SPECIFICATION

RF-G9CW**1J-TB2

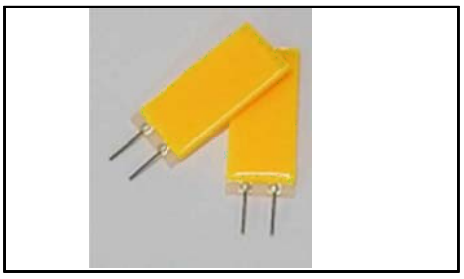
□R&D

■Mass Product

- …

1. Description

1.1GeneralDescription



TheWhiteLED whichwas fabricatedusing abluechipandthephosphor

LED 09mmX20mmX2.3mm

1.2Features

y IntegratedPackage.

y 360 ±Full Angle Luminescence.360 e

y Suitable for spot welding process.

y Moisture sensitivity level: Level 5. Level 5

y RoHS compliant. RoHS

1.3 Application

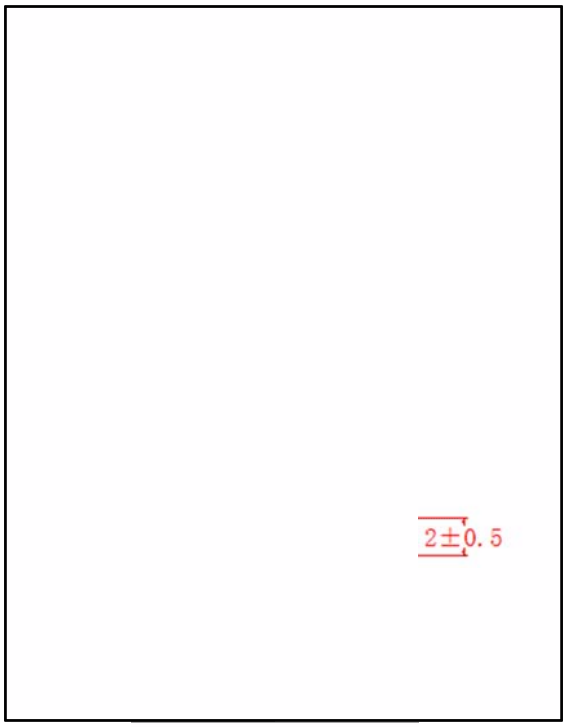
y LED halogen lamp. LED

y Decorative applications.

y Indoor Lighting.

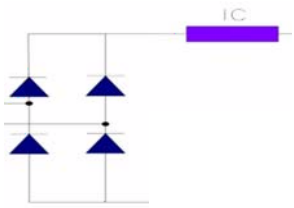
y General use.

1.4 Package Dimension



W

ReversedDrawing



Notes

1. All dimensions units are millimeters.

2. All dimensions tolerances are r0.5mm unless otherwise noted. ±0.5

1.5 Product Parameters

Table 1-1 Electrical / Optical Characteristics at Ts=25°C

Item	Symbol	Test Condition	Value			Unit
			Min.	Typ	Max.	
Forward Voltage	AC	AC230v	225	---	235	V
Luminous Flux	-	AC230v	180	---	300	lm
Viewing Angle	2 1/2	AC230v	---	---	360	deg
Color Rendering Index	Ra	AC230v	80	---	---	/
Color Rendering Index	R9	AC230v	0	---	---	/
Power	P	AC230v	1.7	1.9	2.1	W

Table 1-2 Absolute Maximum Ratings at Ts=25°C

Parameter	Symbol	Rating	Units
Power Dissipation	P_D	2.31	W
Frequency (Hz)hE+Bh9C/	Hz	50	Hz
Electrostatic Discharge (HBM)	E_{SD}	2000	V
Operating Temperature	T_{OPR}	-40 ~ +85	
Storage Temperature	T_{OPR}	-40 ~ +85	
Junction Temperature	T_J	125	

Notes

1. 1/10 Duty cycle, 0.1ms pulse width. 0.1ms, 1/10.

