

Kingbright

XPower

PRELIMINARY SPEC

Part Number : AA1010SEC28 Reddish-Orange

Features

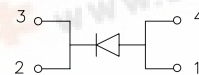
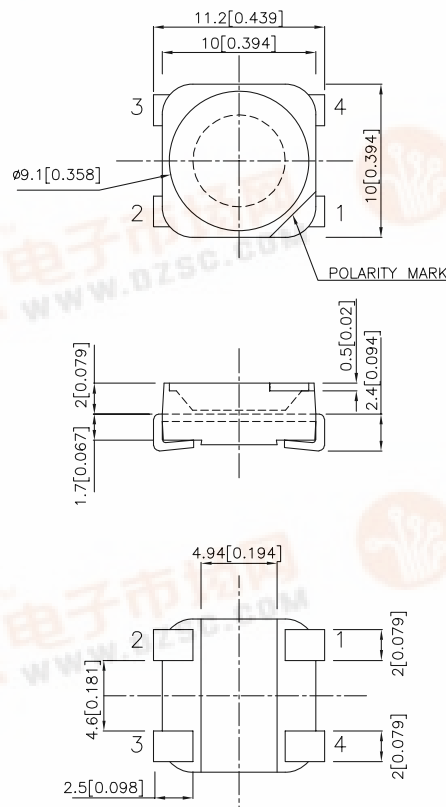
- PLCC-4 PACKAGE.
- SINGLE COLOR.
- HIGH LUMINANCE.
- HIGH POWER, OPERATING CURRENT @350mA.
- SUITABLE FOR ALL SMT ASSEMBLY METHODS.
- PACKAGE : 500PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- PATENT PENDING.
- RoHS COMPLIANT.



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

Package Dimensions



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)@ 350 mA [2]		Φ_v (lm) @ 350mA [2]		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	2 θ 1/2
AA1010SEC28	Reddish-Orange (InGaAlP)	WATER CLEAR	16	32	10	20	120°

Notes:

1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity / luminous Flux: +/-15%.

Absolute Maximum Ratings at T_A=25°C

Parameter	Symbol	Value	Unit
Power dissipation	P _t	1.2	W
Reverse Voltage	V _R	5	V
Junction temperature	T _J	110	°C
Operating Temperature	T _{op}	-40 To +85	°C
Storage Temperature	T _{stg}	-40 To +85	°C
DC Forward Current [1]	I _F	350	mA
Peak Forward Current [2]	I _{FM}	500	mA
Thermal resistance [1]	R _{th}	60	°C/W

Notes:

1. 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.
2. 1/10 Duty Cycle, 0.1ms Pulse Width.

