

深圳市云傲电子有限公司
SHENZHEN YUNAO ELECTRONICS CO.,LTD.

规格书

Specification for approval

客户名称:

CUSTOMER NAME: _____

发件日期:

ISSUE DATE:

回文日期:

RETURN DATE: ____ / ____ / ____

一、型号:

PART NO. : LA-150 RGB

二、说明:

STATEMENT: 1206 贴片全彩灯

三、附件:

ACCESSORY: 样品 出货检验记录表 封装尺寸图 电气特性曲线
内部线路图 焊性建议 PAD 建议

四、客户意见栏 CUSTOMER'S PROPOSAL (请客户填写)

- AGREE 同意 (请于认可栏中签名)
 DISAGREE 不同意

REASON 原因: _____

客户认可签章:

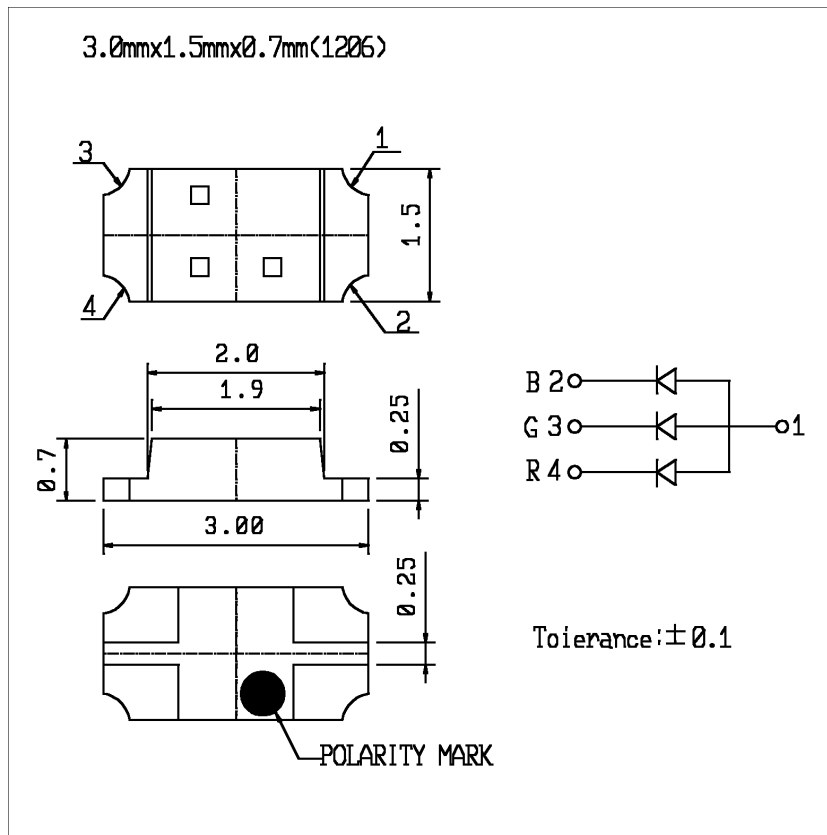
CUSTOMER SIGNATURE: _____

SURFACE MOUNT SMD LED

RGB Series SMD Chip LED Lamps

Part Number: LA-150RGB

Package outlines



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE DEVICES

ITEM	MATERIALS		
Resin (mold)	Epoxy		
Bonding Wire	$\varnothing 25 \mu\text{m Au}$		
Lens color	Water transparent		
Printed circuit board	BT (white)		
Dice	InGaN	InGaN	AllInGaP
Emitted color	Green	Blue	Red

NOTES:

1. All dimensions are in millimeters (inches);
2. Tolerances are $\pm 0.1\text{mm}$ (0.004inch) unless otherwise noted.

SURFACE MOUNT SMD LED

Part Number: LA-150RGB

Absolute maximum ratings

($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value			Unit
		R	G	B	
Power dissipation	Pd	100	280	80	mW
Forward current	If	20			mA
Reverse voltage	Vr	5			V
Operating temperature range	Top	-20 ~+80			$^{\circ}\text{C}$
Storage temperature range	Tstg	-25~+85			$^{\circ}\text{C}$
Peak pulsing current (1/8 duty f=1kHz)	Ifp	100			mA

Electro-optical characteristics

($T_A=25^{\circ}\text{C}$)

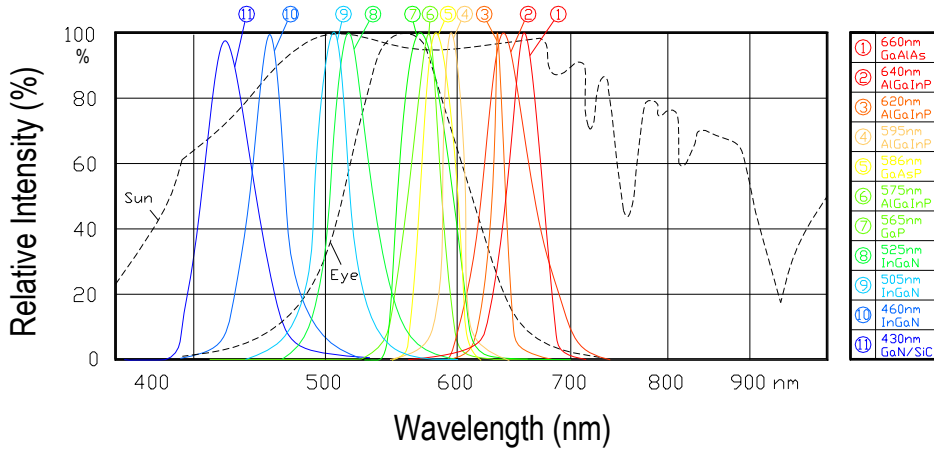
Parameter	Test Condition	Symbol	Value			Unit
			Min	Typ	Max	
Wavelength at peak emission	If=20mA	λ peak R	--	--	--	nm
		G	--	--	--	
		B	--	--	--	
Spectral half bandwidth	If=20mA	$\Delta \lambda$ R	--	20	--	nm
		G	--	40	--	
		B	--	20	--	
Dominant wavelength	If=20mA	λ dom R	627	--	630	nm
		G	520	--	523	
		B	465	--	468	
Forward voltage	If=20mA	Vf R	1.8	2.0	2.1	V
		G	2.8	2.9	3.0	
		B	2.7	2.9	3.0	
Luminous intensity	If=20mA	Iv R	--	100	120	mcd
		G	--	240	280	
		B	--	80	100	
Viewing angle at 50% Iv	If=10mA	2θ 1/2	--	140	--	Deg
Reverse current	Vr=5V	Ir	--	--	10	μA