2. The above forward voltage measurement allowance tolerance is ±1V. ±1V.

3. The above color coordinates measurement allowance tolerance is 0.005. 0.005.

4. The above luminous intensity measurement allowance tolerance ±10%.

5. Care is to be taken that power dissipation does not exceed the absolute maximum

6. All measurements were made under the standardized environment of Us.

7.When the LEDs are in operation the maximum current should be decided after mea
temperaturep»junction temperature should not exceed the maximum rate. LED

8. ESD yield is over 90% at 2000V ESD (HBM). ESD protection during products han
ESD2000V ,

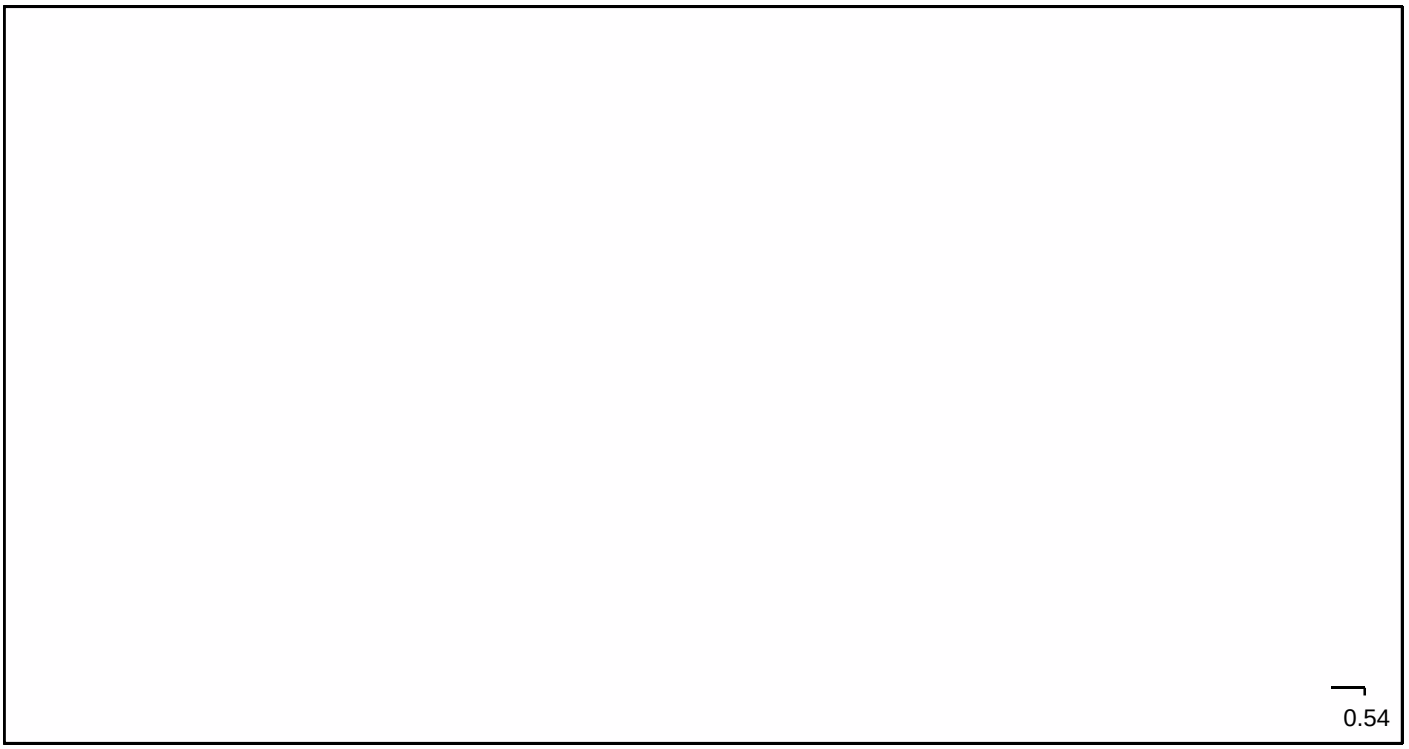
9.The filament is a non-spectroscopic product, and the commitment batch meets the
range of more than 90 %. /

1.5 Bin Range Of Luminous Flux and The Chromaticity Di
BIN (AC=230V)

Table 1-3

RF-G9CW2C1J-TB2 2200K	Rank210		RF-G9CW2H1J-TB2 2400
	190	230	
RF-G9CW2R1J-TB2 2700K	Rank250		RF-G9CW 270
	230	270	
RF-G9CW3E1J-TB2 3000K	Rank260		RF-G9CW 300
	240	280	
RF-G9CW4E1J-TB2 4000K	Rank270		RF-G9CW 400
	250	290	
RF-G9CW5E1J-TB2 5000K	Rank280		RF-G9CW 500
	260	300	
RF-G9CW6E1J-TB2	Rank280		RF-G9CW

