

PRELIMINARY SPEC

PATENT PENDING

XPower

Part Number : KA-1010SEC28 Reddish-Orange

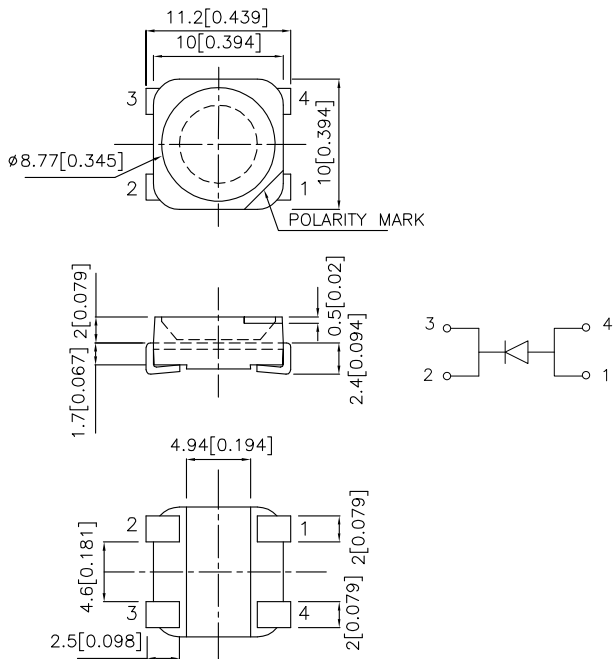
Features

- *P-LCC-4 PACKAGE.
- *SINGLE COLOR.
- *HIGH LUMINANCE.
- *HIGH POWER, OPERATING CURRENT @350mA.
- *SUITABLE FOR ALL SMT ASSEMBLY METHODS.
- *PACKAGE : 1000PCS / REEL.
- *RoHS COMPLIANT.



Applications

- *traffic signaling
- *backlighting (illuminated advertising , general lighting)
- *interior and exterior automotive lighting
- *substitution of micro incandescent lamps
- *portable light source (e.g. bicycle flashlight)
- *signal and symbol luminaire for orientation
- *marker lights (e.g. steps, exit ways, etc)
- *decorative and entertainment lighting
- *indoor and outdoor commercial and residential architectural lighting



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	luminous Intensity Iv(cd) @350mA[1]		Viewing Angle[2]
			Min.	Typ.	2θ1/2
KA-1010SEC28	Reddish-Orange (InGaAlP)	WATER CLEAR	15	20	120°

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power dissipation	Pt	1.2	W
Reverse Voltage	VR	5	V
Junction temperature	TJ	110	°C
Operating Temperature	Top	-40 To +85	°C
Storage Temperature	Tstg	-40 To +85	°C
DC Forward Current[1]	IF	350	mA
Peak Forward Current [3]	IFM	500	mA
Thermal resistance [1]	Rth	60	°C/W

