EVERLIGHT ELECTRONICS CO.,LTD.

Device Number : DLE-301-010 REV: 1.3

MODEL NO : 31-01SURC ECN : Page: 1/4

Benefits :

- Fewer LEDs Required
- Lowers Lighting System Cost



Features :

- High Flux Output.
- Designed for High Current Operation.
- Low Thermal Resistance.
- Low Profile.
- Packaged in Tubes for Use with Automatic Insertion Equipment.

Applications :

- Automotive Exterior Lighting
- Electronic Signs and Signals

Description :

This revolutionary package design allows the lighting designer to reduce the number of LEDs required and provide a more uniform and unique illuminated appearance than with other LED solutions.
This is possible through the efficient optical package design and high-current capabilities.
The low profile package can be easily coupled with reflectors or lenses to efficiently distribute light and provide the desired lit appearance.

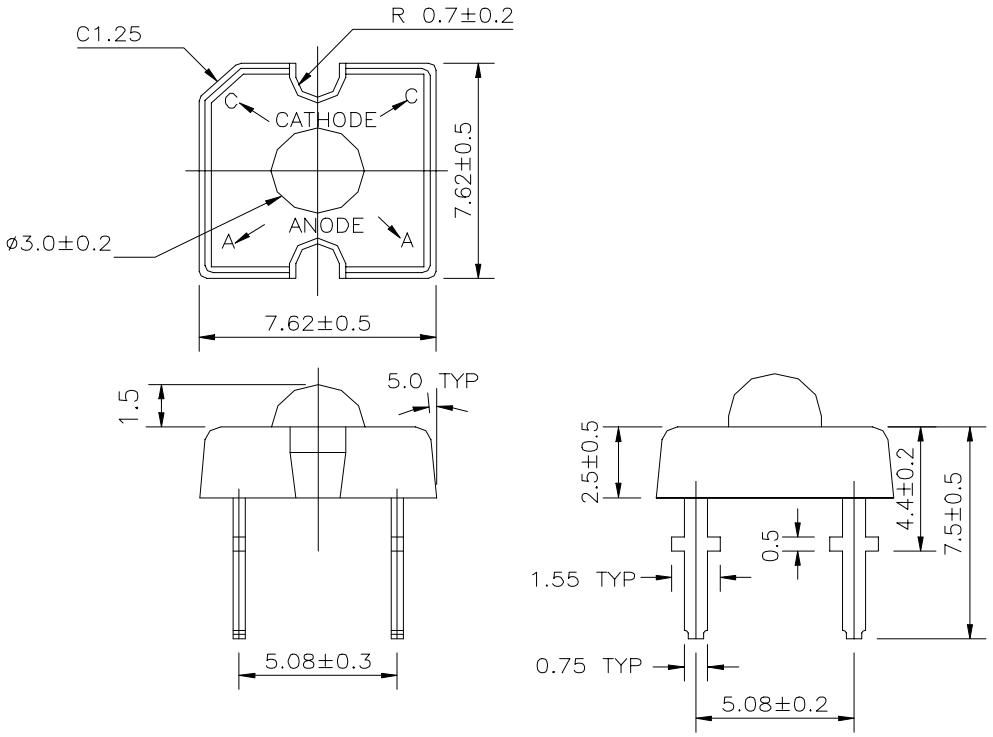
This product family employs the world's brightest red-orange and amber LED materials,which allow designers to match the color of popular lighting applications,such as automotive tail,stop,and turn signal lamps,and electronic signs.

PART NO	CHIP		Lens Color
	Material	Emitted Color	
31-01SURC	AlGaInP	Super Hyper-Red	Water Clear

■ Absolute Maximum Ratings at T_A = 25℃

Parameter	Symbol	Rating	Unit
Forward Current	If	70	mA
Operating Temperature	Topr	-40 to +85	℃
Storage Temperature	Topr	-40 to +100	℃
Soldering Temperature	Tsol	260 ± 5	℃
Power Dissipation	Pd	120	mW
Peak Forward Current(Duty 1/10 @ 1KHZ)	If(Peak)	200	mA
Reverse Voltage	Vr	5	V

■ Package Dimension:



NOTES :

1.All dimensions are millimeter.(inch)

2.An epoxy meniscus may extend about 1.5mm(0.059") down the lead.

