

深圳市聚飞光电有限公司

版本：A4

01.JT.ZB003ZC-B

- Customer:

Technical Data Sheet

Side View White LED (0.6mm t)

For: IF= 15mA

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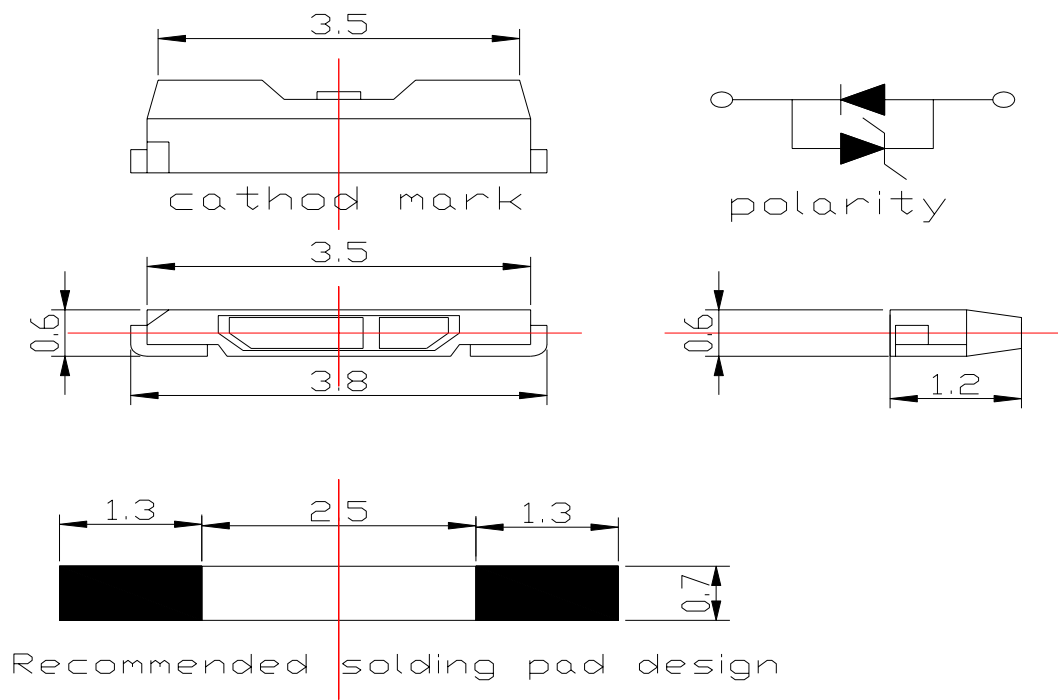
※ Features:

1. Package: 3.8*1.2*0.6mm (Side view white LED)
2. Emitted Color: White
3. Mono-color type
4. Soldering methods: All SMT assembly methods
5. Comply RoHS standard.

※ Applications:

1. LCD back light.
2. Mobile phones: LCD,
3. Status indicators: Consumer & industrial electronics.
4. General use.

※ Package Outline Dimension:



Notes: tolerances Unless Dimension \pm 0.1mm, Unit=mm

NOTES:

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

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※ Absolute Maximum Ratings(Ta=25°C)

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	100	mW
Forward Current	I _F	30	mA
Peak Forward Current * 1	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Soldering Temperature	Tsol	260 (for 10 seconds) Hand soldering (300 for 3 seconds)	°C
Operating Temperature	Topr	-30°C~85°C	-
Storage Temperature	Tstg	-40°C~85°C	-
Electrostatic discharge	ESD	2000	V

* I_{FP} condition: pulse width ≤0.1msec, duty cycle ≤1/10.

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	V _f	2.9		3.4	V	I _F =15mA
Luminous Intensity	I _v	700	-		mcd	
Viewing Angle	2θ _{1/2}	-	110	-	deg	
Reverse Current	V _R	-	0.8	1.2	V	I _R =10mA

