168hrs under normal temperature.

10.4 Storage

- a. Don't open the moisture proof bag before ready to use the LEDs.
- b. 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.
- c. After opening the package:
When soldering, this could result in a decrease of the photoelectric effect or light intensity.
 - 1) Soldering should be done right after mounting the product.
 - 2) Keep the temperature in the range from 5°C to 30°C and the humidity at less than 60%. Soldering should be done within 7 days after opening the package.
- d. If the product has been exposed for more than 7 days after opening the package, baking is required before mounting. Baking condition as below: 70±5 °C for 12hrs for roll goods, 105±5 °C for 1hrs for bulk goods.
- e. The environment have no acid, alkali, corrosive gas, intensively shake and high magnetic field.

10.5 Static

- a. Static and Peak surge voltage can destroy LED, Avoiding Instantaneous voltage when turn on or turn off the lights.
- b. Please wear Anti-static wrist band, Anti-static glove, Anti-static shoes in the course of operation, and the equipment must be grounded.
- c. After LED is be destroyed, leakage current increase obviously, and it will be forward voltage falling or failure lamp in the case of low current.

10.6 Test

- a. 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.
- b. Also, caution should be taken not to overload the LEDs with instantaneous high voltage at the turning ON and OFF of the circuit. Otherwise LED will be destroyed, testing methods as follow

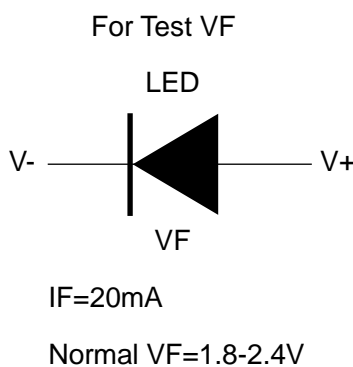


Fig.1

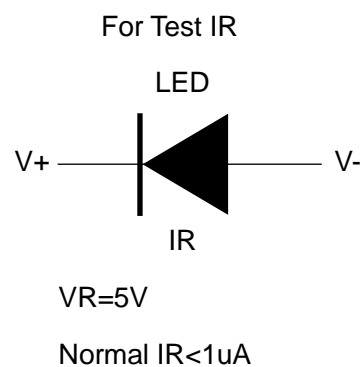


Fig.2

- c. The reverse voltage mustn't exceed 5v when lighting on or testing the LED, otherwise, LEDs will be damaged.

10.7 Else

Radiant color of LEDs will be a little change with the current, recommended that LED is be used in series and resistance, when lighting, please don't see directly radiant surface of LED, otherwise LED will burn eyes.

Revision History

Version: A0

Created by :

Version	Subjects(major change in previous version)	Date of change
A0	First public	Jan.03.2016

About Jufei@

The company production plant to the implementation of 10,000 purification, temperature and humidity, anti-static, the company introduced the most advanced SMD LED automatic production equipment, strict real integrated management system of ISO9001/TS16949, QC080000, ISO14001, OHSAS18001, and passed the CQC third-party certification; products by SGS, fully comply with the ROHS / REACH / halogen-free product environmental requirements. Jufei cost photoelectric LED products, widely recognized by the customers, has become the top ten brands of Chinese LED industry market customer satisfaction, and received the title of "Shenzhen Top Brand".

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