SURFACE MOUNT CHIP LED LAMP SPECIFICATION

●COMMODITY：SURFACE MOUNT CHIP LED LAMP

●DEVICE NUMBER：BL-HS136D AGE: 1

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃) REVISION: 1.0

Chip			Lens Appearance	Absolute Maximum Rating				Electro-optical Data (At 20mA)				Viewing Angle 2θ1/2 (deg)
Emitted Color	Peak Wave Length λp(nm)	Dominant Wave Length λd(nm)		Δλ (nm)	Pd (mW)	If (mA)	Peak If(mA)	Vf(V)		Iv Typ. (mcd)		
								Typ.	Max.	Min	Typ.	
Super Red	660	643	Water Clear	20	60	30	100	1.8	2.6	4.5	14.0	120

Remark：Viewing angle is the Off-axis angle at which the luminous intensity is half the axial luminous intensity.

●ABSOLUTE MAXIMUM RATINGS (Ta=25℃)

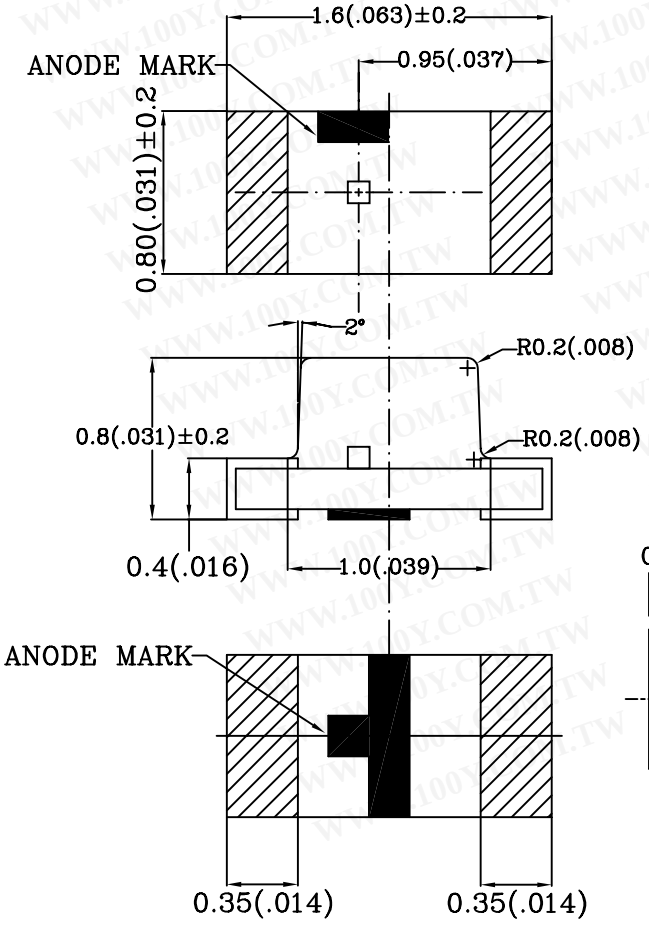
Reverse Voltage 5V

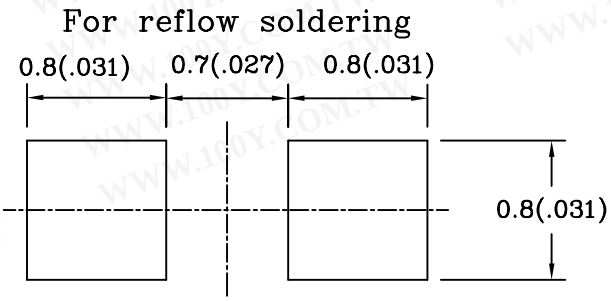
Reverse Current (V_R=5V) ..... ≦100μA

Operating Temperature Range ..... -25℃ ～ 80℃

Storage Temperature Range ..... -30℃ ～ 85℃

●PACKAGE DIMENSIONS





NOTES: 1.All dimensions are in millimeters (inches).

2.Tolerance is ± 0.10mm (0.004) unless otherwise specified.

3.Specifications are subject to change without notice.

4.Condition for IFp is pulse of 1/10 duty and 0.1msec width.