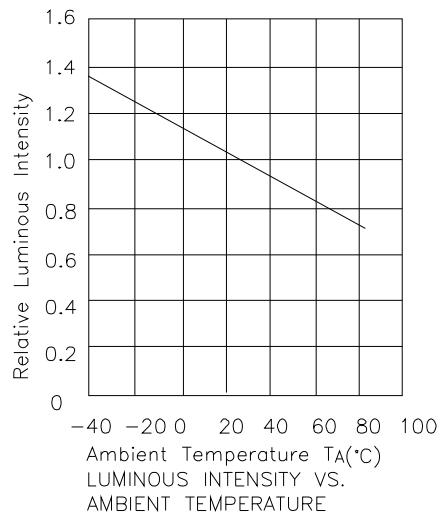
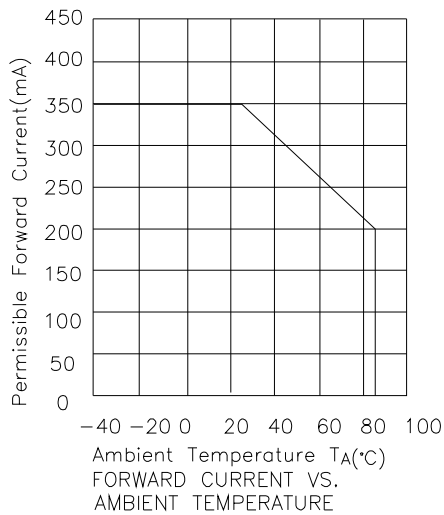
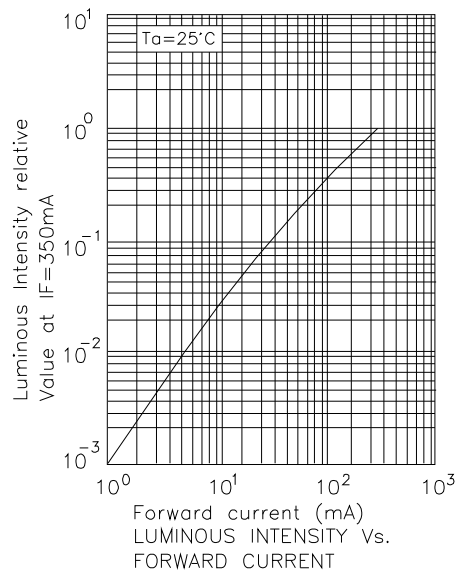
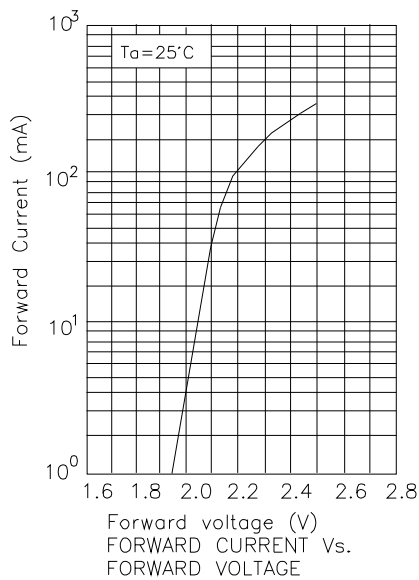
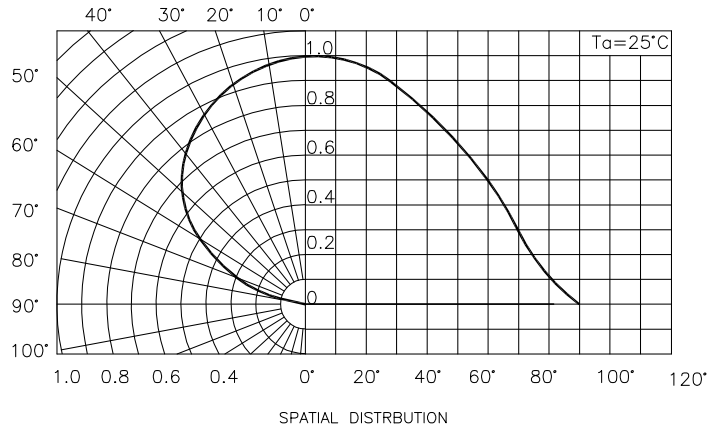
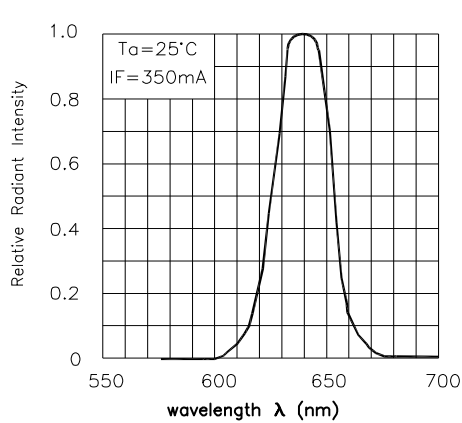
Notes:

- Results from mounting on PC board FR4(pad size≥100mm² per pad), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.
- θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- 3.1/10 Duty Cycle, 0.1ms Pulse Width.

