NMOP-2835-625-60

SURFACE MOUNT LED TAPE AND REEL

Features:

1. Top view white LED.
2. white SMT package.
3. Leadframe package with individual 2 pin.
4. Wide viewing angle.
5. Soldering methods:IR reflow soldering.
6. Feature of the device:more light due to higher optical efficiency;extremely wide viewing angle; ideal for backlighting and coupling in light guide.

Descriptions:

The NMOP-2835-625-60 SMD has wide viewing angle and optimized light coupling by inter reflector,The low current requirement makes this device ideal for portable equipment or any other application where power is at a premium.

Applications:

1. LCD back light.
2. Mobile phones.
3. Indicators.
4. Switch lights.

Device Selection Guide

Part No	Material	Color	
		Emitted	Lens
NMOP-2835-625-60	AlGaInP	Red	Water Clear

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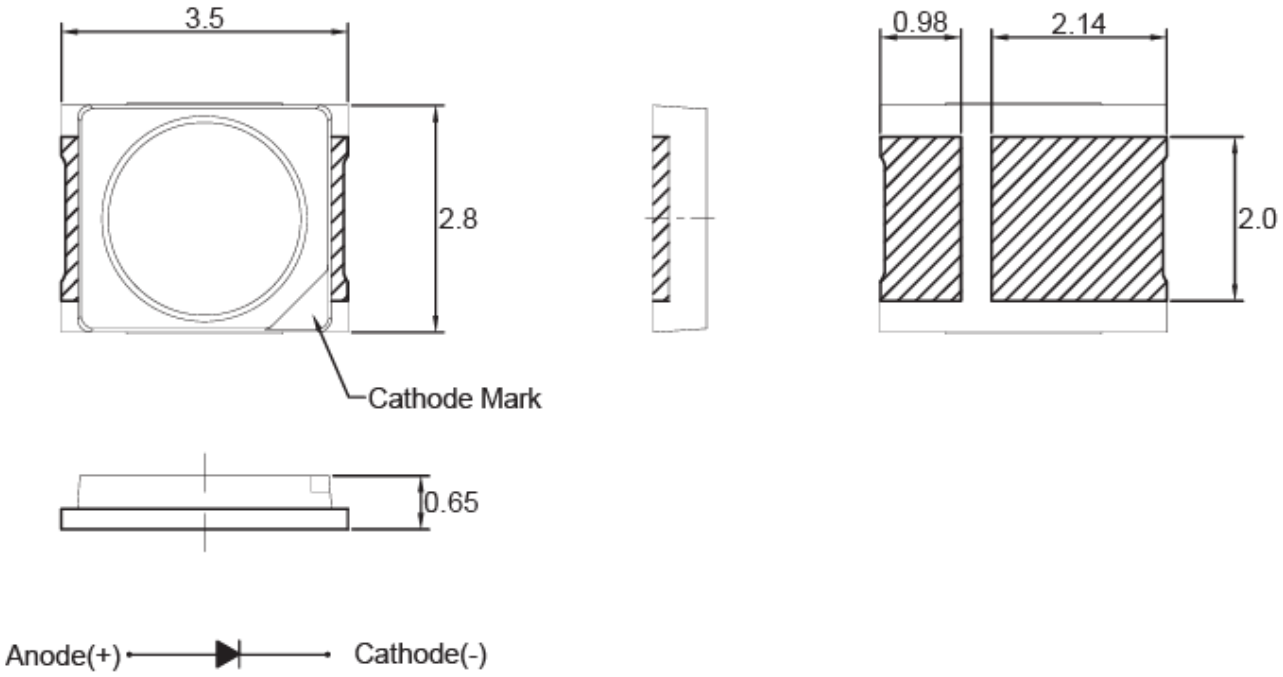
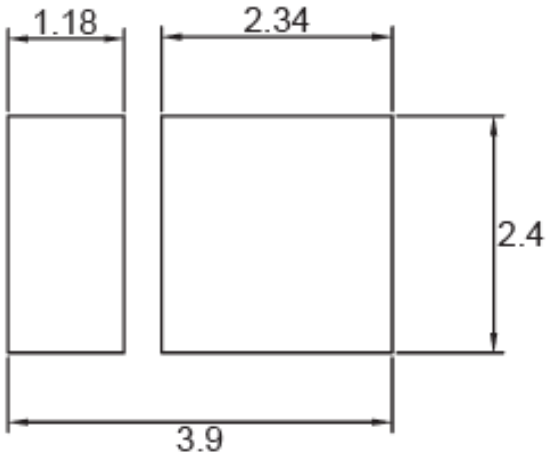
Package Dimensions



Note : 1. All dimension are in millimeter tolerance is ±0.2mm unless otherwise noted.
2. Specifications are subject to change without notice.