6500K	260	300	6500K	260	300



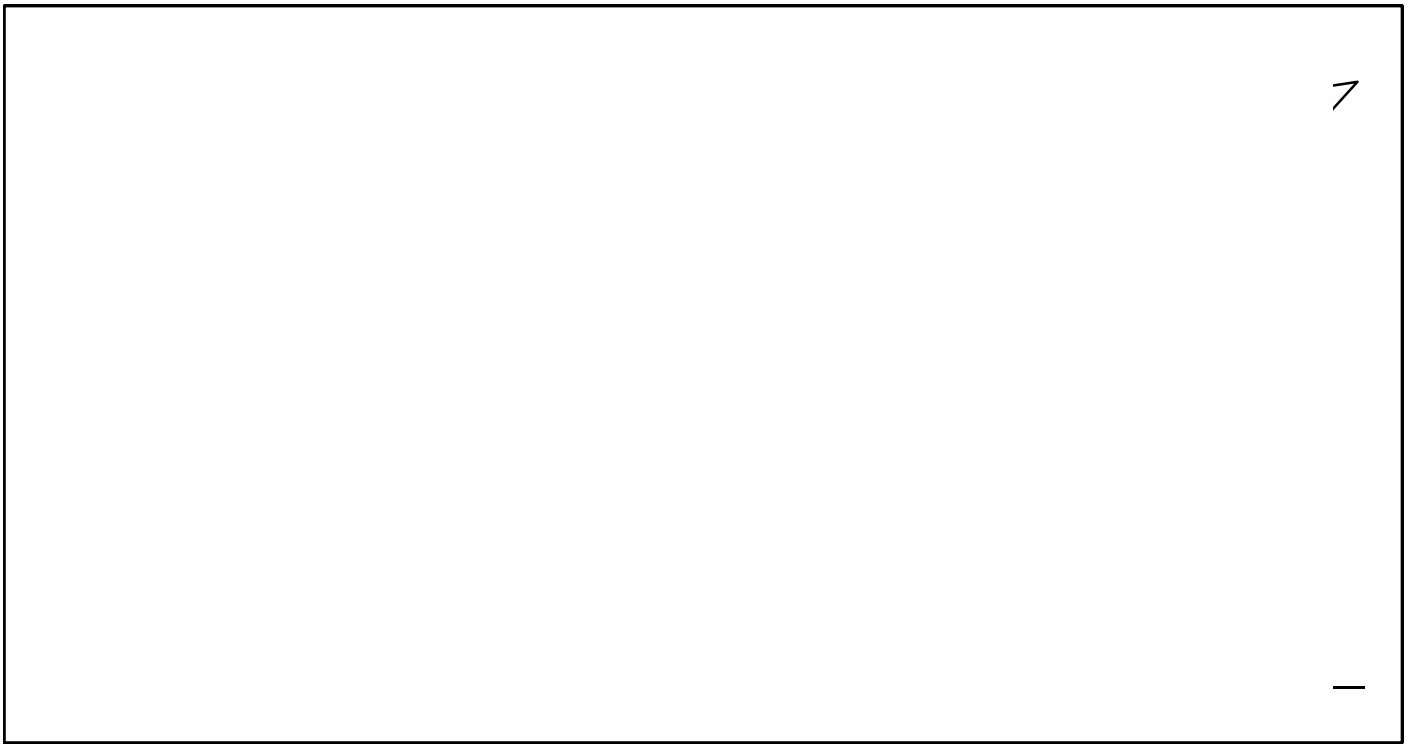


Fig 1-3 The C.I.E Chromaticity Diagram CIE

BIN C0DE	CIE-X1	CIE-Y1
22C	0.4845	0.4065
24H	0.4675	0.4060
27R	0.4395	0.4016
30E	0.4227	0.3845
40E	0.3649	0.3595
50E	0.3360	0.3383
65E	0.3068	0.3208
27K	0.4394	0.3914
30S	0.4169	0.3842
40S	0.3671	0.3583
50S	0.3358	0.3355
65S	0.3067	0.3119