Note: 1. Tolerance of luminous intensity is ±10%

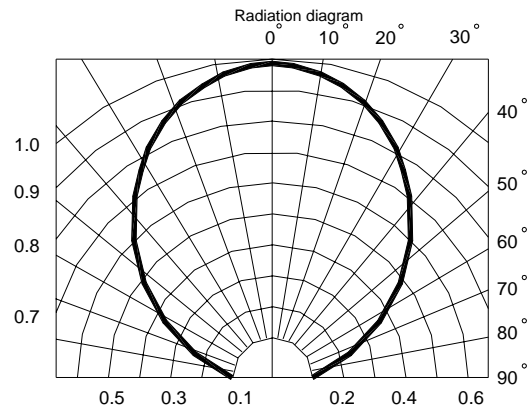
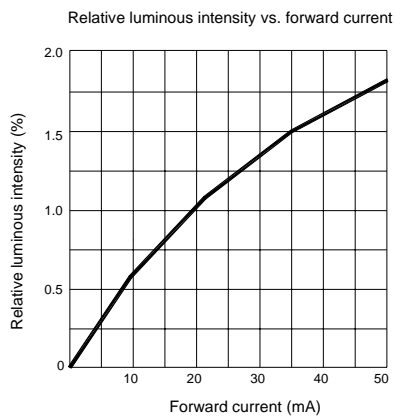
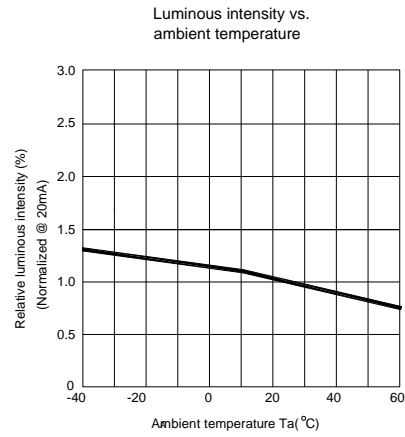
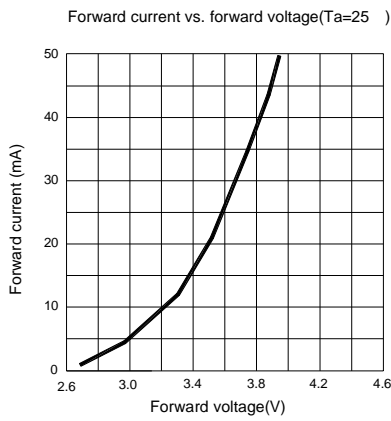
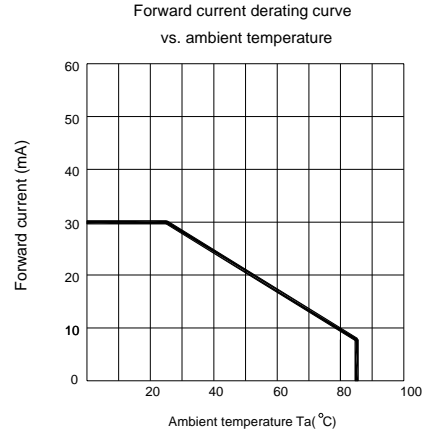
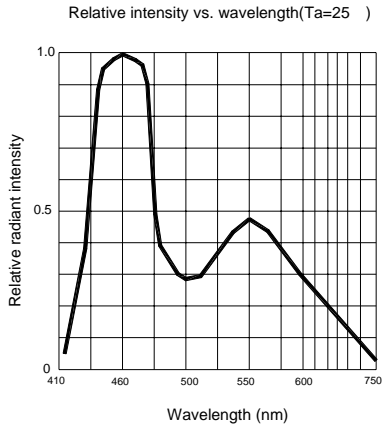
2. Tolerance of forward voltage is ±0.05V

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※ Typical Electro-Optical Characteristics Curves