Recommended Soldering Pad Dimensions



Note : The tolerances unless mentioned is ±0.1mm,Unit=mm.

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Absolute Maximum Ratings at Ta=25° C

Parameter	Symbol	Ratings	UNIT
Forward Current	I_F	60	mA
Peak Forward Current Duty1/10@10KHz	I_{FP}	90	mA
Power Dissipation	PD	156	mW
Reverse Current @5V	I_r	10	μA
Electrostatic Discharge	ESD	2000	V
Operating Temperature	T_{opr}	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +100	°C
LED Junction Temperature	T_j	115	°C

Typical Electrical & Optical Characteristics (Ta=25° C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	Iv	5	7	---	lm	IF=60mA
Dominant Wavelength	λD	---	625	---	nm	IF=60mA
Spevctral Line Half Width	Δλ	---	20	---	nm	IF=60mA
Forward Voltage	VF	1.7	---	2.6	V	IF=60mA
Viewing Angle	2θ1/2	---	120	---	deg	IF=60mA

Note : 1. The forward voltage data did not including ±0.1V testing tolerance.
2. The luminous intensity data did not including ±15% testing tolerance.
3. The dominant wavelength data did not including ±1nm testing tolerance

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Luminous Intensity Classification

BIN CODE	Iv (lm) at 60mA	
	Min.	Max.
F5	5	6
F6	6	7
F7	7	8
F8	8	9

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Typical Electro-Optical Characteristics Curve

