

TAPE AND REEL SURFACE MOUNT CHIP LED LAMPS

SURFACE MOUNT CHIP LED LAMP SPECIFICATION

● **DEVICE NUMBER : BL-XUB361-TR9**

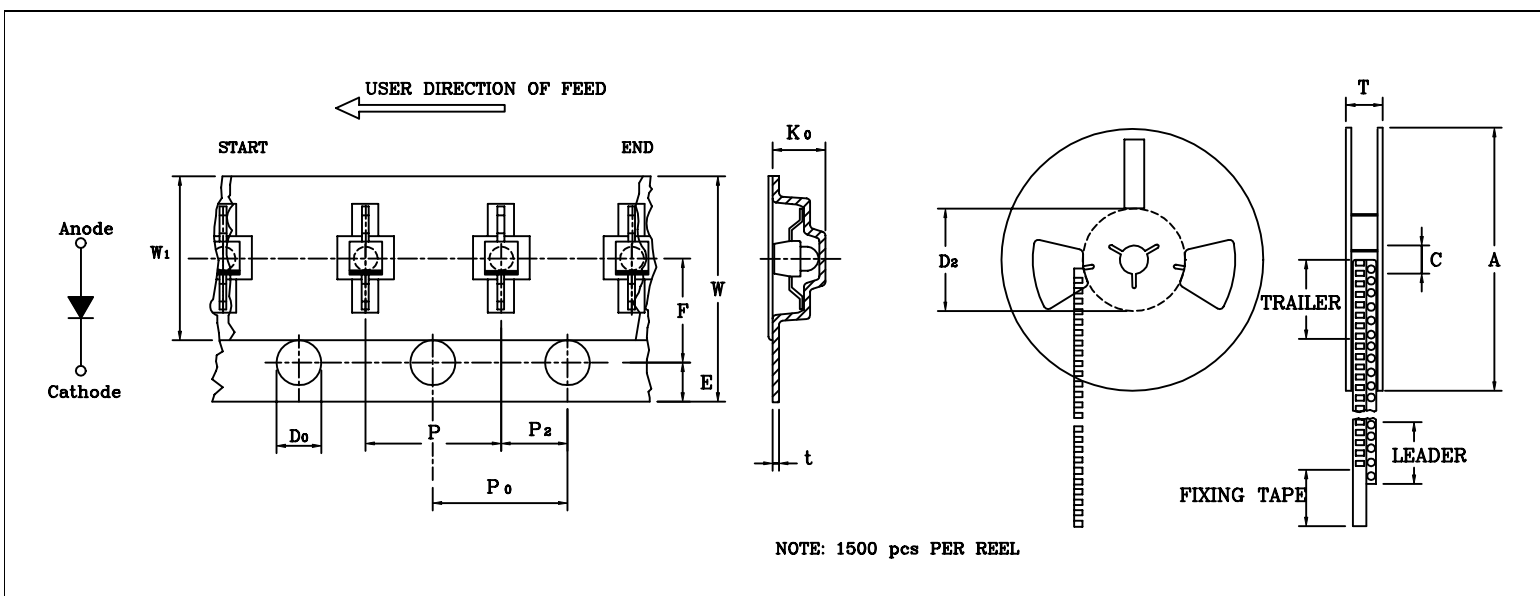
VERSION : 1.0 / 2001.06.07

● **FEATURES:**

- Compatible with automatic placement equipment
- Surface Mount assembly lamp
- High efficiency low power consumption
- Long life solid state reliability

● **TAPPING AND PACKAGING SPECIFICATION**

ITEM	SYMBOL	SPECIFICATION			
		Minimum		Maximum	
		mm	inch	mm	inch
Tape Feed Hole Diameter (DIA)	D_0	1.40	0.055	1.55	0.061
Feed Hole Location	E	1.65	0.065	1.85	0.072
Centers Line Dimensions Length Direction	F	5.45	0.215	5.55	0.218
Compartment Depth	K_0	3.10	0.122	3.20	0.126
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	12.00	0.472	12.30	0.484
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	20.00	0.788	21.50	0.846
Fixing Tape Width	W_1	9.00	0.354	9.30	0.366
Flange Space Between Flanges	T	16.00	0.629	18.40	0.724
Compartment Length	A_0	1.97	0.077	2.05	0.080
Compartment Width	B_0	6.40	0.250	6.50	0.256



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SURFACE MOUNT CHIP LED LAMP SPECIFICATION

●COMMODITY : AXIAL TYPE LED

●DEVICE NUMBER : BL-XUB361-F9

VERSION : 1.0 / 2001.06.07

●ELECTRICAL AND OPTICAL CHARACTERISTICS (Ta=25°C)