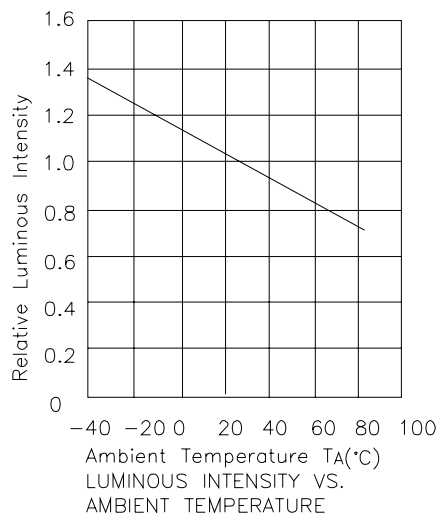
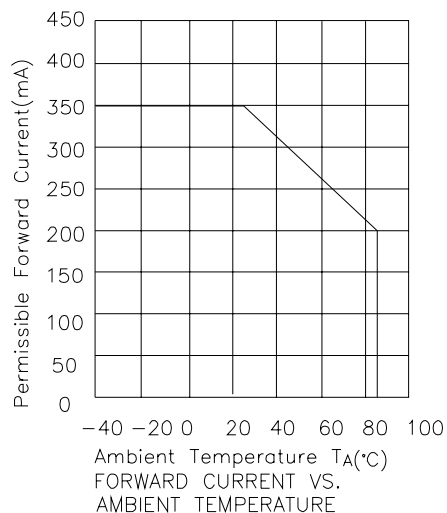
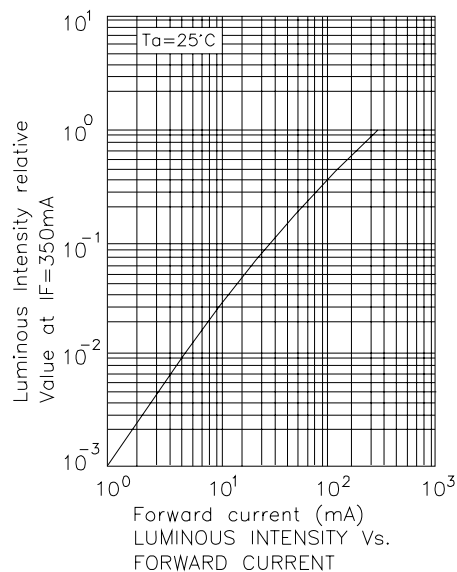
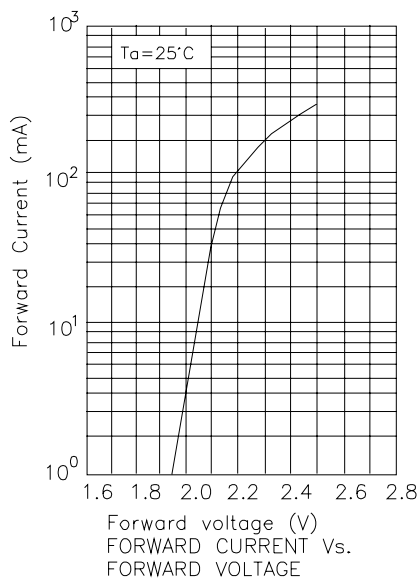
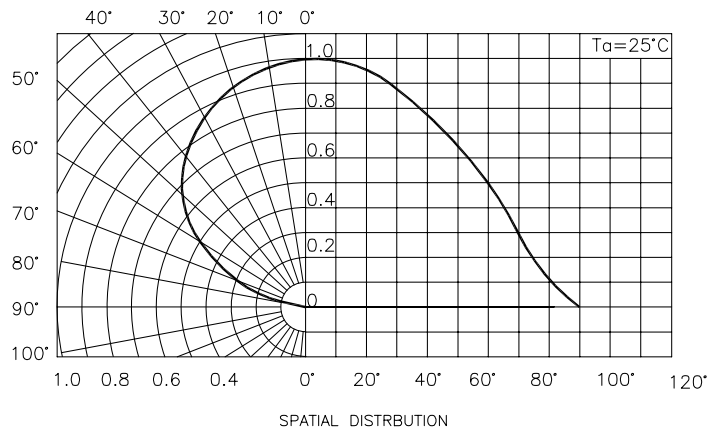
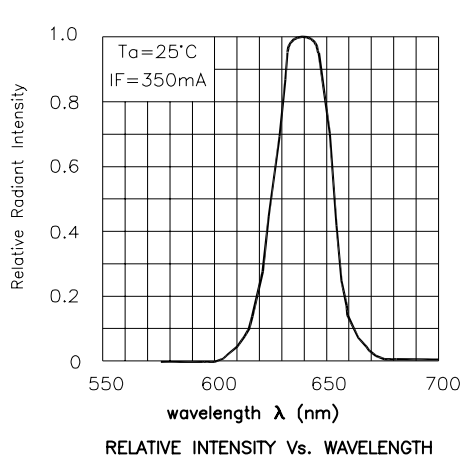
Electrical / Optical Characteristics at T_A=25°C