Fig.1 Forward current vs. Forward Voltage

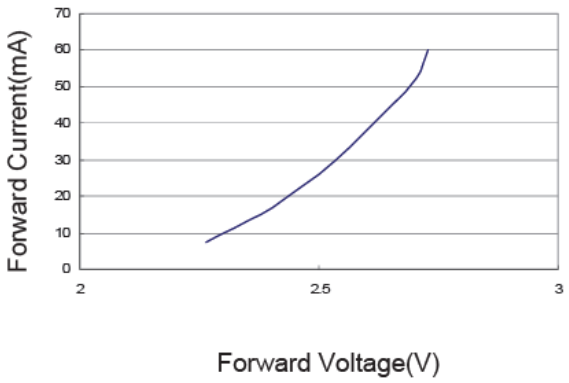


Fig.2 Forward current vs.Luminous Intensity

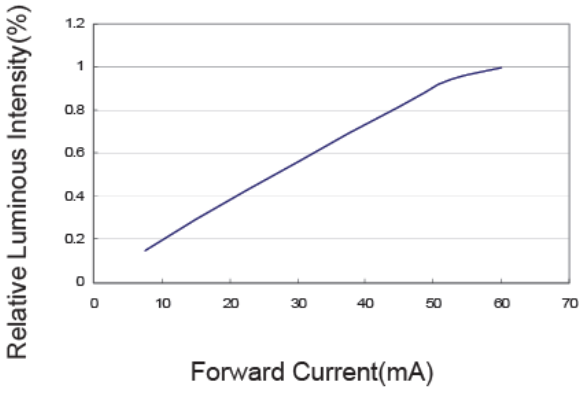


Fig.3 Forward Voltage vs. Temperature

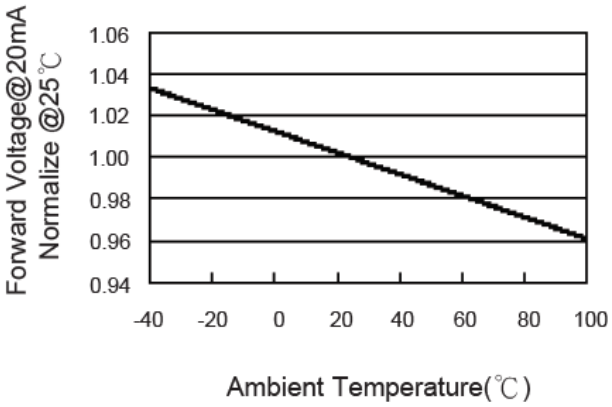


Fig.4 Luminous Intensity vs. Temperature

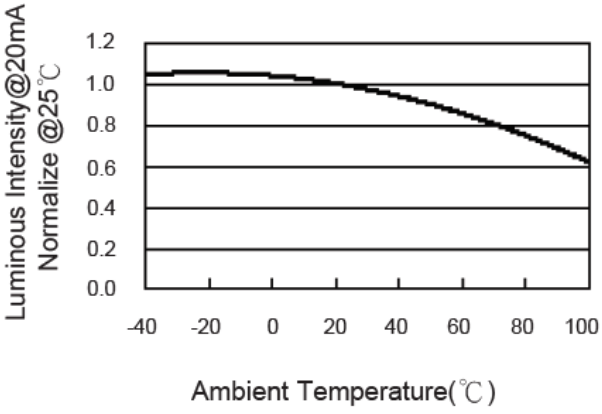


Fig.5 Relative Intensity vs. Wavelength

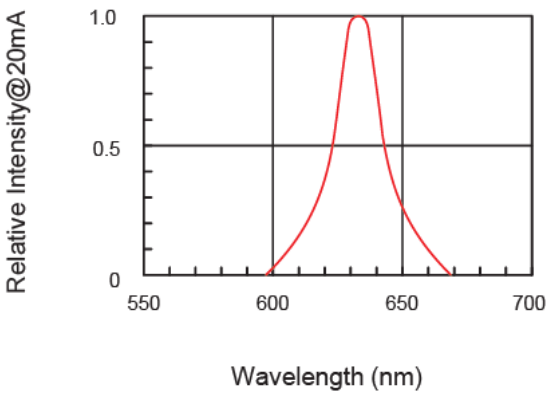
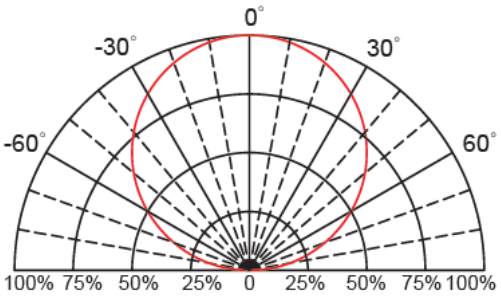


