

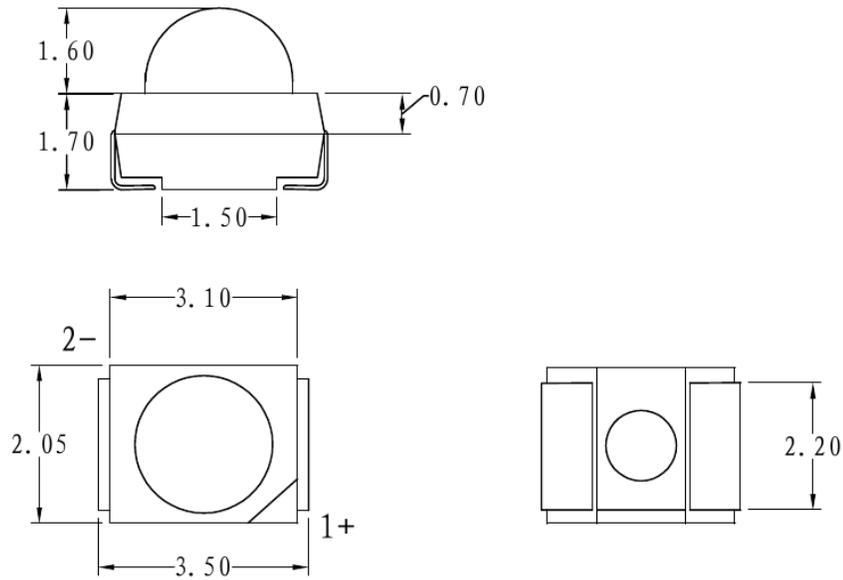


APPROVAL SHEET

P/N: IE-3528R-L-C
REV: A/0
EFFECTIVE TIME: 2015-5-5

Part Number: IE-3528R-L-C

■ Package Dimensions And Materials



1: ANODE
2: CATHODE

Chip		Lens Color
Material	Emitting Color	
AlGaInP	Red	Water Clear

(Units)	(Unless otherwise noted)	(Encapsulation tolerance)	(Dimensions of produded resin flange)
mm	± 0.1	± 0.25	Max1.0

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■ Absolute Maximum Rating at TA=25° C

Item	Symbol	Absolute Maximum Rating	Unit
Forward Current	If	20	mA
Peak Forward Current	Ifp	100	mA
Reverse Voltage	VR	5	V
Power Dissipation	PD	50	mW
Electrostatic discharge	ESD	3000	V
Operation Temperature	Topr	-30 -- +80	° C
Storage Temperature	Tstg	-40 -- +80	° C
Lead Soldering Temperature	Tsol	Max. 240° C for 5sec Max	

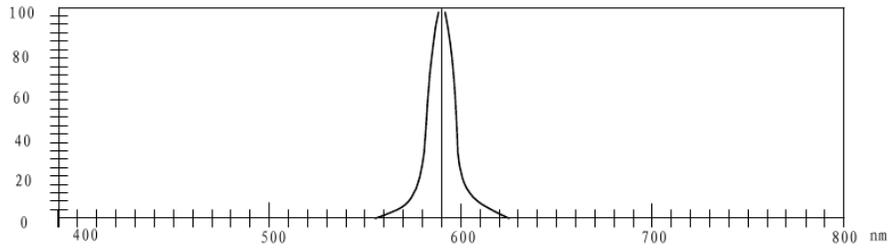
IFP Conditions: Pulse Width ≤ 10msec duty ≤ 1/10
 Tsol Conditions: 5mm from the base of the epoxy bulb

■ Typical Optical/Electrode Characteristic

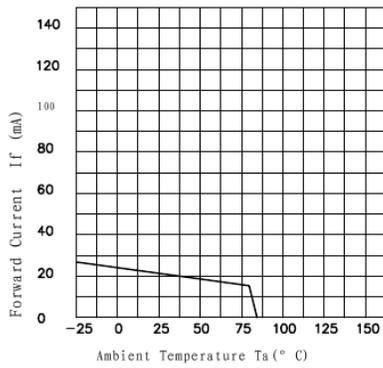
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	Vf	IF=20mA	1.8	--	2.4	V
Reverse Current	Ir	Vr=5V	--	--	10	uA
50% Power Angle	2θ 1/2	IF=20mA		30		deg
Luminous Intensity	IV	IF=20mA	2	--	4	LM
The Main Wavelength	λ D	IF=20mA	620	--	630	NM
Recommend Forward Current	If (rec)	--		10-30		mA

Typical Optical/Electrode Characteristic Curves
($T_a=25^\circ\text{C}$ Unless Otherwise Noted)

