

Part Number: KAD1-1010SY28Z1S

Super Bright Yellow



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- PLCC-4 package.
- Single color.
- High luminance.
- High power, operating current @350mA.
- Suitable for all SMT assembly methods.
- Package : 300pcs / reel.
- Moisture sensitivity level : level 4.
- RoHS compliant.

Application Note

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

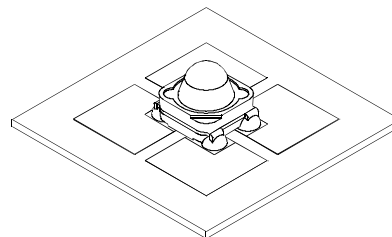
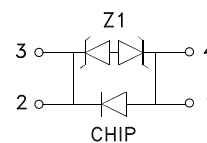
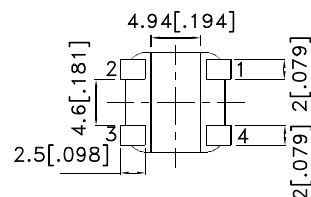
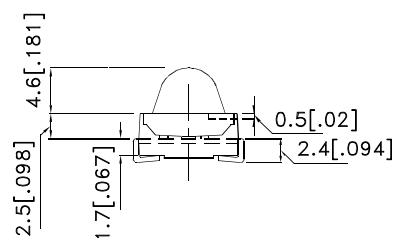
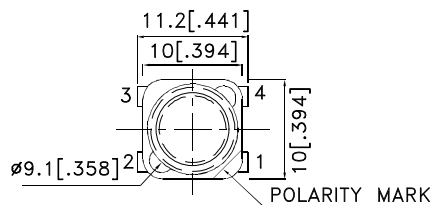
All devices, equipment and machinery must be electrically grounded.



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. The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.
4. The device has a single mounting surface. The device must be mounted according to the specifications.



Selection Guide

Part No.	Dice	Lens Type	luminous Intensity [2] Iv(cd)@ 350 mA		Φv (lm) [2] @350mA		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	
KAD1-1010SY28Z1S	Super Bright Yellow (AlGaInP)	WATER CLEAR	32	50	24	35	20°

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.
2. Luminous intensity/ luminous Flux: +/-15%.

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power dissipation	Pd	1.05	W
Junction temperature	TJ	110	°C
Reverse Voltage	VR	5	V
Operating Temperature	Top	-40 To +85	°C
Storage Temperature	Tstg	-40 To +85	°C
DC Forward Current[1]	IF	350	mA
Peak Forward Current [2]	IFM	500	mA
Thermal resistance [1]	Rth	80	°C/W

Notes:

- 1.Results from mounting on PC board FR4(pad size≥100mm²), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.
2. 1/10 Duty Cycle, 0.1ms Pulse Width.

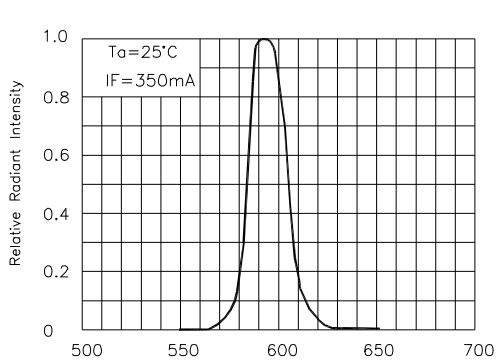
Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Value	Unit
Wavelength at peak emission IF=350mA [Typ.]	λpeak	590	nm
Dominant Wavelength IF=350mA [Typ.]	λ dom [1]	588	nm
Spectral bandwidth at 50%ΦREL MAX IF=350mA [Typ.]	Δλ	20	nm
Reverse Current VR=5V [Max.]	IR	10	uA
Forward Voltage IF=350mA [Min.]	VF [2]	2.0	V
Forward Voltage IF=350mA [Typ.]		2.5	
Forward Voltage IF=350mA [Max.]		3.0	
Temperature coefficient of λpeak IF=350mA, -10°C≤T≤100°C [Typ.]	TCλpeak	0.15	nm/°C
Temperature coefficient of λdom IF=350mA, -10°C≤T≤100°C [Typ.]	TCλdom	0.13	nm/°C
Temperature coefficient of VF IF=350mA, -10°C≤T≤100°C [Typ.]	TCv	-2.0	mV/°C

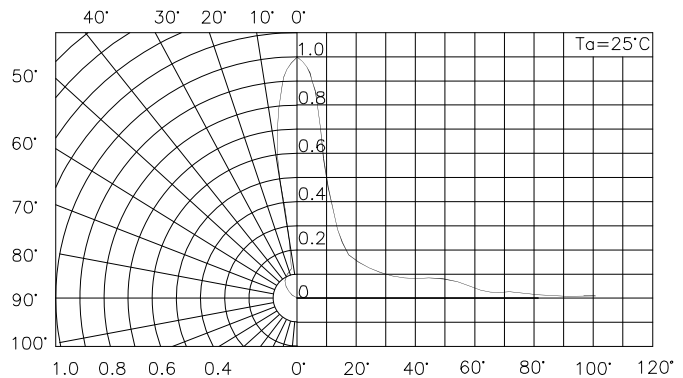
Notes:

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

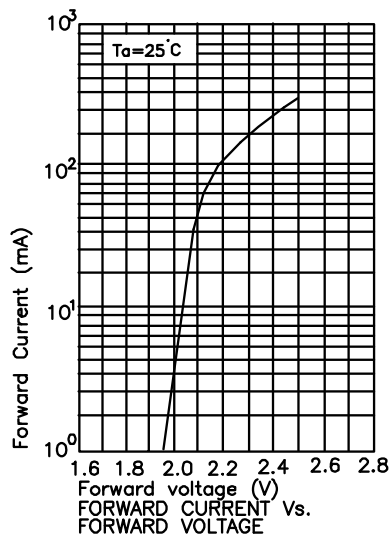
KAD1-1010SY28Z1S



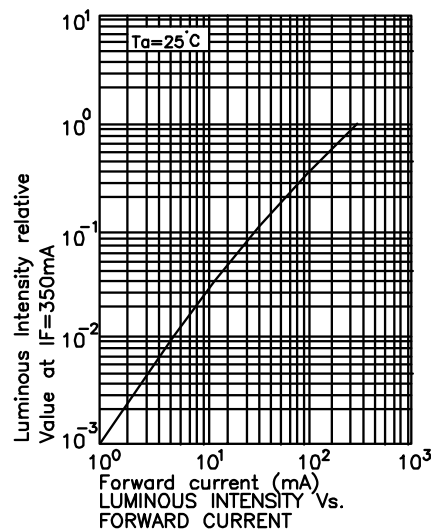
RELATIVE INTENSITY Vs. WAVELENGTH



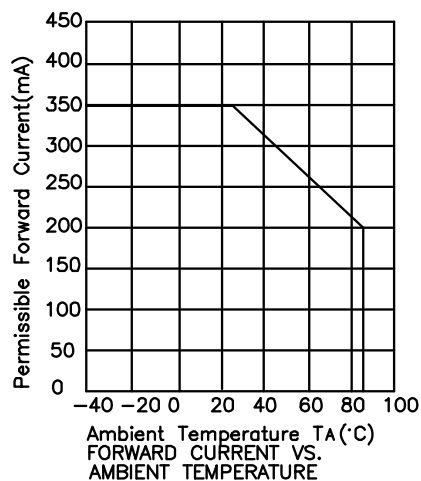
SPATIAL DISTRIBUTION



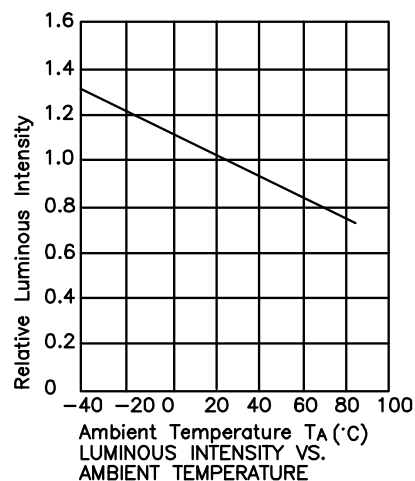
FORWARD CURRENT Vs. FORWARD VOLTAGE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT Vs. AMBIENT TEMPERATURE

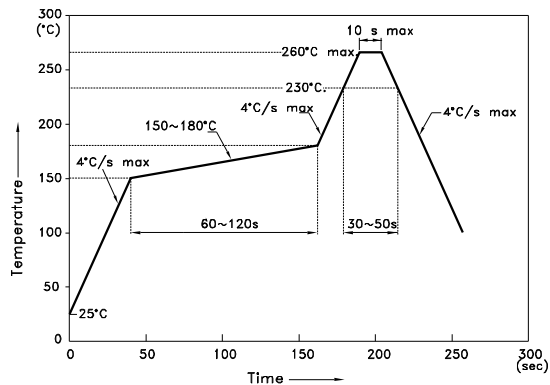


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

KAD1-1010SY28Z1S

**Reflow soldering is recommended and the soldering profile is shown below.
Other soldering methods are not recommended as they might cause damage to the product.**

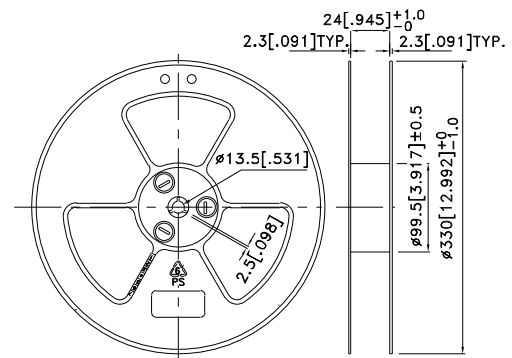
Reflow Soldering Profile For Lead-free SMT Process.