SURFACE MOUNT SMD LED

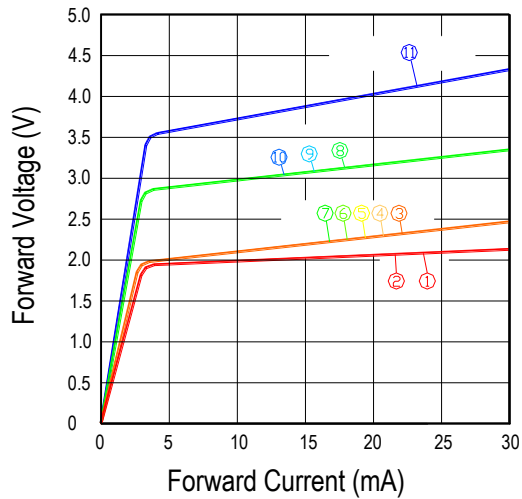
Part Number: LA-150RGB

OPTICAL CHARACTERISTIC CURVES

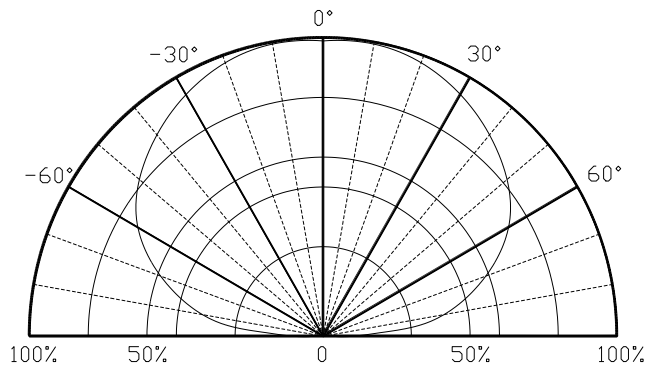
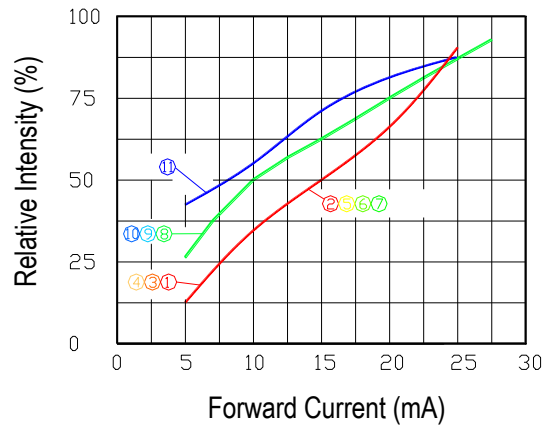
Relative Intensity vs. Wavelength