02826 -1.97 -47-248.6 -1.94reW* .68 82h47-27826 -1.974 reW* n0 841.98 595.2

1.6 Typical optical

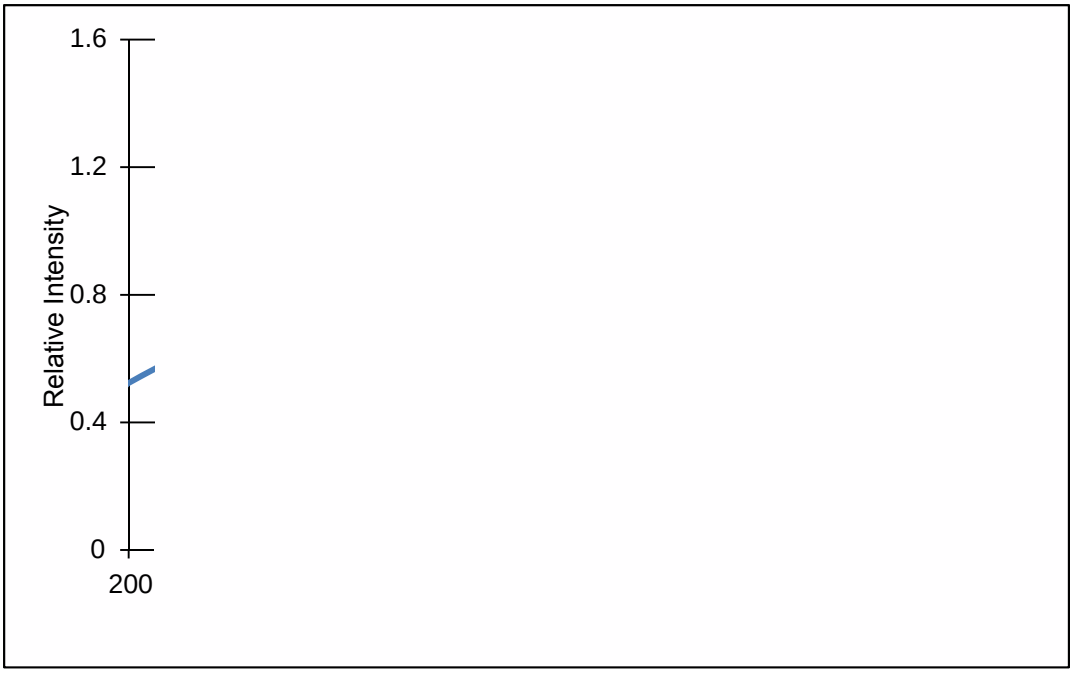


Fig 1-1F

Fig 1-2 Ambient Temperature Vs.

