深 圳 市 希 兰 光 电 有 限 公 司
SHENZHEN SEALAND OPTOELECTRONICS CO.,LTD

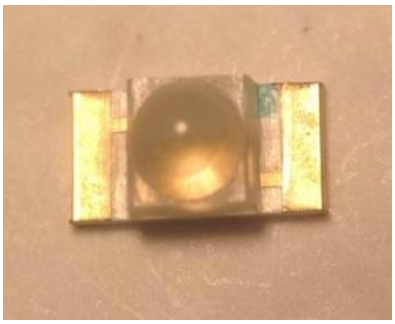
NO:XL1206IRC1720-L

Specification for Approval

● Feature

- water clear type
- 1206 dome lens
- superior weather-resistance
- high radiant intensity
- Ideal for indication light on hand held products

◆ Appearance



● Applications

- Floppy disk drive
- Medical equipment
- PCB mounted infrared sensor
- Infrared remote control units with high power requirement
- Smoke detector
- Infrared applied system
- Infrared touch screen

■ Notes

1. Lead spacing is measured where the lead emerge from the package.
2. Above specification may be changed without notice . Our company will reserve authority on material change for above specification.
3. These specification sheets include materials protected under copyright of SEALAND corporation.

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Absolute Maximum Rating (Ta=25℃)

Item	Symbol	Value	Unit
DC forward current	I_F	20	mA
Pulse forward current*	I_{FP}	100	mA
Power dissipation	P_D	100	mW
Operating temperature	T_{opr}	-40~+85	℃
Storage temperature	Y_{stg}	-40~+80	℃
Reverse voltage	V_R	5	V
Sold soldering temperature	T_{sol}	260℃/3Sec	---

*Plus with Max 10ms,duty ratio max1/10

Initial Electrical/Optical Characteristics Tamb = 25°C, unless otherwise specified

Parameter	Test conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	IF = 20 mA	VF		0.7	0.9	v
Forward voltage*	IF = 100 mA	VF		0.85	1.1	v
Reverse voltage	IR = 100 μA	VR		5		v
Radiant power	IF = 20 mA	Φe	0.55	0.85		mW
Radiant power*	IF = 100 mA	Φe		3		mW
Peak wavelength	IF = 20 mA	λp	1670	1720	1740	nm
Spectral bandwidth at 50%	IF = 20 mA	Δλ0.5		100		nm
Viewing angle	IF = 20 mA	φ		30		deg.
Switching time	IF = 20 mA	tr, tf		25/40		ns

*Plus with Max 10ms,duty ratio max1/10

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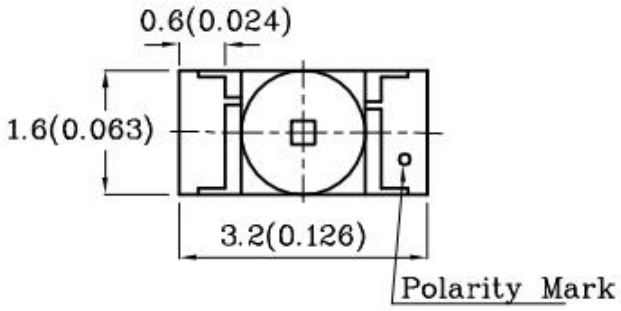
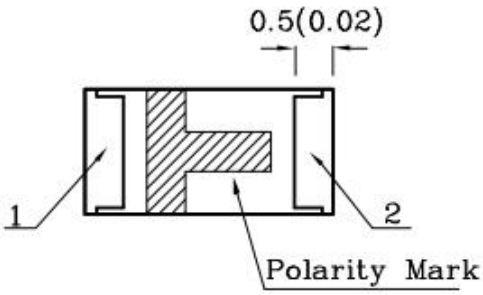
Package Schematics

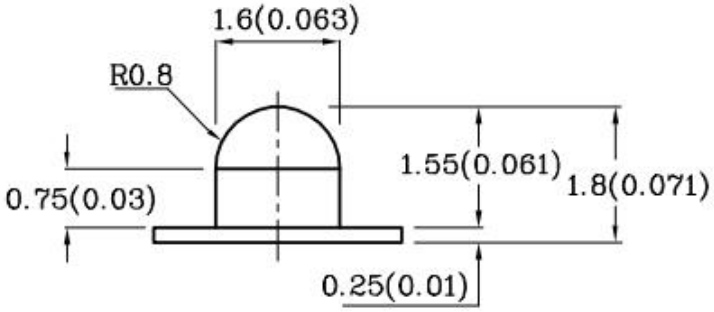
Top view:



Back view:



Side view:



Notes:

1. All dimensions are in millimeters (inches).

2.Tolerance is ±0.1(0.004") unless otherwise noted.