Fig.6 Directive Radiation



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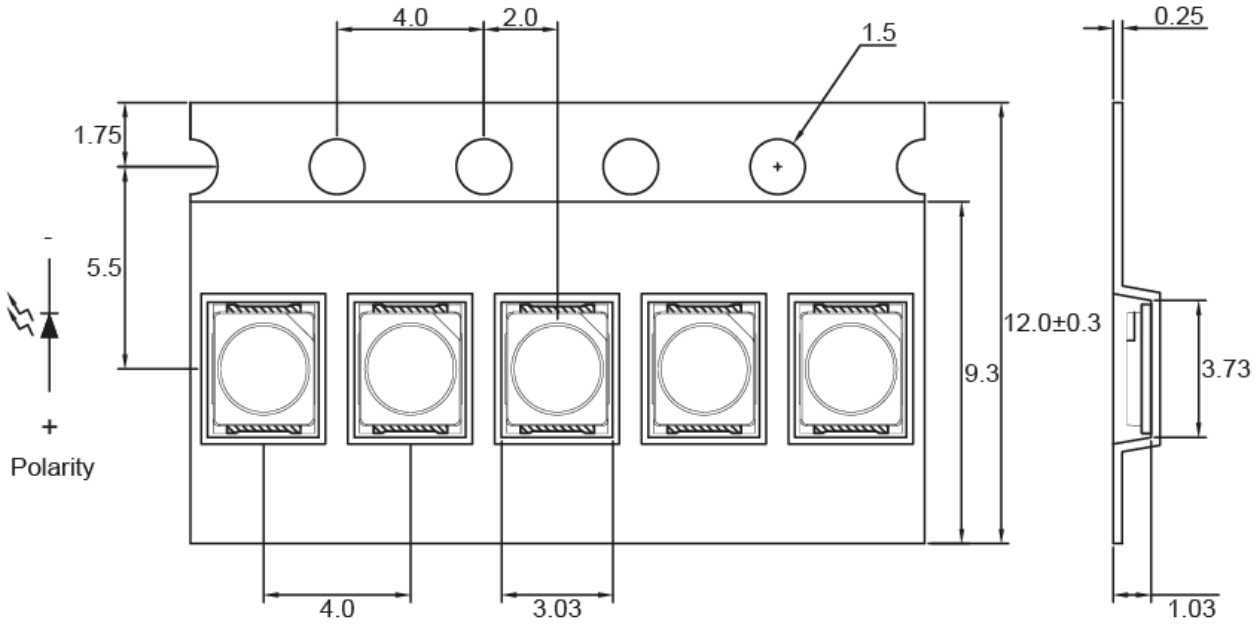
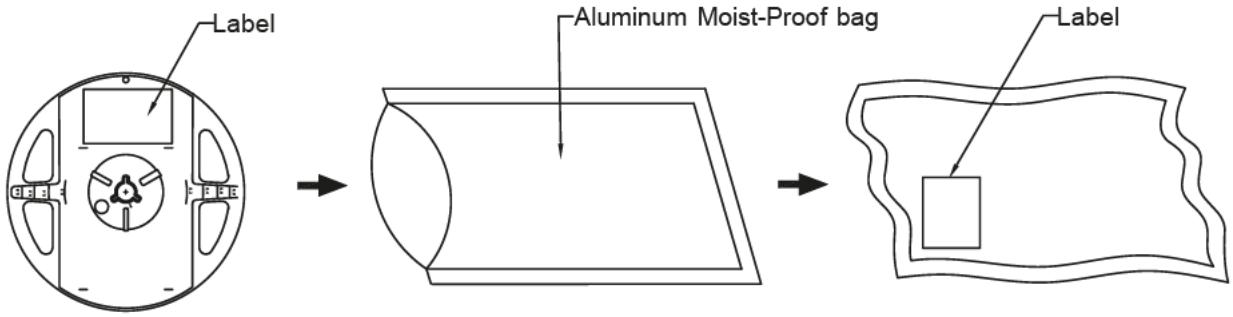
Carrier Type Dimensions



Note : The tolerances unless mentioned is ±0.1mm,Angle± 0.5. Unit=mm.

Packing Specifications



Part No.	Description	Quantity/Reel
NMOP-2835-625-60	12.0mm tape,7"reel	2000 PCS

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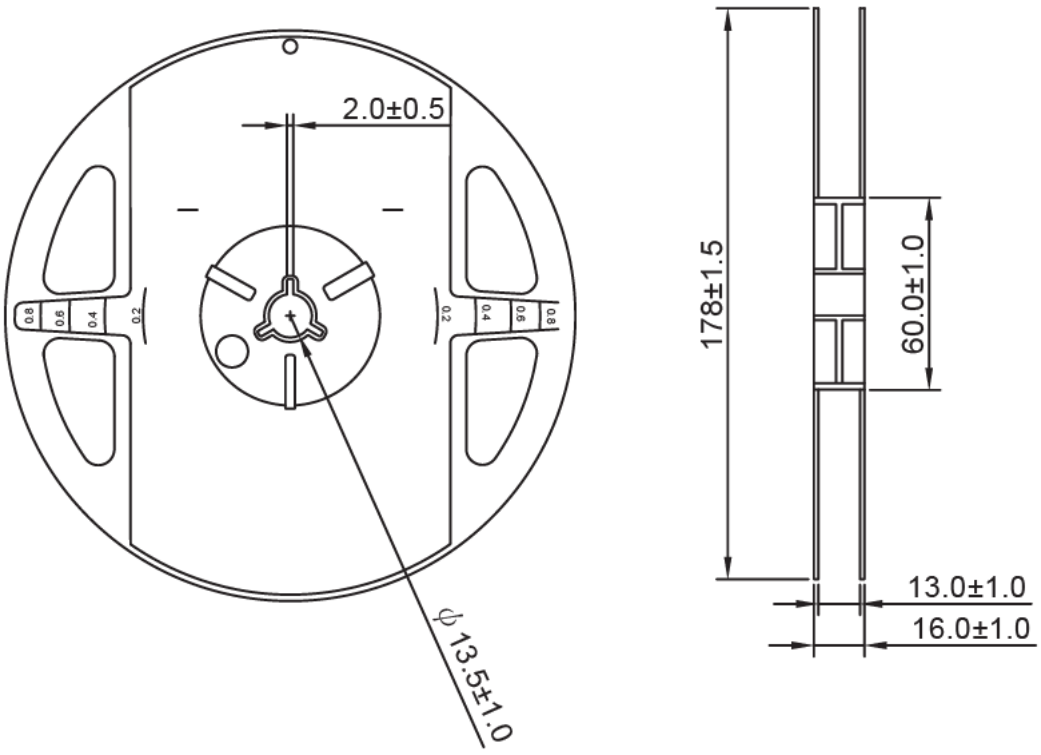
Label Explanation