Fig 1-3 Central surface temperat

Fig 1-4Forward Voltage Vs Central surface temperature

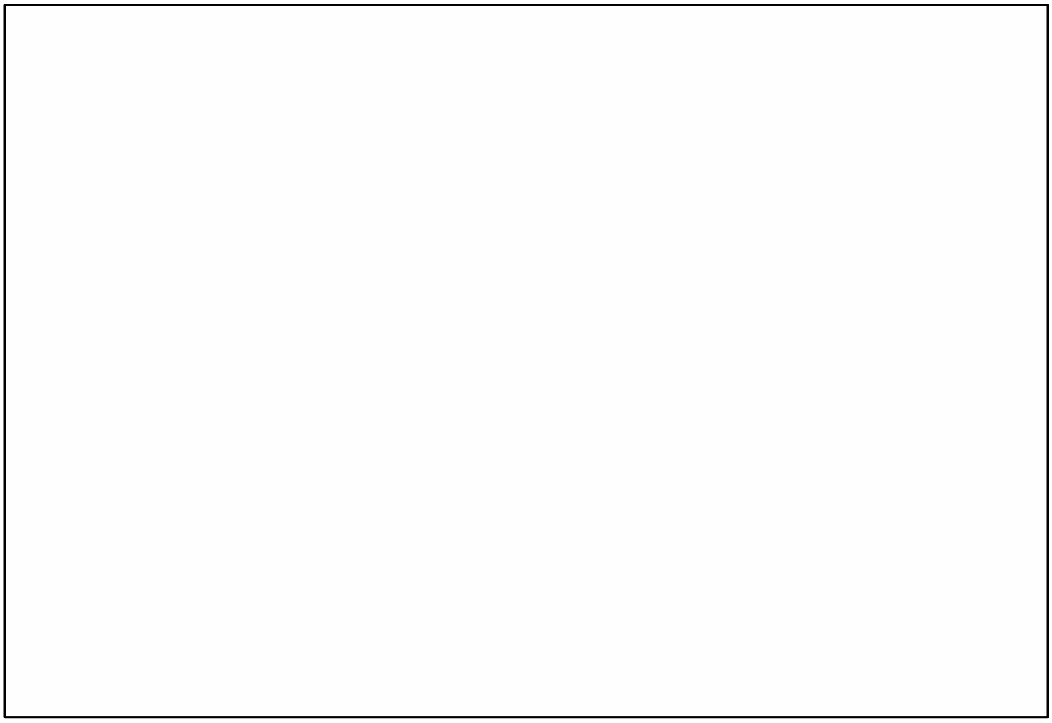


Fig 1-5 Central surface temperature VsForward Current

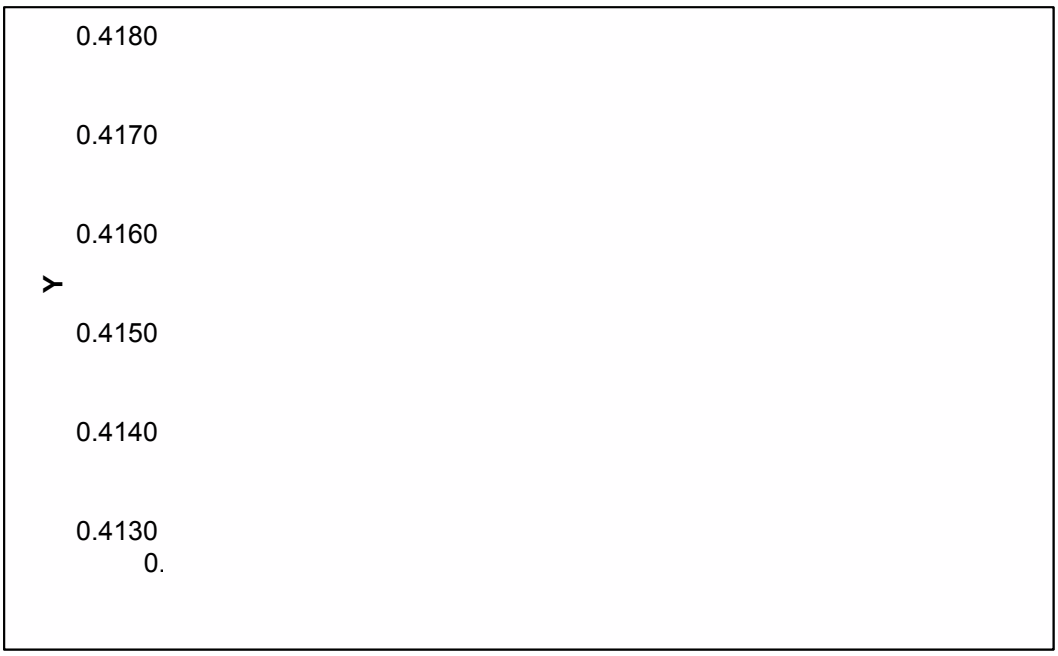


Fig 1-7Chromaticit

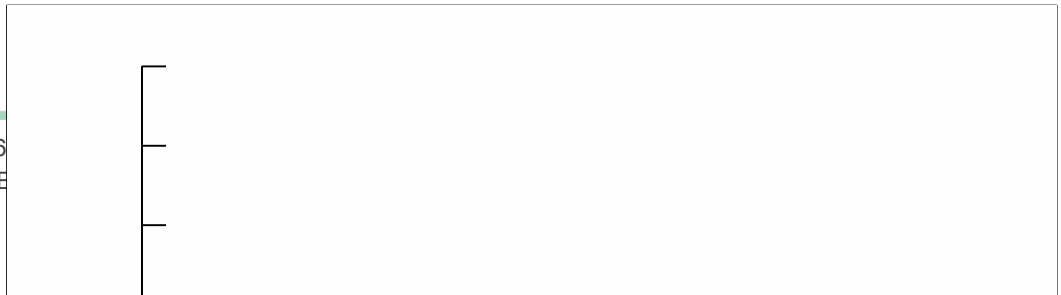


Fig 1-8Spectrum Distribution

2. Packaging

2.1 Packaging Specification

Package:50pcs/box. 50pcs

2.1.1 Suction box Dimension

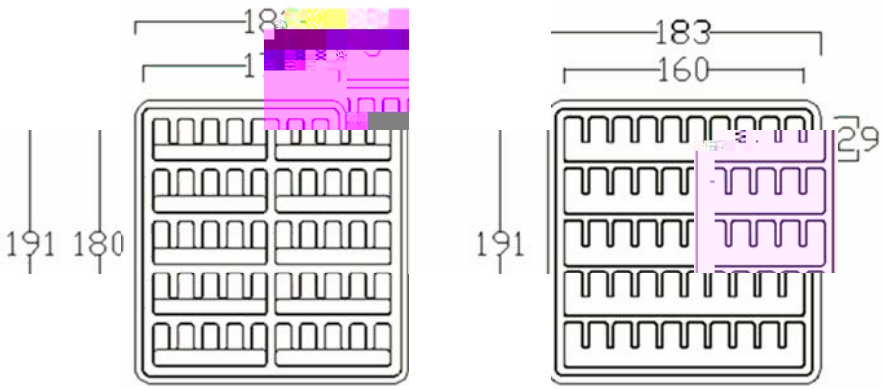


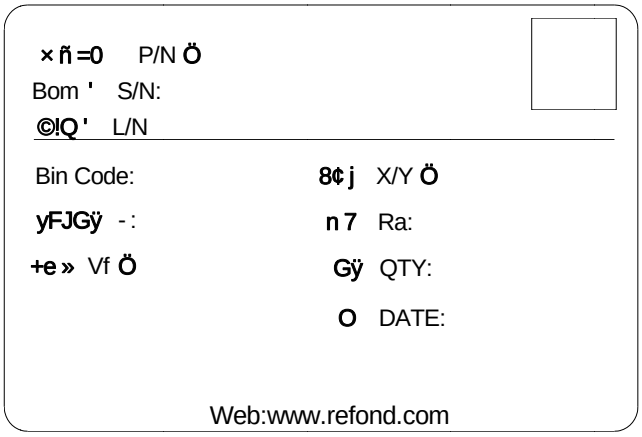
Fig.2-1 Suction box Dimension

Notes