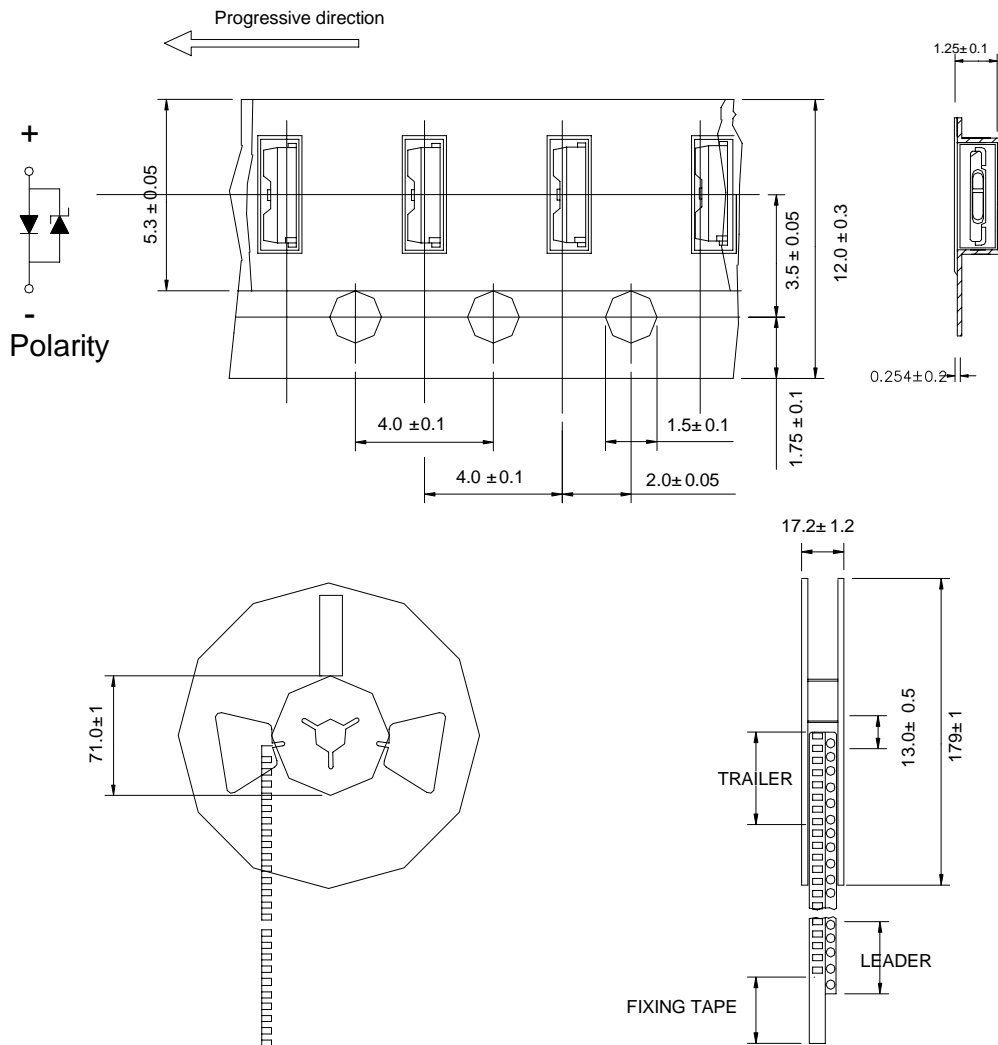
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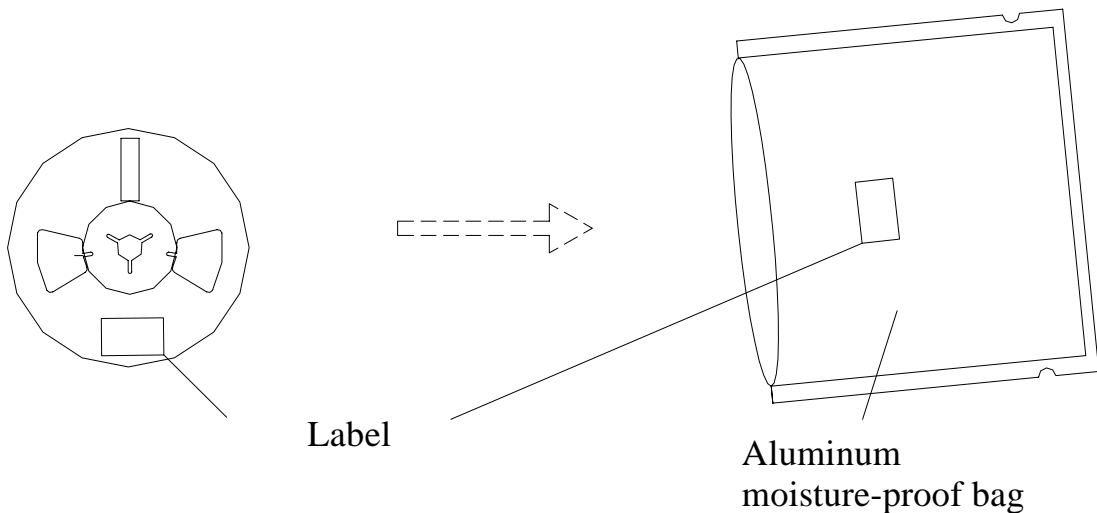
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※ Tapping specifications (Units: mm)