Forward Voltage vs. Forward Current



Relative Intensity vs. Forward Current

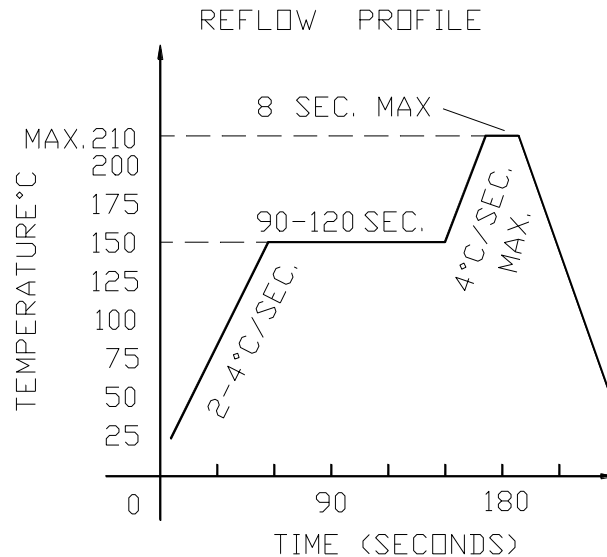


SURFACE MOUNT SMD LED

Part Number: LA-150RGB

Reflow Profile

■ Reflow Temp/Time

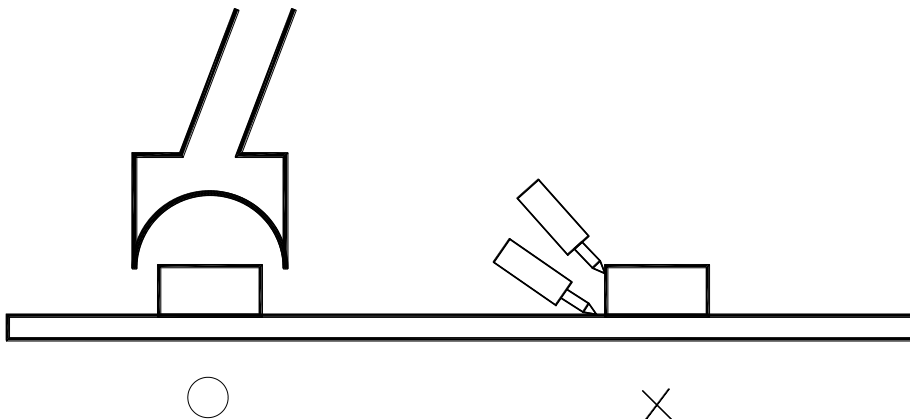


■ Soldering iron

Basic spec is ≤ 5 sec when 260°C . If temperature is higher, time should be shorter (+ $10^{\circ}\text{C} \rightarrow -1$ sec). Power dissipation of iron should be smaller than 15W, and temperatures should be controllable. Surface temperature of the device should be under 230°C .

■ Rework

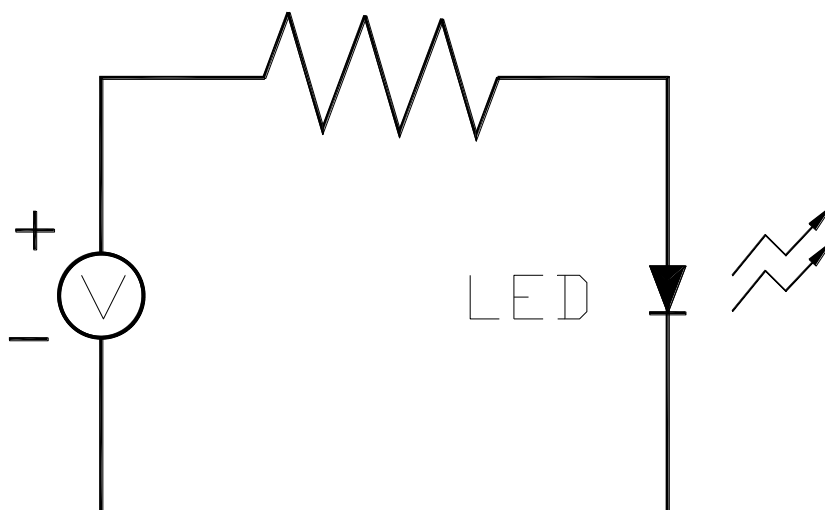
1. Customer must finish rework within 5 sec under 260°C .
2. The head of iron can not touch copper foil
3. Twin-head type is preferred.



SURFACE MOUNT SMD LED

Part Number: LA-150RGB

TEST CIRCUIT



■ Precautions For use

Over-current-proof

Customer must apply resistors for protection; otherwise slight voltage shift will cause big current change (Burn out will happen).

SURFACE MOUNT SMD LED

Part Number LA-150RGB

Test items and results of reliability

Type	Test Item	REF. Standard	Test Conditions	Note	Number of Damaged
Environmental Sequence	Temperature Cycle	JIS C 7021 (1977)A-4	-20°C 30min ↑ ↓ 5min 80°C 30min	100 cycle	0/100
	Thermal Shock	MIL-STD-107D	-20°C 15min ↑ ↓ 80°C 15min	100 cycle	0/100
	High Humidity Heat Cycle	JIS C 7021 (1977)A-5	30°C ↔ 65°C 90%RH 24hrs/1cycle	10 cycle	0/100
	High Temperature Storage	JIS C 7021 (1977)B-10	T _a =80°C	1000 hrs	0/100
	Humidity Heat Storage	JIS C 7021 (1977)B-11	T _a =60°C RH=90%	1000 hrs	0/100
	Low Temperature Storage	JIS C 7021 (1977)B-12	T _a =-30°C	1000 hrs	0/100
Operation Sequence	Life Test	JIS C 7035 (1985)	T _a =25°C I _F =20mA	1000 hrs	0/100
	High Humidity Heat Life Test	*	60°C RH=90% I _F =20mA	500 hrs	0/100
	Low Temperature Life Test	*	T _a =-20°C I _F =20mA	1000 hrs	0/100