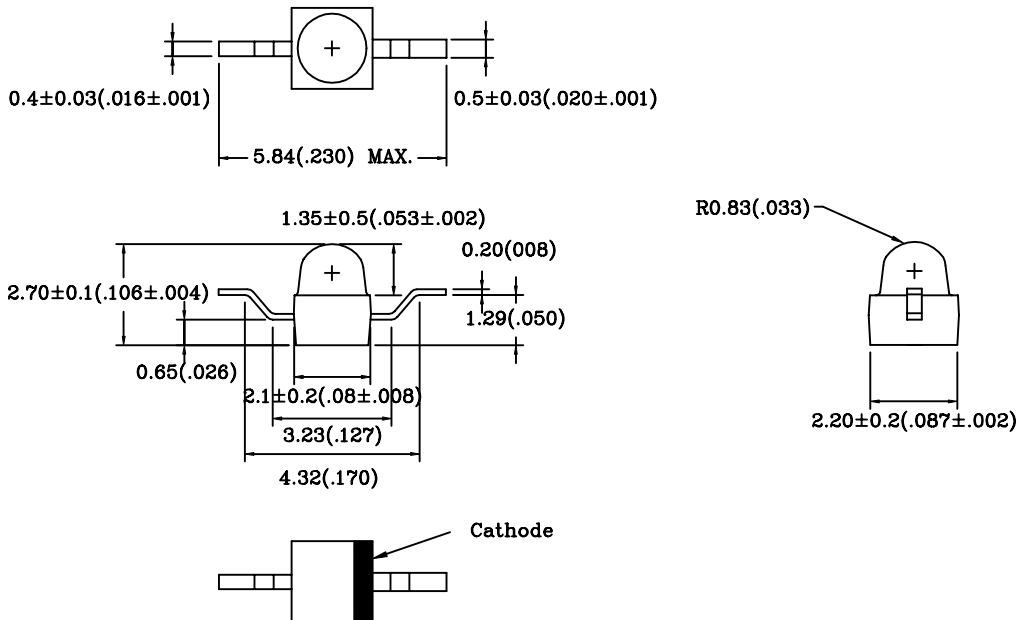
Chip		Lens Appearance	Absolute Maximum Rating				Electro-optical Data (At 20mA)			Viewing Angle 2θ 1/2 (deg)
Emitted Color	Peak Wave Length λ P(nm)		Δ λ (nm)	Pd (mW)	If (mA)	Peak If(mA)	Vf(V)		Iv Typ. (mcd)	
							Typ.	Max.		
Ultra Red	645	Water Clear	20	80	30	150	2.0	2.6	150.0	35

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

●ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Reverse Voltage	5V
Reverse Current (-Vr=5V)	100μA
Operating Temperature Range	-25°C ~ 80°C
Storage Temperature Range	-30°C ~ 85°C
Preheating Temperature	100°C ~ 150°C Within 2 Minutes
Soldering Temperature	240°C ~ 250°C Within 5 Seconds

●PACKAGE DIMENSIONS



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

2.Tolerance is ± 0.25 mm (0.01 "") unless otherwise specified.

3.Specifications are subject to change without notice.

RELEASED :



ENGINEER :