Parameter	Symbol	Value	Unit
Wavelength at peak emission I _F =350mA [Typ.]	λ_{peak}	640	nm
Dominant Wavelength I _F =350mA [Typ.]	λ_{Dom} [1]	625	nm
Spectral bandwidth at 50% $\Phi_{REL MAX}$ I _F =350mA [Typ.]	$\Delta\lambda$	30	nm
Viewing angle at 50% Φ_v [Typ.]	θ	120	°
Forward Voltage I _F =350mA [Min.]	V _F [2]	2.0	V
Forward Voltage I _F =350mA [Typ.]		2.5	
Forward Voltage I _F =350mA [Max.]		3.0	
Reverse Current (V _R =5V) [Max.]	I _R	10	μA
Temperature coefficient of λ_{peak} I _F =350mA, -10°C≤T≤100°C [Typ.]	TC λ_{peak}	0.14	nm/°C
Temperature coefficient of λ_{dom} I _F =350mA, -10°C≤T≤100°C [Typ.]	TC λ_{dom}	0.12	nm/°C
Temperature coefficient of V _F I _F =350mA, -10°C≤T≤100°C [Typ.]	TC _V	-3.0	mV/°C

Notes:

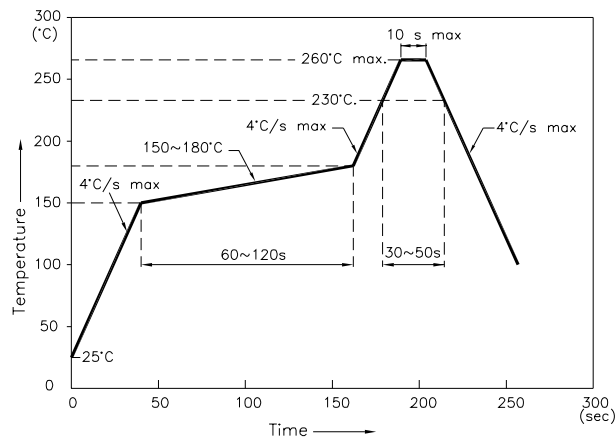
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

AA1010SEC28



AA1010SEC28

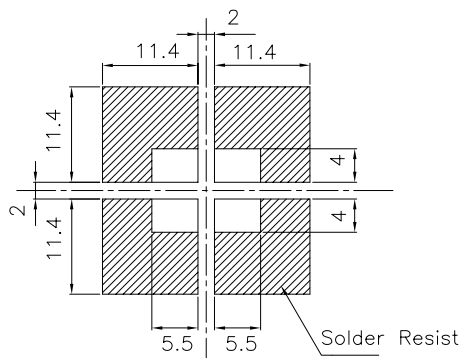
Reflow Soldering Profile For Lead-free SMT Process.



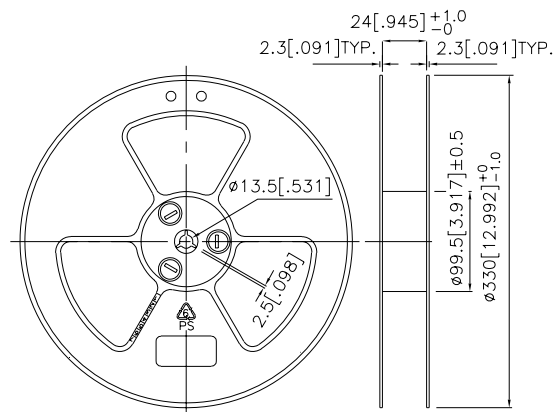
NOTES:

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.

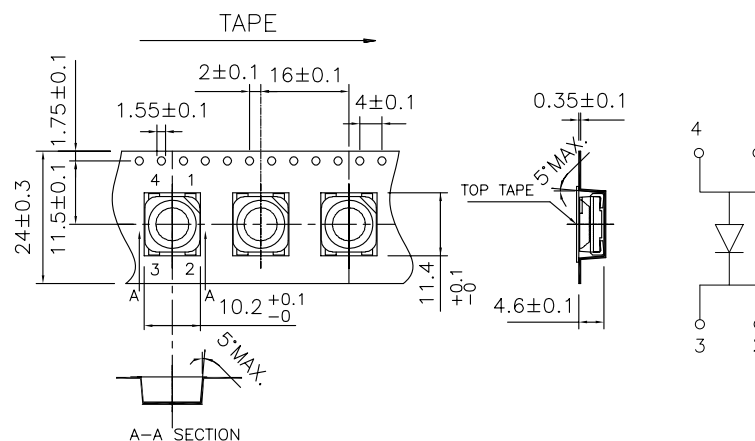
Recommended Soldering Pattern (Units : mm; Tolerance: ±0.1)