BIN : Radiant Flux

HUE : Chromaticity Coordinates
(CIE_x , CIE_y)

VF : Forward Voltage

Reel Dimensions



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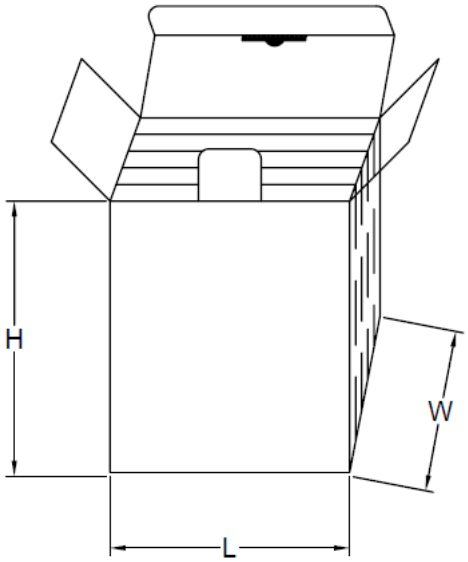
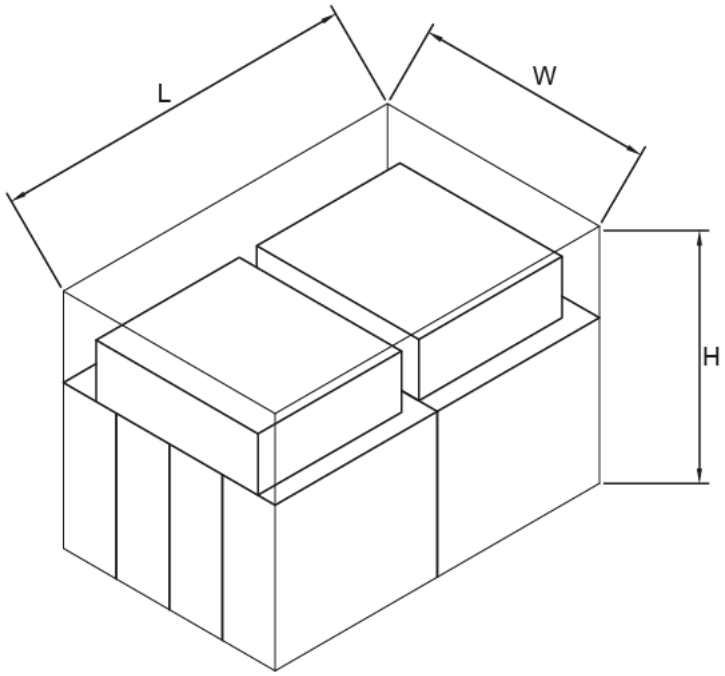
Box Explanation