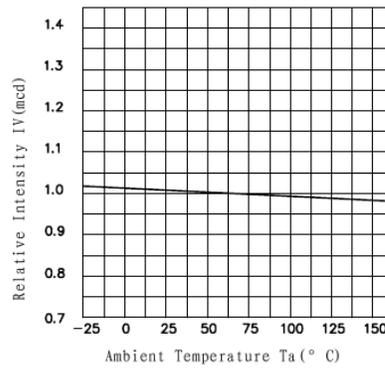
RELATIVE RESPONSE 100%=1.642e-G01



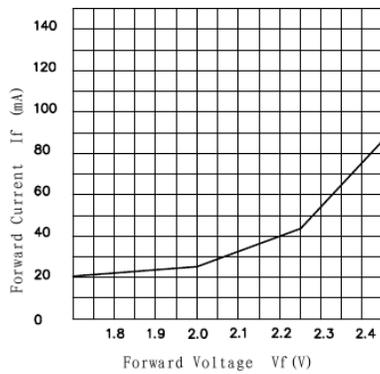
Forward Current vs. Ambient Temperature



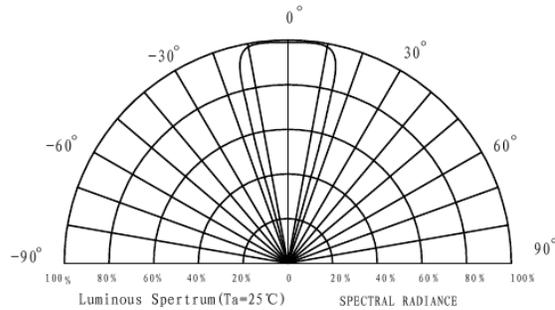
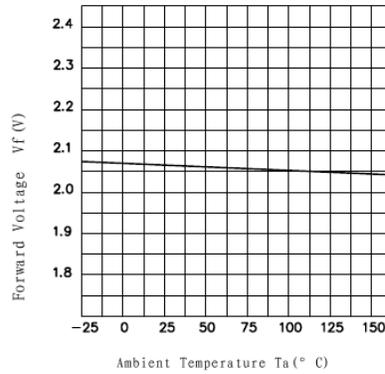
Relative Intensity vs. Ambient Temperature



Forward Current vs. Ambient Temperature



Forward Current vs. Ambient Temperature



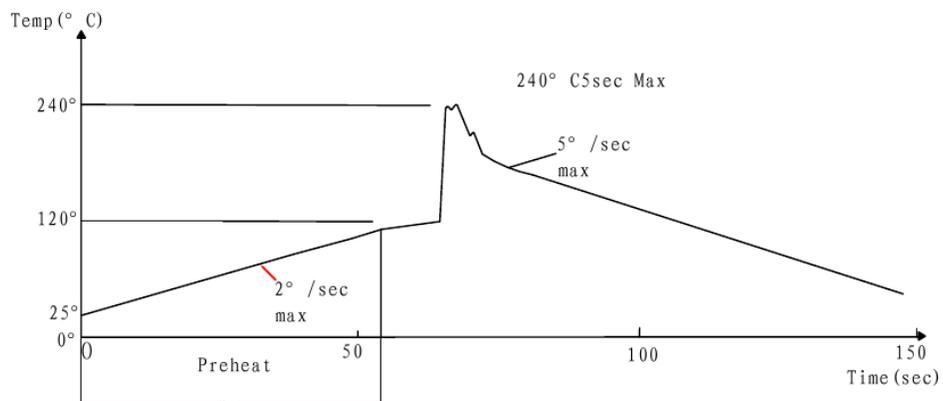
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Soldering Condition (Pb-Free)

1. Iron:

Soldering Iron: 30W Max
Temperature 350° C Max
Soldering Time: 3 Seconds Max (One Time)
Distance: 2mm Min (From solder joint to body)

2. Wave Soldering Profile

Dip Soldering
Preheat: 120° C Max
Preheat time: 60seconds Max
Ramp-up
2° C/sec (max)
Ramp-Down: -5° C/sec (max)
Solder Bath: 240° C Max
Dipping Time: 3 seconds Max
Distance: 2mm Min (From solder joint to body)



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■ Reliability Persult

Test Classification	Test Item	Test Condititons	Test Duration	Sample Size	AC/RE
Life Test	Room Temperatuer DC Operating Life Test	Ta=25°C ± 5°C, IF=20mA	1000Hrs	5PCS	0/1
Environment Test	Thermal Shock Test	-10°C ± 5°C ← → +100°C ± 5°C 5min. 10sec. 5min	50cycles	5PCS	0/1
	Temperature Cycle Test	-55°C ± 5°C ← → +85°C ± 5°C 30min. 5min. 30min	50cycles	5PCS	0/1
	High Temperature High Humidity test	Ta=85°C ± 5°C RH=85% ± 0.5%RH	1000Hrs	5PCS	0/1
	High Temperature Storage	Ta=100°C ± 5°C	1000Hrs	5PCS	0/1
	Low Temperature Storage	Ta=-55°C ± 5°C	1000Hrs	5PCS	0/1
Mechanical Test	Resistance to Soldering Heat	Ta=240°C ± 5°C	5sec	5PCS	0/1
	Lead Integrity	Load 2.5N(0.25kgf) 0° - 90° - 0°	3times	5PCS	0/1

■ Criteria for Judging The Damage

Item	Symbol	Test Conditions	Criteria for Judgment	
			Min.	Max.
Forward Voltage	V _F	IF=20mA		U. S. L. *1. 2
Reverse Current	I _R	V _R =5V		U. S. L. *2. 2
Luminous Intensity	I _V	IF=20mA	L. S. L. ** × 0. 7	

U. S. L. * : Upper Standard Level

L. S. L. ** : Lower Standard Level