The tolerances unless mentioned ±0.1mm. Unit : mm <•pÉ6☪•! -– â ±0.1;“L +â+ "ý õpÉ;“ L

2.1.2 Label Form Specification :– N \S:Ë

Table 2-2 label :–N



P/ N	Part Number !6'P&œL•
S/N	Spec Number \S:Ë
L/N	Lot Number 5 =°&†
Bin Code	Bin Code &Q7ÿ!rJ•
N	Luminous flux #Øb©d^
X/Y	Chromaticity Bin U %É
V_F	Forward Voltage =ò& GÆ&
Ra	Color Rendering Index 8Í 5–
QTY	Packing Quantity 7ÿd^
DATE	Made Date G®68t9®

Fig 2-2 label :– N

2.2 Moistu re Resis tant Pac king hÁAý%"[T

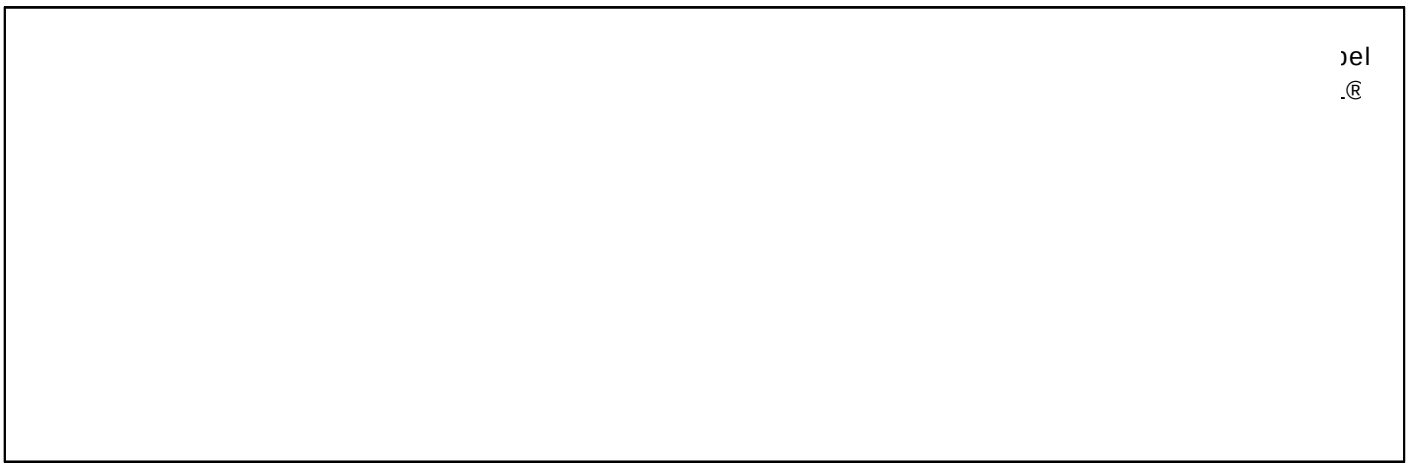
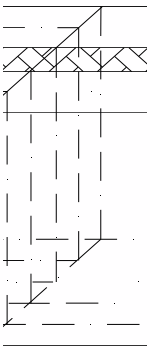