1. 4 BAG / INNER BOX
2. INNER BOX SIZE : L X W X H 23cm X 8.5cm x 26cm



3. 10 INNER BOXES / CARTON
4. CARTON SIZE : L X W X H 58cm X 34cm x 35cm



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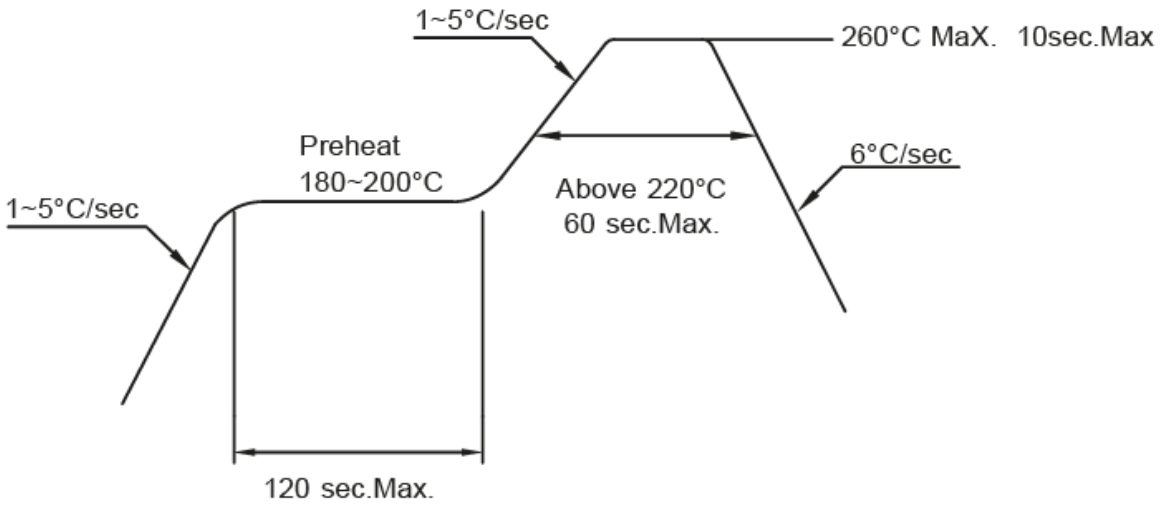
Recommended Soldering Conditions

1. **Hand Solder**
   Basic spec is ≤320°C 3 Sec one time only

2. **PB-Free Reflow Solder**



Note: 1.Reflow soldering should not be done more than two times.
2.When soldering,do not put stress on the LEDs during heating.
3.After soldering,do not warp the circuit board.

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Precautions For Use:

Storage time:

1. The operation of Temoeraturen and RH are: 5°C ~ 30°C, RH60%

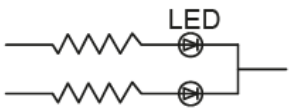
2. One the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp proof box with descanting agent. Considerung the tape life, we suggest out customers to use our products within a yaer (from production date).

3. If opened more than one week in an atmosphere 5°C ~ 30°C, RH60%, they should be treated at 60°C±5°C for 24hrs.

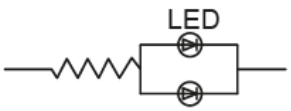
Drive Method:

LED is a current operated device, and therefore, requirer some kind of current limiting incorporated into the driver circuit. This current limiting typically takes the form of a current limiting resistor placed in series with the LED. Consider worst case voltage variations than could occur across the current limiting resistor. The forwrd current should not be allowed to change by more than 40% of its desired value.

Circuit model A



Circuit model B



A) Recommended circuit.
(B) The difference of brightness between LED could be found due to the VF-IF characteristics of LED.

Cleaning

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED.

ESD(Electrostatic Discharge):

Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrosatic glove is recommended when handing these LED. All devices, equipment and machinery must be properly grounded.

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Reliability Test:

Classification	Test Item	Test Condition	Sample Size
Endurance Test	Operating Life Test	1.Ta=25°C 2.If=60mA 3.t=1000 hrs (-24hrs,+72hrs)	22
	High Temperature Storage Test	1.Ta=100°C±5°C 2.t=1000 hrs (-24hrs,+72hrs)	22
	Low Temperature Storage Test	1.Ta=-40°C±5°C 2.t=1000 hrs (-24hrs,+72hrs)	22
	High Temperature High Humidity Storage Test	1.Ta=85°C 2.RH=85% 3.t=1000hrs(-24hrs,+72hrs)	22
Environmental Test	Thermal Shock Test	1.Ta=100°C±5°C ~ -40°C±5°C 20min/ 10sec / 20min 2.total 100 cycles	22
	Temperature Cycling	1.100°C±5°C ~ -40°C±5°C 30mins / 5mins / 30mins 2.100 Cyeles	22
	IR Reflow	1.T=260°C Max. 10sec.Max. 2. 6 Min	22

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