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●COMMODITY：SURFACE MOUNT CHIP LED LAMP

●DEVICE NUMBER：BL-HS136D

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃)

Fig.1 RELATIVE INTENSITY VS. WAVELENGTH

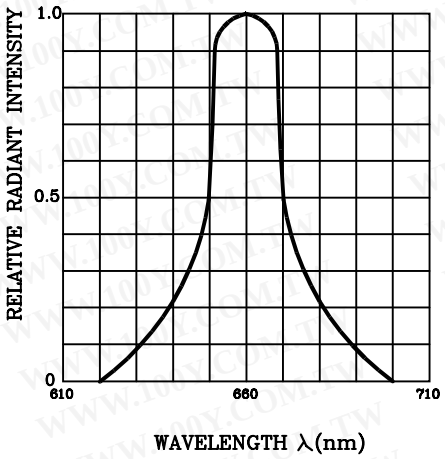


Fig.2 FORWARD CURRENT DERATING CURVE

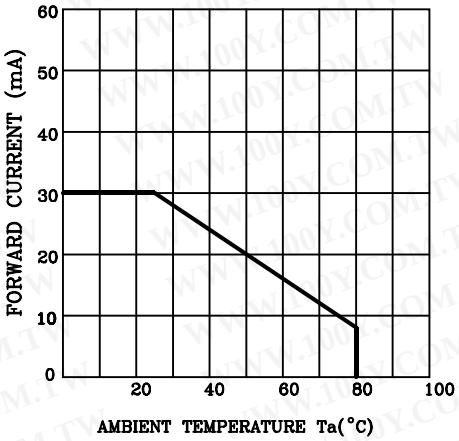


Fig.3 FORWARD CURRENT VS. FORWARD VOLTAGE

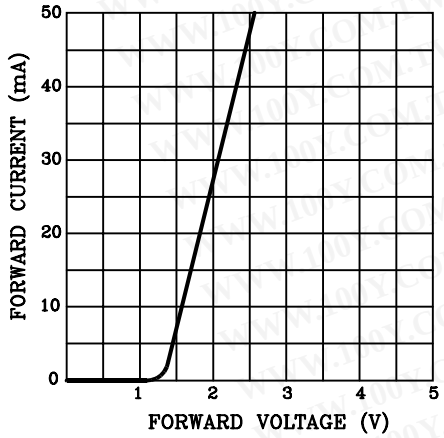


Fig.4 RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE

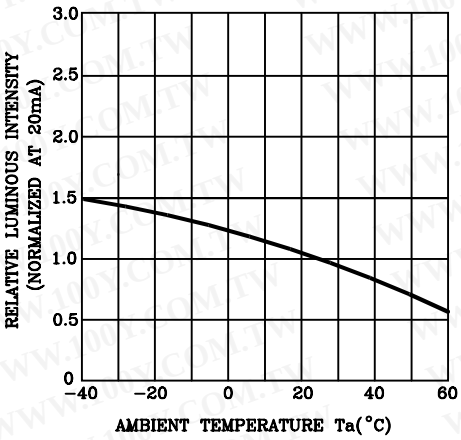


Fig.5 RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

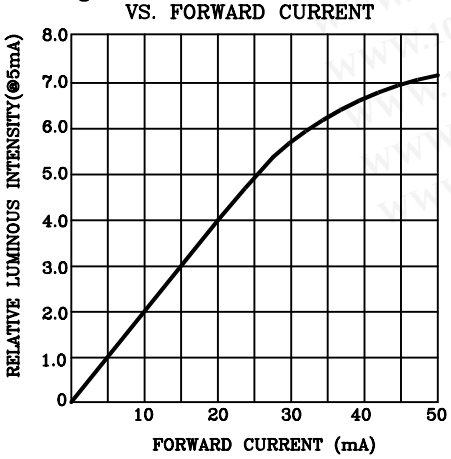
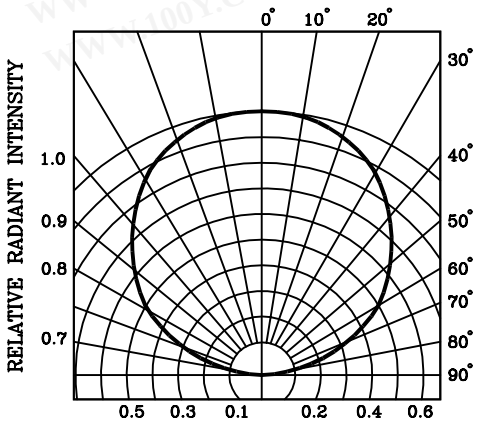