Loaded quantity: 1000-3000 pcs/reel



※ Package Method:(unit:mm)

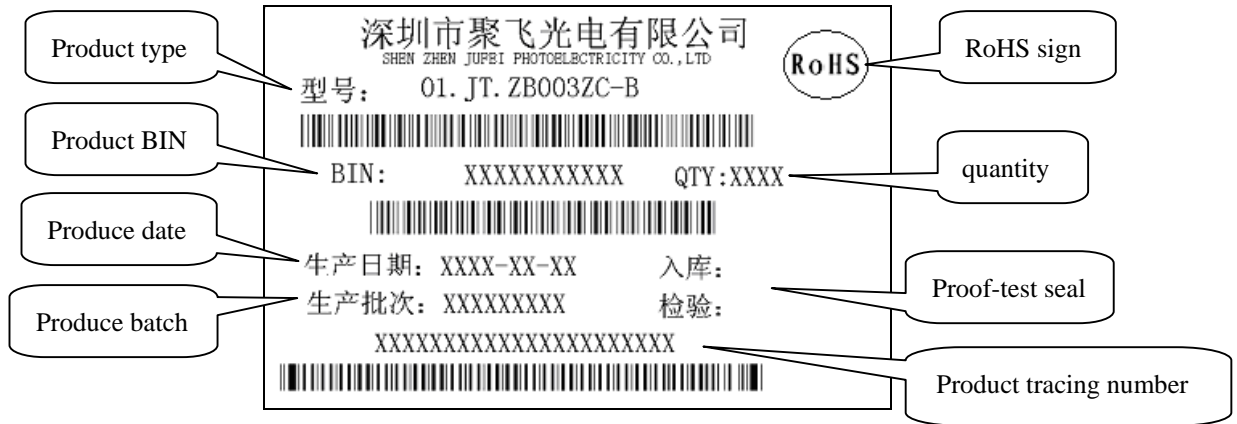


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※ Label description:



※ BIN range

Luminous intensity (tolerance is $\pm 10\%$ @ $I_f=15mA$):

BIN CODE	15mA 测试		20mA 测试(与三星标准比对)	
	Min. (mcd)	Max. (mcd)	Min. (mcd)	Max. (mcd)
6	700	750	1100	1150
7	750	800	1150	1200
8	800	850	1200	1250
9	850	900	1250	1300
10	900	950	1300	1350
11	950	1000	1350	1400
12	1000	1050	1400	1500
13	1050	1100	1500	1550
14	1100	1150	1550	1650
15	1150	1200	1650	1700
16	1200	1250	1700	1800