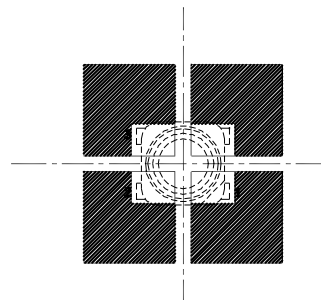
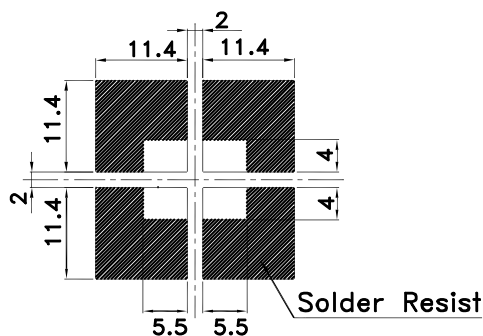
NOTES:

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.

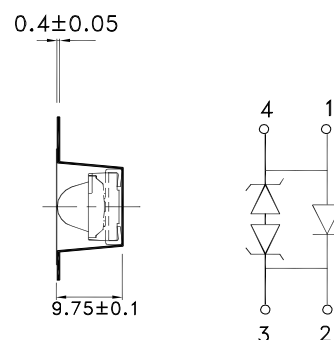
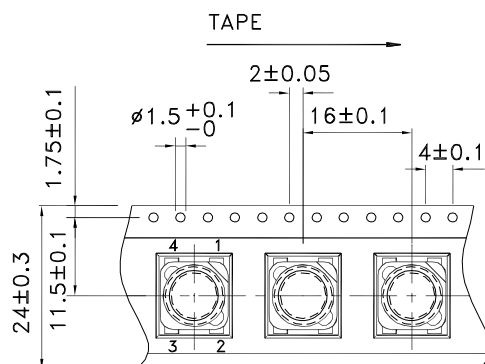
Reel Dimension



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

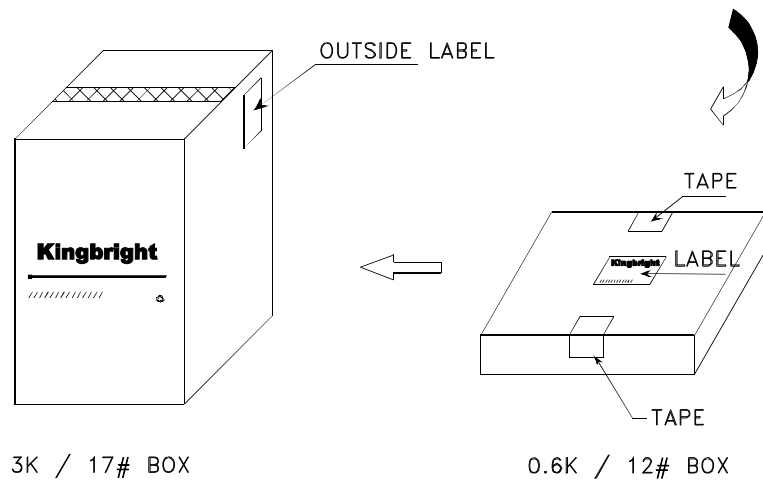
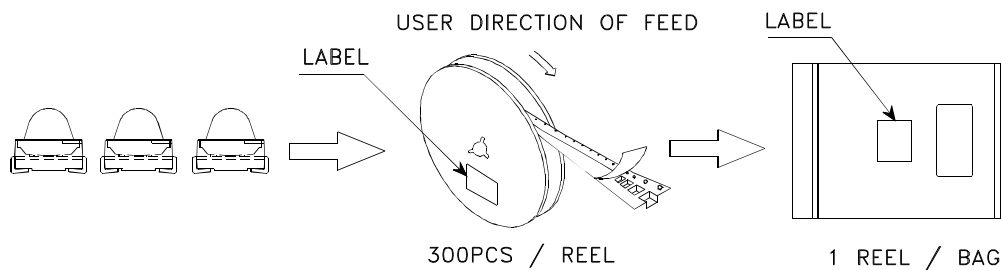



Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

KAD1-1010SY28Z1S



Kingbright		
P/NO: KAD1-1010xxx		
QTY: 300 pcs	Q.C.	Q C
S/N: XXXX		xx xx xxxx
CODE: XXX		PASSED
LOT NO:		
		
RoHS Compliant		