Reel Dimension

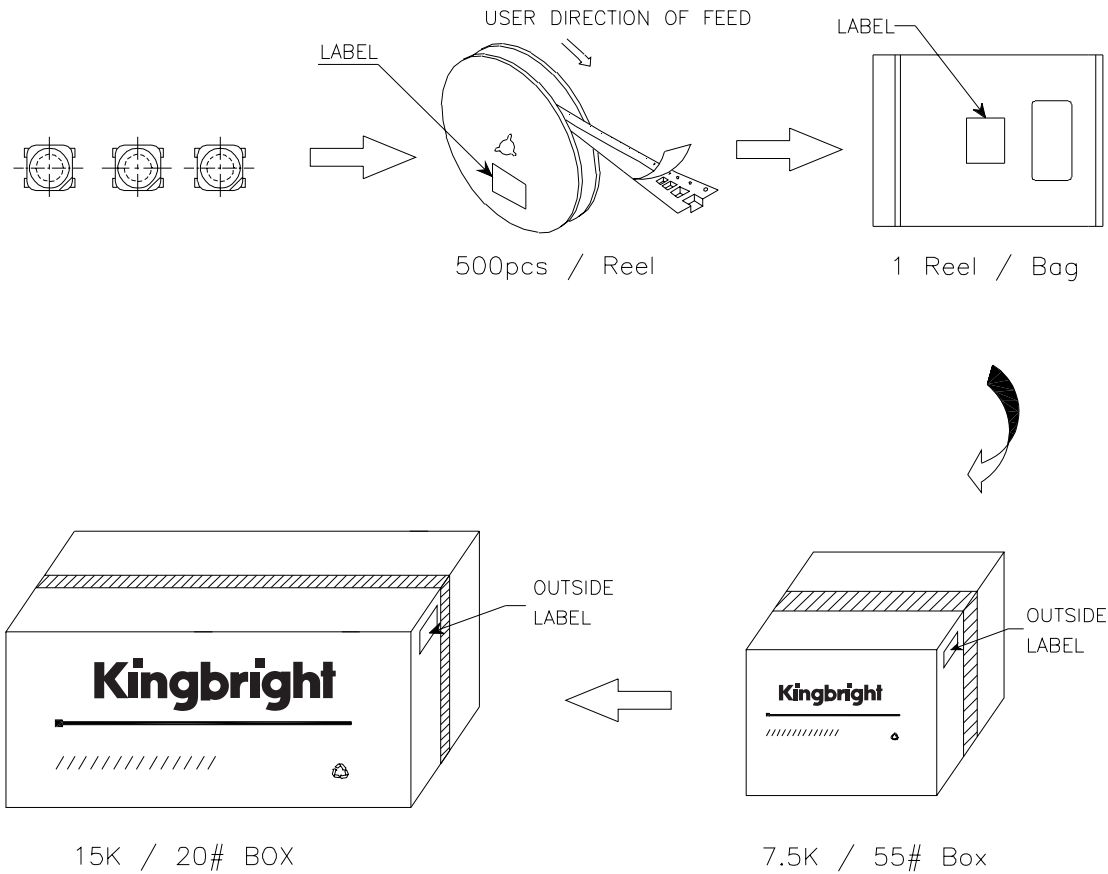


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

AA1010SEC28



Kingbright		
P/NO: AA1010XXX		
QTY: 500 pcs	Q.C.	Q C
S/N: XXXX		xx xx xxx
CODE: XXX		PASSED
LOT NO:		Date
		
RoHS Compliant		