3. Specifications are subject to change without notice.

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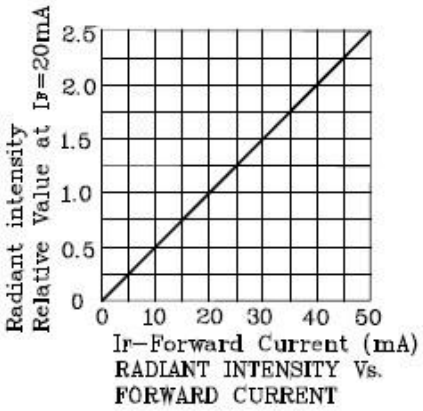
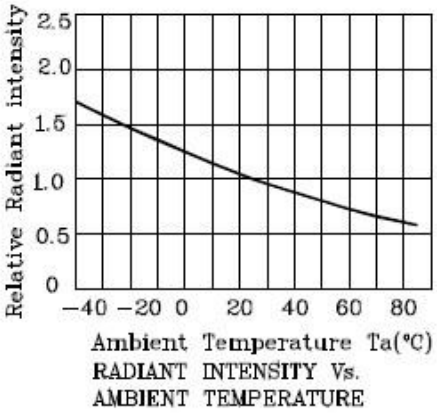
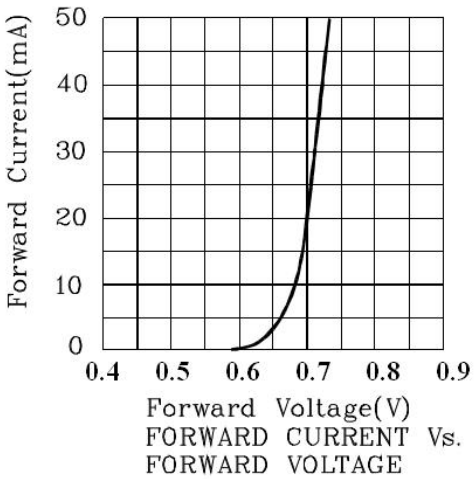
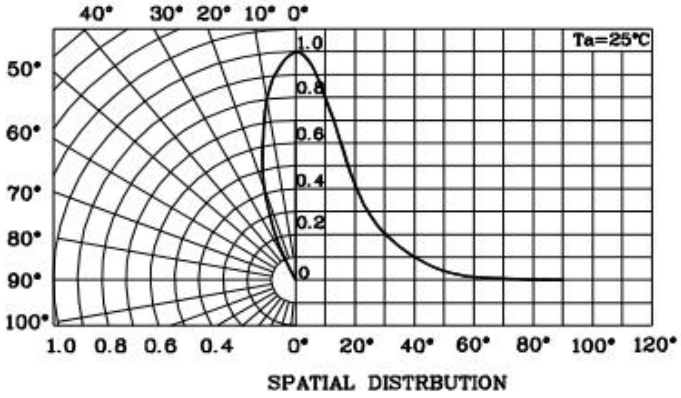
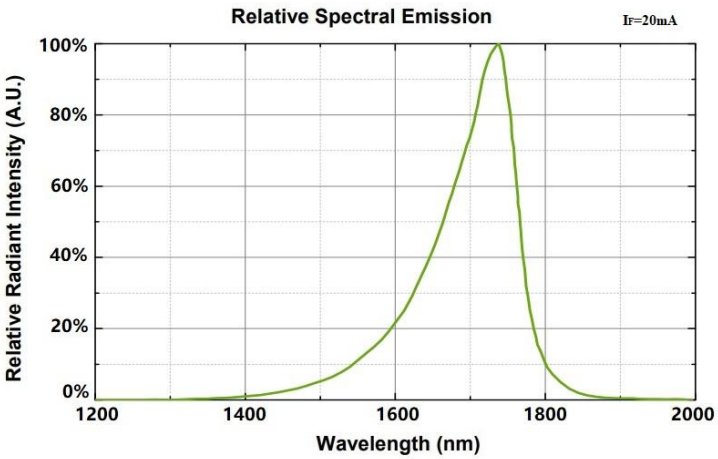
Typical Electro-Optical Characteristics Curves