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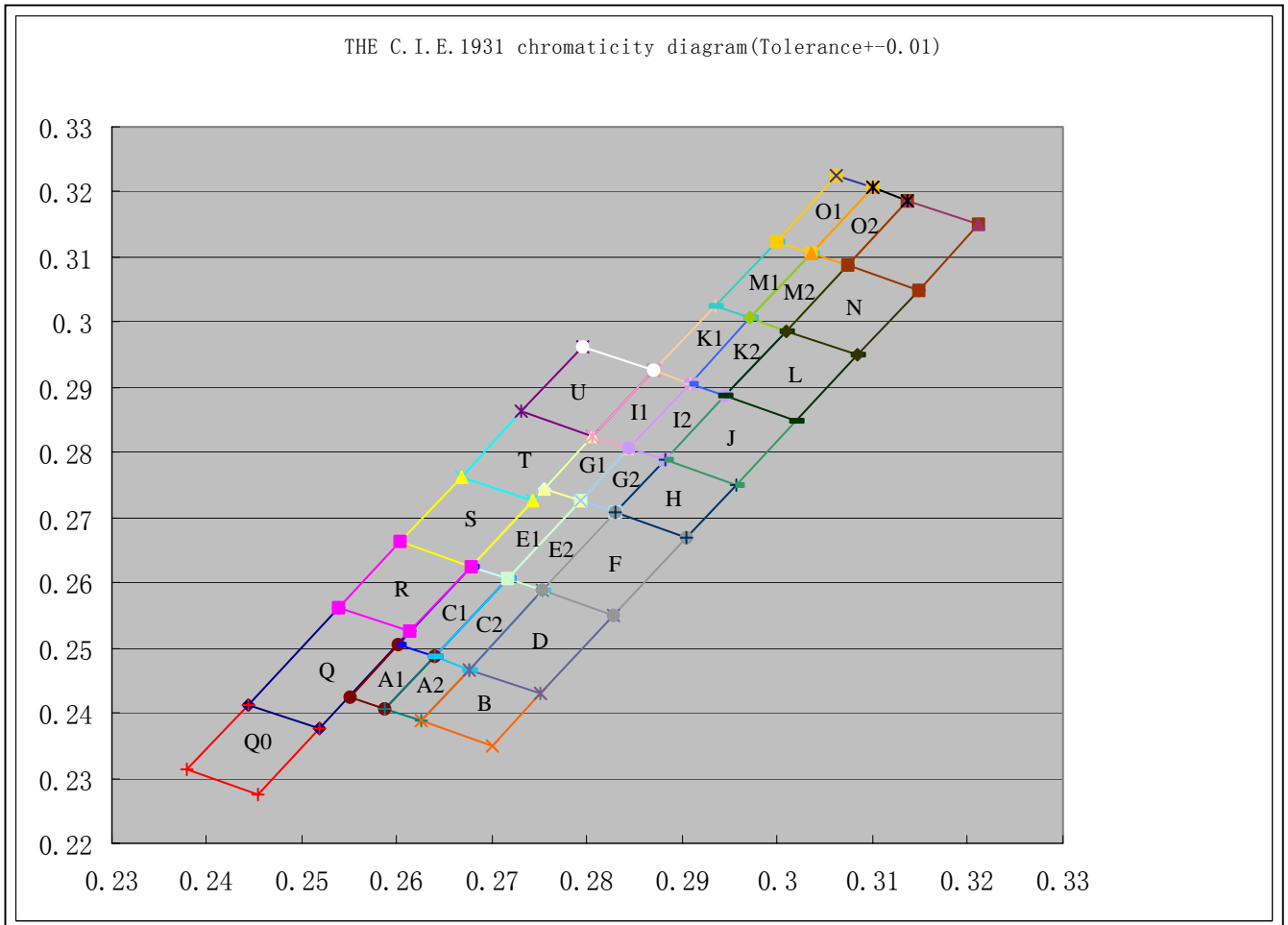
Chromaticity coordinates specifications(tolerance is ± 0.01 @If=15mA)

序号	x	y	x	y	序号	x	y	x	y
A1	0.26012	0.25050	0.25500	0.24250	B	0.26762	0.24675	0.26250	0.23875
	0.25875	0.240625	0.26387	0.248625		0.27000	0.23500	0.27512	0.24300
A2	0.26387	0.248625	0.25875	0.240625	D	0.27530	0.25875	0.26762	0.24675
	0.26250	0.23875	0.26762	0.24675		0.27512	0.24300	0.28280	0.25500
C1	0.26780	0.26250	0.26012	0.25050	F	0.28298	0.27075	0.27530	0.25875
	0.26387	0.248625	0.27155	0.260625		0.28280	0.25500	0.29048	0.26700
C2	0.27155	0.260625	0.26387	0.248625	H	0.28810	0.27875	0.28298	0.27075
	0.26762	0.24675	0.27530	0.25875		0.29048	0.26700	0.29560	0.27500
E1	0.27548	0.27450	0.26780	0.26250	J	0.29450	0.28875	0.28810	0.27875
	0.27155	0.260625	0.27923	0.272625		0.29560	0.27500	0.30200	0.28500
E2	0.27923	0.272625	0.27155	0.260625	L	0.30090	0.29875	0.29450	0.28875
	0.27530	0.25875	0.28298	0.27075		0.30200	0.28500	0.30840	0.29500
G1	0.28060	0.28250	0.27548	0.27450	N	0.30730	0.30875	0.30090	0.29875
	0.27923	0.272625	0.28435	0.280625		0.30840	0.29500	0.31480	0.30500
G2	0.28435	0.280625	0.27923	0.272625	P	0.31370	0.31875	0.30730	0.30875
	0.28298	0.27075	0.28810	0.27875		0.31480	0.30500	0.32120	0.31500
I1	0.28700	0.29250	0.28060	0.28250	Q0	0.2443	0.2413	0.2379	0.2313
	0.28435	0.280625	0.29075	0.290625		0.2454	0.2275	0.2518	0.2375
I2	0.29075	0.290625	0.28435	0.280625	Q	0.2539	0.2563	0.2443	0.2413
	0.28810	0.27875	0.29450	0.28875		0.2518	0.2375	0.2614	0.2525
K1	0.29340	0.30250	0.28700	0.29250	R	0.2603	0.2663	0.2539	0.2563
	0.29075	0.290625	0.29715	0.300625		0.2614	0.2525	0.2678	0.2625
K2	0.29715	0.300625	0.29075	0.290625	S	0.2667	0.2763	0.2603	0.2663
	0.29450	0.28875	0.30090	0.29875		0.2678	0.2625	0.2742	0.2725
M1	0.29980	0.31250	0.29340	0.30250	T	0.2731	0.2863	0.2667	0.2763
	0.29715	0.300625	0.30355	0.310625		0.2742	0.2725	0.2806	0.2825
M2	0.30355	0.310625	0.29715	0.300625	U	0.2795	0.2963	0.2731	0.2863
	0.30090	0.29875	0.30730	0.30875		0.2806	0.2825	0.287	0.2925
O1	0.30620	0.32250	0.29980	0.31250					
	0.30355	0.310625	0.30995	0.320625					
O2	0.30995	0.320625	0.30355	0.310625					
	0.30730	0.30875	0.31370	0.31875					