Fig.6 RADIATION DIAGRAM



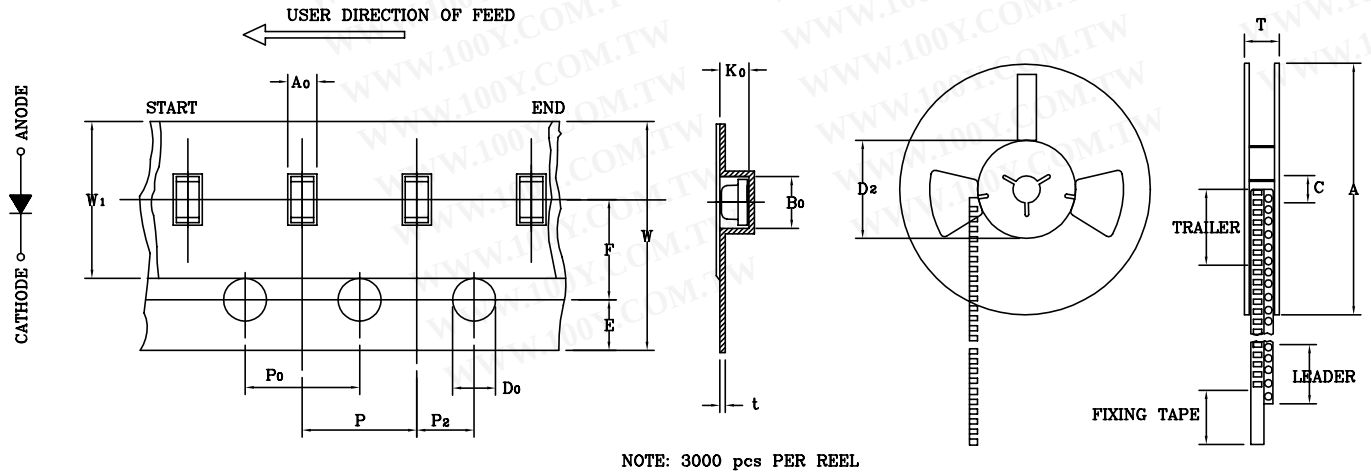
SURFACE MOUNT CHIP LED LAMP SPECIFICATION

●COMMODITY：SURFACE MOUNT CHIP LED LAMP

●DEVICE NUMBER：BL-HS136D-TR

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25℃)

ITEM	SYMBOL	SPECIFICATION			
		Minimum		Maximum	
		mm	inch	mm	inch
Tape Feed Hole Diameter (DIA)	D_0	1.40	0.055	1.60	0.063
Feed Hole Location	E	1.65	0.064	1.85	0.073
Centers Line Dimensions Length Direction	F	3.45	0.135	3.55	0.139
Compartment Depth	K_0	0.95	0.037	1.07	0.042
Compartment Pitch	P	3.90	0.153	4.10	0.161
Sprocket Hole Diameter	P_0	3.90	0.153	4.10	0.161
Centers Line Dimensions Length Direction	P_2	1.95	0.076	2.05	0.080
Carrier Tape Thickness	t	—	—	0.30	0.012
Carrier Tape Width	W	7.70	0.303	8.30	0.326
Flange Diameter	A	178.0	7.008	180.0	7.087
Hub Spindle Hole	C	12.50	0.492	13.50	0.531
Hub Diameter	D_2	70.00	2.755	72.00	2.830
Fixing Tape Width	W_1	5.25	0.206	5.35	0.210
Flange Space Between Flanges	T	12.50	0.492	13.50	0.531
Compartment Length	A_0	0.95	0.037	1.07	0.042
Compartment Width	B_0	1.75	0.068	1.90	0.074



NOTE: 3000 pcs PER REEL

SURFACE MOUNT CHIP LED LAMP SPECIFICATION

RELIABILITY TEST

Classification	Test Item	Reference Standard	Test Conditions	Result
Endurance Test	Operation Life	MIL-STD-750:1026 MIL-STD-883:1005 JIS C 7021 :B-1	Connect with a power If=20mA Ta=Under room temperature Test time=1,000hrs	0/20
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS C 7021 :B-11	Ta=+65℃±5℃ RH=90%-95% Test time=1,000hrs	0/20
	High Temperature Storage	MIL-STD-883:1008 JIS C 7021 :B-10	High Ta=+85℃±5℃ Test time=1,000hrs	0/20
	Low Temperature Storage	JIS-C-7021 :B-12	Low Ta=-35℃±5℃ Test time=1,000hrs	0/20
Environmental Test	Temperature Cycling	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1010 JIS C 7021 :A-4	-35℃ ~+25℃ ~+85℃ ~+25℃ 60min 20min 60min 20min Test Time=5cycle	0/20
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011	+85℃±5℃ ~-35℃±5℃ 20min 20min Test Time=10cycle	0/20
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS C 7021 :A-1	Preheating： 140℃-160℃,within 2 minutes. Operation heating： 235 ℃ (Max.),within 10 seconds.(Max.)	0/20

JUDGMENT CRITERIA OF FAILURE FOR THE RELIABILITY

Measuring items	Symbol	Measuring conditions	Judgement criteria for failure
Forward voltage	V_F (V)	If=20mA	Over Ux1.2
Reverse current	Ir(uA)	Vr=5V	Over Ux2
Luminous intensity	Iv (mcd)	If=20mA	Below SX0.5

Note: 1.U means the upper limit of specified characteristics. S means initial value.

2.Measurment shall be taken between 2 hours and after the test pieces have been returned to normal ambient conditions after completion of each test.