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Reliabibity performance

Test items and result

Test classification	Test item	Test condionts	Test duration	Sample size	AC/RE
Life test	Room temperature DC operating life test	Ta=25±5ºC IF=20mA	1000hrs	30pcs	0/1
Environment test	Thermal shock Test	-10±5ºC←→+100±5ºC 5min l0sec 5min	50cysles	30pcs	0/1
	Temperature cycle test	-40±5ºC←→+85±5ºC 30min 5sec 30min	50cysles	30pcs	0/1
	High temperature & High humidity test	Ta=85±5ºC RH=85%±0.5%RH	1000hrs	30pcs	0/1
	High temperature storage	Ta =100±5 ºC	1000hrs	30pcs	0/1
	Low temperture storage	Ta =-55±5ºC	1000hrs	30pcs	0/1
Mechanical test	Resistance to soldering heat	Ta =230±5ºC	5sec	30pcs	0/1
	Lead integrity	Load 2.5N(0.25KGf) 0 ºC ∽ 90 ºC ∽ 0ºC	3times	30pcs	0/1

Reflow profile

Soldering condition

• Recommended soldering conditions

Reflow Soldering		Hand Soldering	
Pre-heat	160～180℃	Temperature	300℃ Max.
Pre-heat time	120 seconds Max.		
Peak temperature	260℃ Max.	Soldering time	3 second Max.
Soldering time	10 seconds Max.		(one time only)
Condition	Refer to Temperature-profile		

After reflow soldering rapid cooling should be avoided

Temperature-profile (Surface of circuit board)

Use the following conditions shown in the figure.

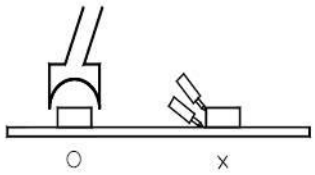
1. Reflow soldering should not be done more than two times
2. When soldering ,do not put stress on the LEDs during heating

Soldering iron

1. When hand soldering, keep the temperature of the iron under 300℃, and at that temperature keep the time under 3sec.
2. The hand soldering should be done only a time
3. The basic spec is ≤5 sec. when the temperature of 260℃, do not contact the resin when hand soldering

Rework

1. Customer must finish rework within 5 sec under 260℃
2. The head of iron can not touch the resin
3. Twin-head type is preferred.