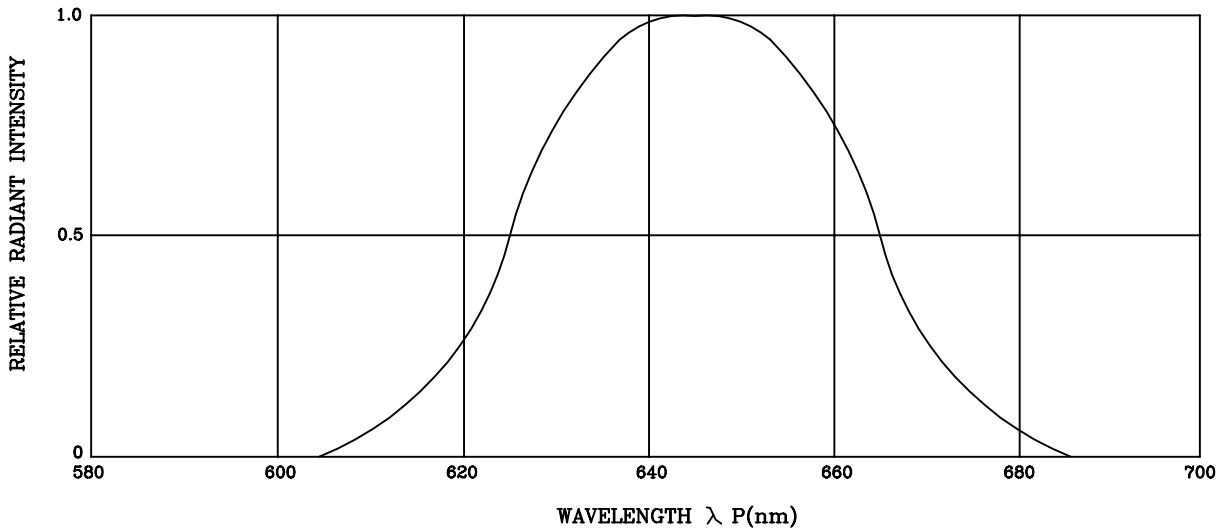


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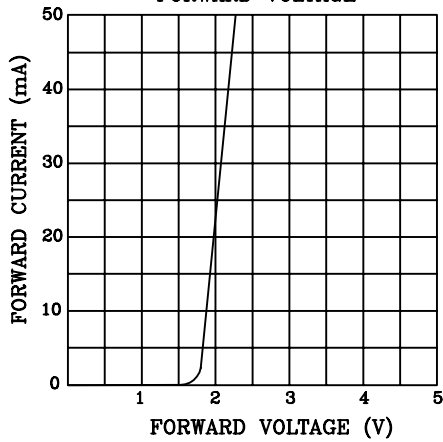
TYPICAL CHARACTERISTICS

DEVICE NUMBER: BL-XUB361-TR9

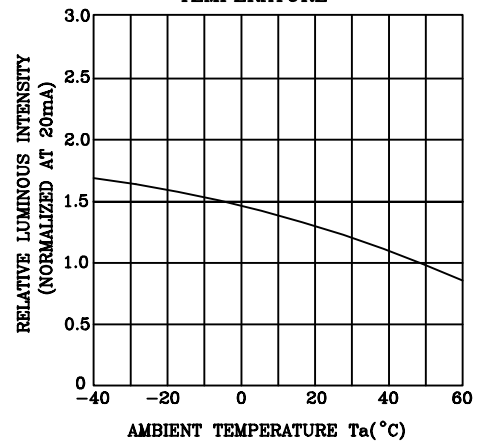
SPECTRAL DISTRIBUTION



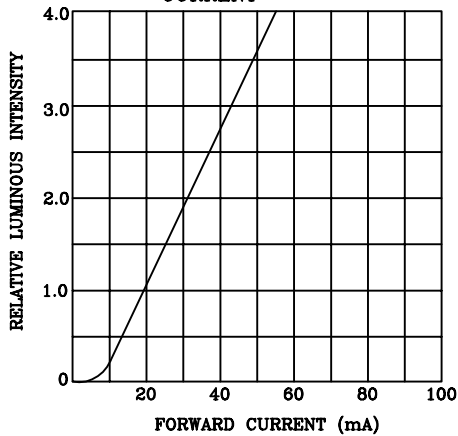
FORWARD CURRENT VS. FORWARD VOLTAGE



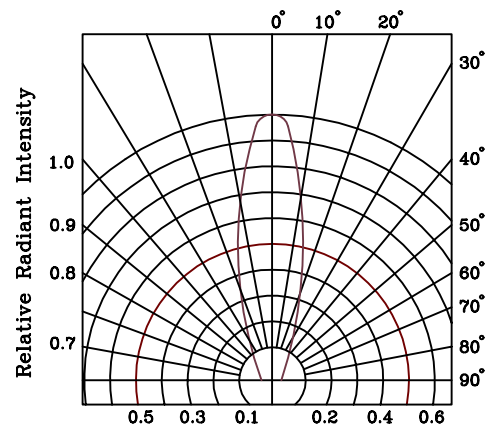
RELATIVE LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE



RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT



RADIATION DIAGRAM



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RELIABILITY TEST

DEVICE NO.: BL-XUB361-TR9

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 $I_f=20\text{mA}$ T_a =Under room temperature Test time=1,000hrs	0/20
	High Temperature High Humidity Storage	MIL-STD-202:103B JIS C 7021 :B-11	$T_a=+65^\circ\text{C}\pm 5^\circ\text{C}$ RH=90%-95% Test time=1,000hrs	0/20
	High Temperature Storage	MIL-STD-883:1008 JIS C 7021 :B-10	High $T_a=+85^\circ\text{C}\pm 5^\circ\text{C}$ Test time=1,000hrs	0/20
	Low Temperature Storage	JIS-C-7021 :B-12	Low $T_a=-35^\circ\text{C}\pm 5^\circ\text{C}$ 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	$-35^\circ\text{C} \sim +25^\circ\text{C} \sim +85^\circ\text{C} \sim +25^\circ\text{C}$ 60min 20min 60min 20min Test Time=5cycle	0/20
	Thermal Shock	MIL-STD-202:107D MIL-STD-750:1051 MIL-STD-883:1011	$+85^\circ\text{C}\pm 5^\circ\text{C} \sim -35^\circ\text{C}\pm 5^\circ\text{C}$ 20min 20min Test Time=10cycle	0/20
	Solder Resistance	MIL-STD-202:201A MIL-STD-750:2031 JIS C 7021 :A-1	Preheating : 140°C -160°C ,within 2 minutes. Operation heating : 235°C (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	VF (V)	$I_f=20\text{mA}$	Over $U_x1.2$
Reverse current	IR(μA)	VR=5V	Over U_x2
Luminous intensity	IV (mcd)	$I_f=20\text{mA}$	Below SX0.5

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

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