Electrical / Optical Characteristics at TA=25°C

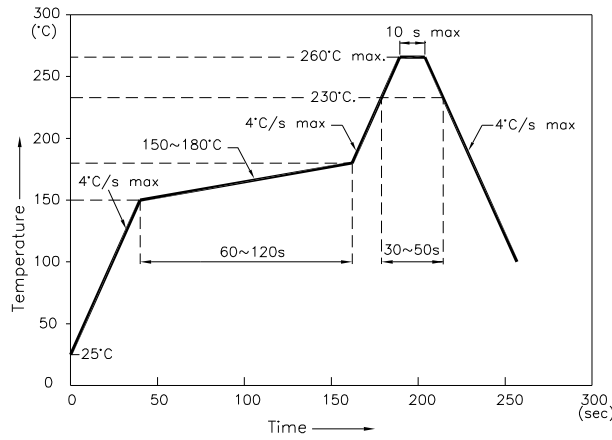
Parameter	Symbol	Value	Unit
Wavelength at peak emission IF=350mA [typ.]	λpeak	640	nm
Dominant Wavelength IF=350mA [typ.]	λdom	625	nm
Spectral bandwidth at 50%ΦREL MAX IF=350mA [typ.]	Δλ	30	nm
Viewing angle at 50%ΦV [typ.]	θ	120	°
Forward Voltage IF=350mA [typ.]	VF	2.5	V
Reverse Current (VR=5V) [typ.]	IR	10	μA
Temperature coefficient of λpeak IF=350mA, -10°C≤T≤100°C [typ.]	TCλpeak	0.14	nm/°C
Temperature coefficient of λdom IF=350mA, -10°C≤T≤100°C [typ.]	TCλdom	0.12	nm/°C
Temperature coefficient of VF IF=350mA, -10°C≤T≤100°C [typ.]	TCV	-3.0	mV/°C

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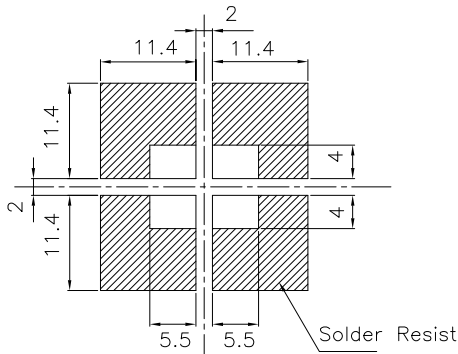
Reflow Soldering Profile For Lead-free SMT Process.



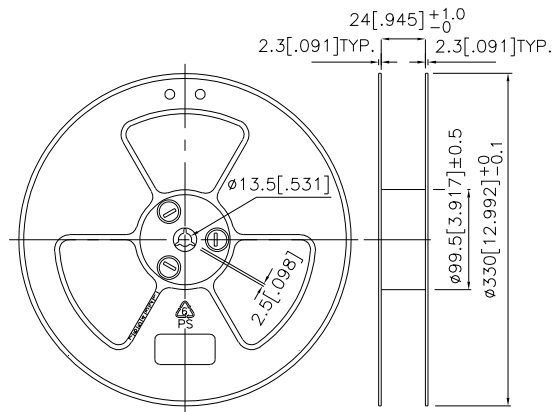
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

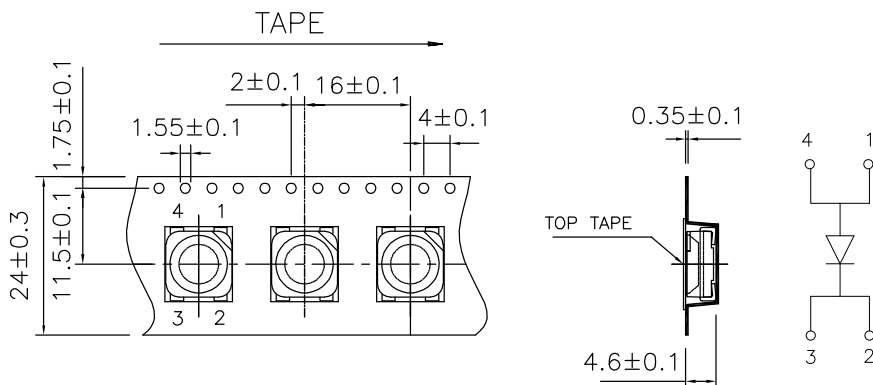
Recommended Soldering Pattern (Units : mm)



Reel Dimension



Tape Specifications (Units : mm)



If special sorting is required (e.g. binning based on forward voltage, luminous intensity, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.