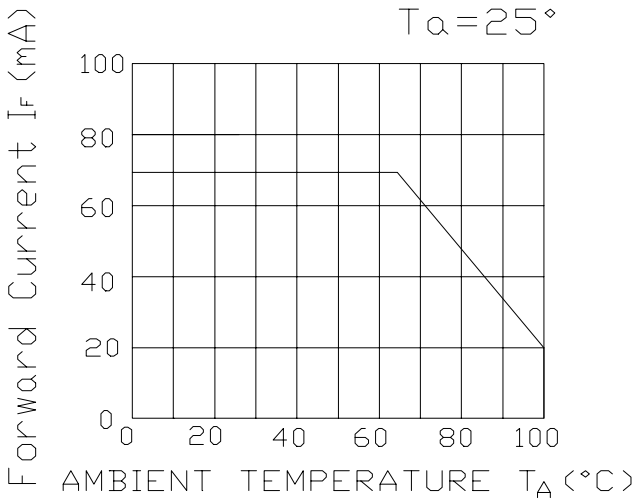
■ Electro-Optical Characteristics :

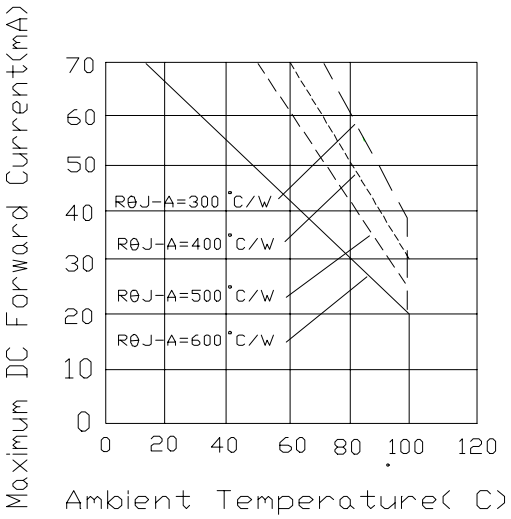
Parameter	Symbol	MIN.	TYP.	MAX.	Condition	Unit
Total Flux	Φv	500	1310	----	If=70mA	mlm
Viewing Angle	2θ 1/2	----	50	----	If=20mA	deg
Peak Wavelength	λp	----	632	----	If=20mA	nm
Dominant Wavelength	λd	----	624	----	If=20mA	nm
Spectrum Radiation Bandwidth	△λ	----	20	----	If=20mA	nm
Forward Voltage	Vf	1.71	2.30	2.91	If=70mA	V
Reverse Current	Ir	----	----	10	Vr=5V	μA
Recommened Operating Current	If (Rec)	20	----	70		mA
DC Forward Current	If (mA)	----	----	70		mA

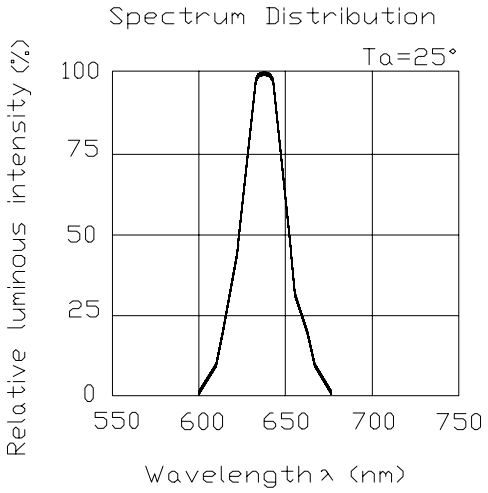
■ Reliability test item and condition

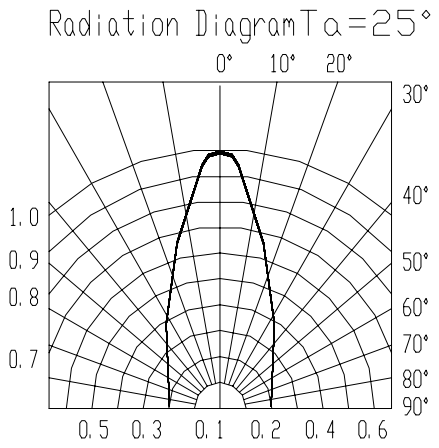
NO	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Soldering Heat	TEMP:260℃ ± 5 ℃	10±1 SEC	76 Pcs	0/1
2	Solderability	TEMP:230℃ ± 5 ℃	5±1 SEC	76 Pcs	0/1
3	Temperature Cycle	H : +85℃ 30min ∫ 5 min L : -55℃ 30min	50 CYCLES	76 Pcs	0/1
4	Thermal Shock	H : +100℃ 5min ∫ 10 sec L : -10℃ 5min	50 CYCLES	76 Pcs	0/1
5	High Temperature Storage	TEMP : 100℃	1000 HRS	76 Pcs	0/1
6	Low Temperature Storage	TEMP : -55℃	1000 HRS	76 Pcs	0/1
7	DC Operating Life	If(max) mA	1000 HRS	76 Pcs	0/1
8	High Temperature / High Humidity	85℃/85% RH	1000 HRS	76 Pcs	0/1

■ Typical Electro-Optical Characteristic Curves









■ Specifications for Bin Grading

31-01SURC- □ □ □

① ② ③

① Vf(v)			② λd(nm)			③ Φv(mlm)		
Bin	Min	Max	Bin	Min	Max	Bin	Min	Max
1	1.71	1.95	L	618	630	U	500	830
2	1.83	2.07				V	680	1310
3	1.95	2.19				W	990	1760
4	2.07	2.31				X	1440	2750
5	2.19	2.43				Y	2250	4100
6	2.31	2.55						
7	2.43	2.67						
8	2.55	2.79						
9	2.67	2.91						