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※ Forward voltage (tolerance is $\pm 0.05V@I_f=15mA$):

BIN CODE	Min.(v)	Max.(v)
6-1*	2.9	3.0
6-2*	3.0	3.1
7-1*	3.1	3.2
7-2*	3.2	3.3
8-1*	3.3	3.4

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※ Reliability test items and conditions:

No.	Test Item	Test Conditions	Sample size	Ac/Re
1	Operation Life	Test If=DC20mA Temp: Room temperature Test time=1000hrs	22	0/1
2	High Temperature High Humidity	Temp. =+85℃ RH=85%HR Test time=1000hrs	22	0/1
3	Thermal Shock	-35℃ ~ +85℃ 20min 10s 20min Test Time=300cycles	22	0/1
4	High Temperature Storage	High Temp. =+85℃ Test time=1000hrs	22	0/1
5	Low Temperature Storage	Low Ta=-35℃ Test time=1000hrs	22	0/1
6	Temperature Cycle	-35℃ ~ +100℃ 15min 5min 15min Test Time=300cycle	22	0/1
7	Reflow Soldering	Operation heating: 260℃(Max.), within 10seconds. (Max.)	22	0/1

※ Judgment criteria of failure for the reliability

- Iv: Below 70% of initial values
- Vf: Over 20% 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.

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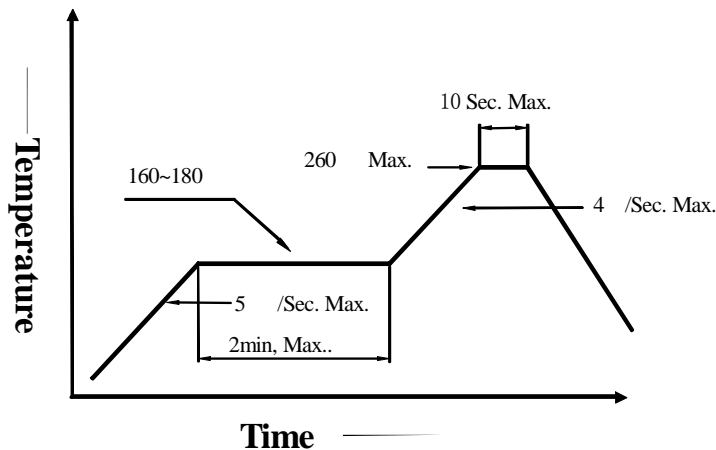
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※ Precautions for use :

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 $30^{\circ}\text{C}/35\%\text{RH}$ 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: $60\pm 5^{\circ}\text{C}$ for 12 hrs.
 $60\pm 5^{\circ}\text{C}$ 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



- Note: a) Reflow soldering should not be done more than two times.
b) Don't put stress on the LEDs when soldering.
c) Don't warp the circuit board before it have been returned to normal ambient conditions after soldering.