Fig.2-3Moisture Resistant Packing hÁAý%"[T

2.3 Cardb oard Box %"[TQ



2.4 Reliability Test Items A

Table 2-3 Reliabil

TestItems	Ref.
Thermal Shock	JEIT/ 3
Switching Test	
Life Test	JESI

High Temperature High Humidity Life T

2.5 Criteria For Jud

Test Items
Power Ï)·
Luminous Flux y FJGÿ

Notes

1.U.S.L: Upper

2.The Reliabilit

3.The technica

examples of the

of any license.

3.1 Handlir

(1) LED opera

LEDmating us

or endorsement.LED LED 100PPM.

(2) In order to prevent ex- ternal material from getting into the inside of LED, which may cause the malfunction of LED, the single content of Bromine element is required to be less than 900PPM,the single content of Chlorine elementis required to be less than 900PPM,the total content of Bromine element and Chlorine element in the external materials of the application products is required to be less than 1500PPM. This is provided for informational purposes only and is not a warranty or endorsement. LED LED 900PPM 900PPM 1500PPM.

(3) 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. We advises against theuse of any chemicals or materials that have been found or are suspected to have an adverse affect on device performance or reliability. To verifycompatibility, We recommends that all chemicals and materials be tested in the specific application and environment for which they are intended tobe used. Attaching LEDs, do not use adhesives that outgas organic vapor. LED LED LED LED

(4) Handle the component along the side surface by using forceps or appropriate tools; do not directlytouch or Handle the silicone lens surface, it may damage the internal circuitry.

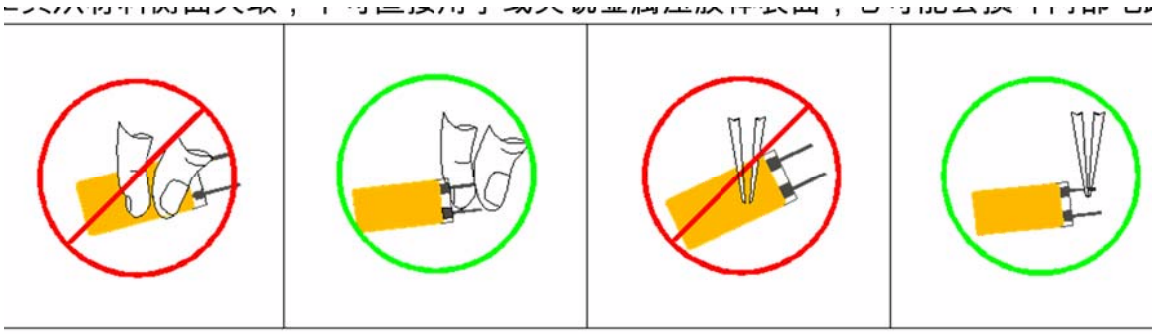


Fig 4-1Clip filament specification

(5) 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

(6) Thermal Design is paramount importance because heat generation may result in the Characteristics decline,such as brightness decreased,Color change and so on.Please consider the heat generation of the LEDs when making the system design.LED

LED

(7) Compared to standard encapsulants, silicone is generally softer, and the surface is more likely to attract dustp»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. We 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

Table 4-1 Storage

Conditions	Temperature	Humidity	Time

Storage Ø ˆ	Before Opening Aluminum Bag	≤30	≤75%	Within 1 Year From Date
	After Opening Aluminum Bag	≤30	≤60%	24hours 24
Baking		60±5	-	≥24hours 24

(8) If the moisture absorbent materialp· silica gelp¸ has faded away or the LEDs have exceeded the storage timep»baking treatment should be performed after unpacking and based on the following conditionp· 65 ²5p¸ W for above 24 hours.

60±5 24

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

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

(10) Other points for attention, please refer to our relevant information.

Ve

Date

De
Thi