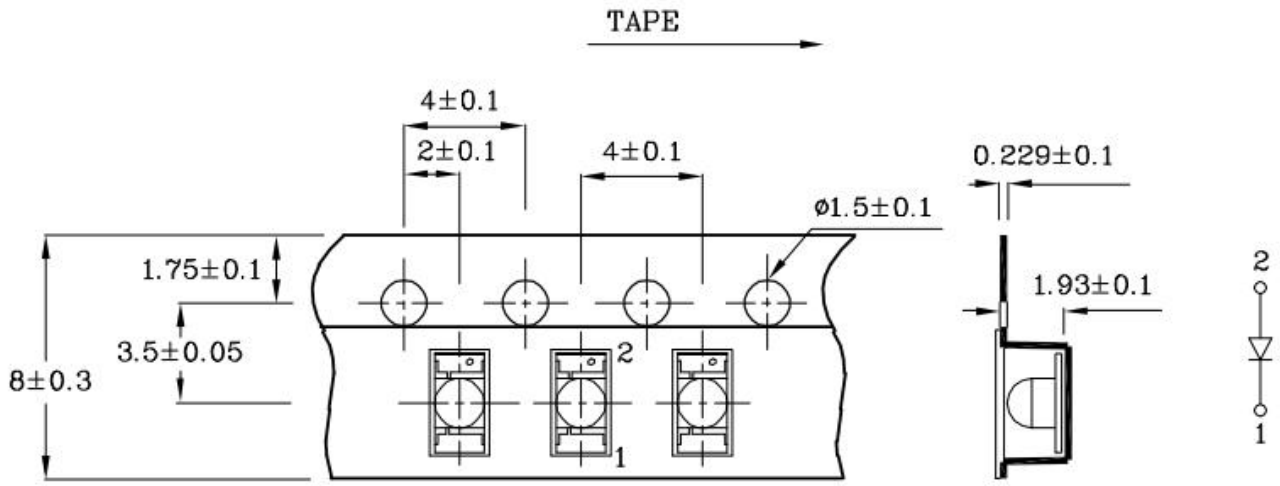


CAUTIONS

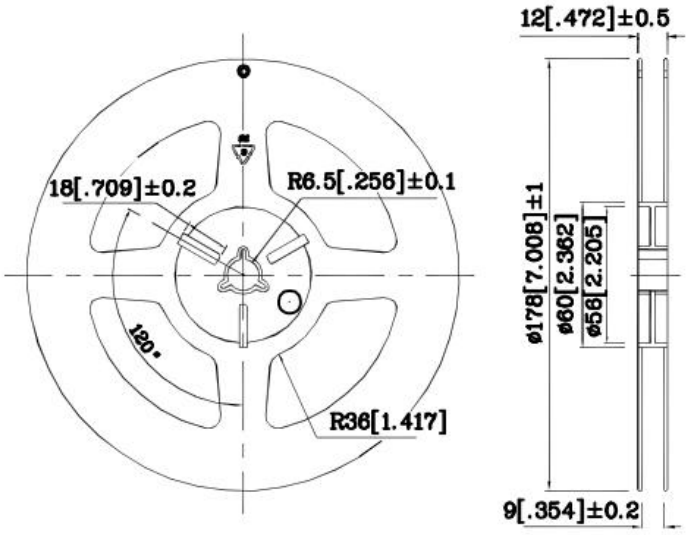
The encapsulated material of the LEDs is silicone . Therefore the LEDs have a soft surface on the top of package. The pressure to the top surface will be influence to the reliability of the LEDs. Precautions should be taken to avoid the strong pressure on the encapsulated part. So when using the picking up nozzle, the pressure on the silicone resin should be proper

Specification for Approval

◆ Dimens ions for Tape

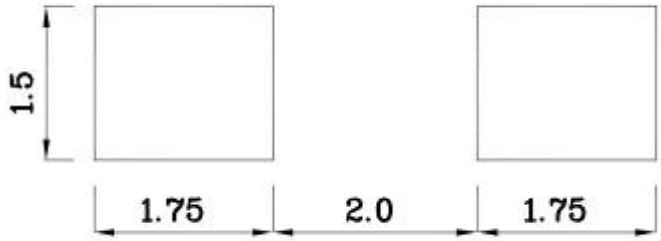


Reel Dimensions

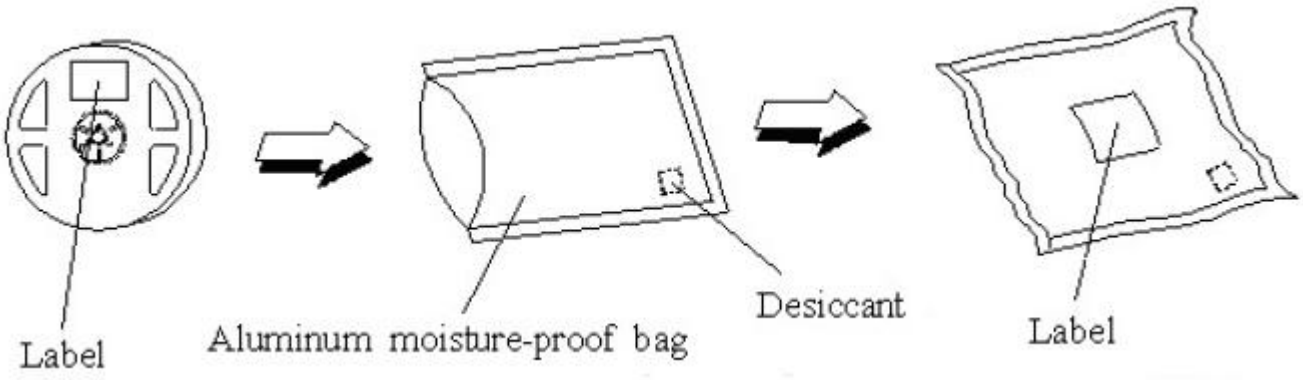


Recommended Soldering Pattern

(Units : mm; Tolerance: ± 0.1)



◆ Dimensions for Reel



Notes:

1.All dimensions are in mm, tolerance is±2.0mm unless otherwise noted.

2.Specifications are subject to change without notice.