

PRELIMINARY SPEC

Part Number: AAD1-9090SE28ZC

Reddish-Orange



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- Super high flux output and high luminance.
- Designed for high current operation.
- Low thermal resistance.
- Low voltage DC operated.
- Superior ESD protection.
- Package: 500pcs/reel.
- Not reflow compatible.
- The component is internally protected with silicone gel.
- RoHS compliant.

Application Note

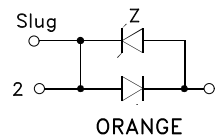
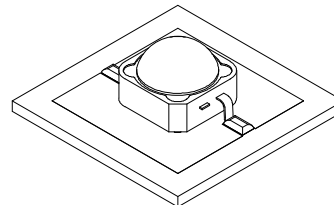
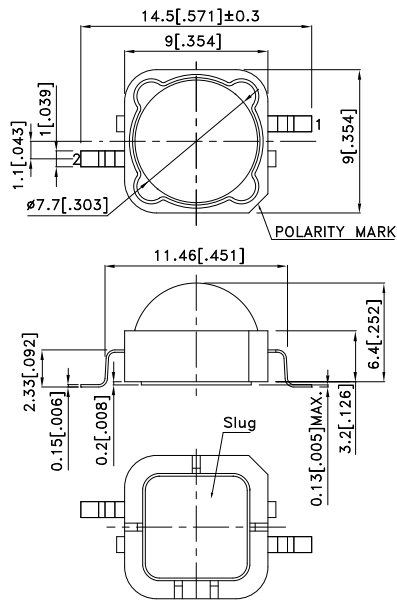
Static electricity and surge damage the LEDs.
It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.
All devices, equipment and machinery must be electrically grounded.



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 ±0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without 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)@ 350mA		Φ_v (lm) @ 350mA [2]		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	2 θ 1/2
AAD1-9090SE28ZC	Reddish-Orange (AlGaInP)	WATER CLEAR	8	12	25	35	100°

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
Junction temperature	T _J	110	°C
Operating Temperature	T _{op}	-40 To +100	°C
Storage Temperature	T _{stg}	-40 To +100	°C
DC Forward Current [1]	I _F	350	mA
Peak Forward Current [2]	I _{FM}	500	mA
Thermal resistance [1]	R _{th j-slug}	12	°C/W
Electrostatic Discharge Threshold (HBM)		8000	V
Iron Soldering [3]		350°C For 3 Seconds	

Notes:

1. Results from mounting on MCPCB.
2. 1/10 Duty Cycle, 0.1ms Pulse Width.
3. 1.29mm distance from solder joint to package.

Electrical / Optical Characteristics at T_A=25°C

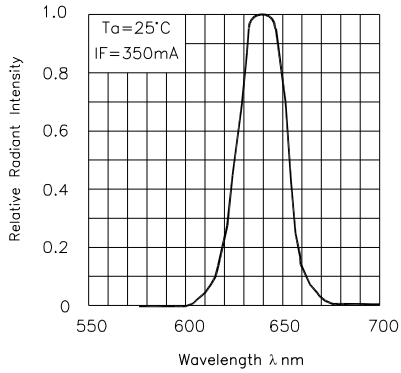
Parameter	Symbol	Value	Unit
Wavelength at peak emission I _F =350mA [Typ.]	λ_{peak}	640	nm
Dominant Wavelength I _F =350mA [Typ.]	λ_{dom} [1]	625	nm
Spectral bandwidth at 50% $\Phi_{REL MAX}$ I _F =350mA [Typ.]	$\Delta\lambda$	30	nm
Forward Voltage I _F =350mA [Min.]	V _F [2]	2.0	V
Forward Voltage I _F =350mA [Typ.]		2.5	
Forward Voltage I _F =350mA [Max.]		3.0	
Temperature coefficient of λ_{peak} I _F =350mA, -10°C ≤ T ≤ 100°C [Typ.]	TC _{λ_{peak}}	0.12	nm/°C
Temperature coefficient of λ_{dom} I _F =350mA, -10°C ≤ T ≤ 100°C [Typ.]	TC _{λ_{dom}}	0.05	nm/°C
Temperature coefficient of V _F I _F =350mA, -10°C ≤ T ≤ 100°C [Typ.]	TC _V	-2.6	mV/°C

Notes:

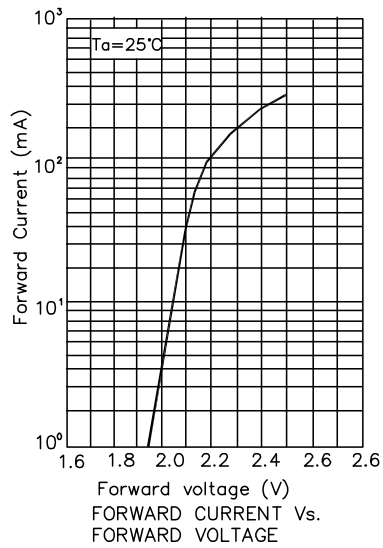
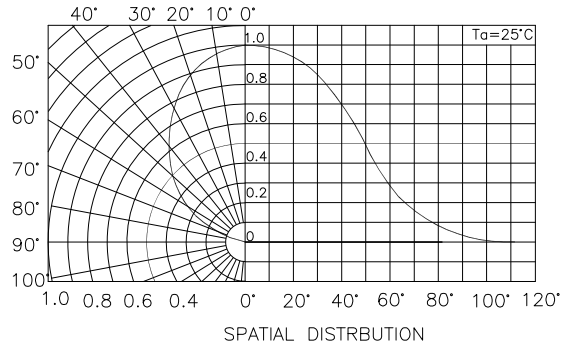
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

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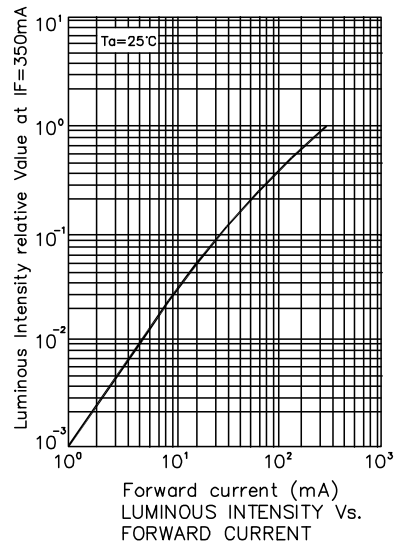
AAD1-9090SE28ZC



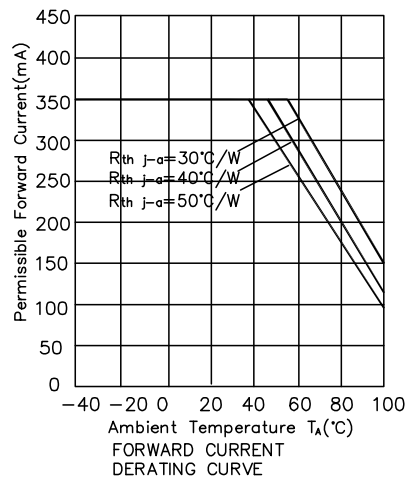
RELATIVE INTENSITY Vs. WAVELENGTH



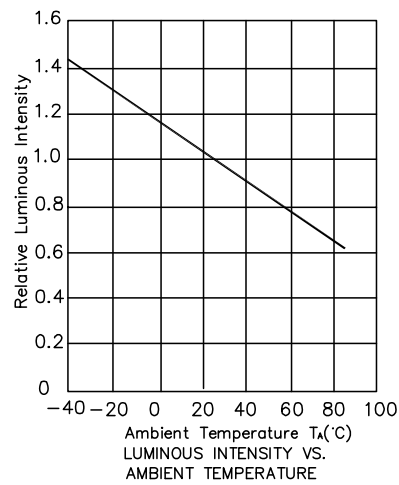
FORWARD CURRENT Vs. FORWARD VOLTAGE



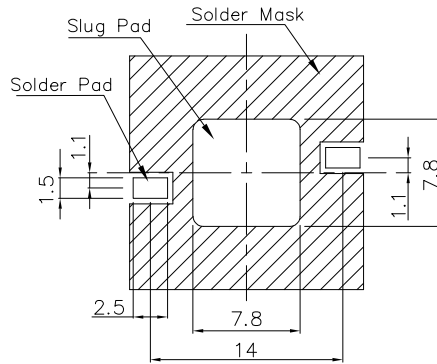
LUMINOUS INTENSITY Vs. FORWARD CURRENT



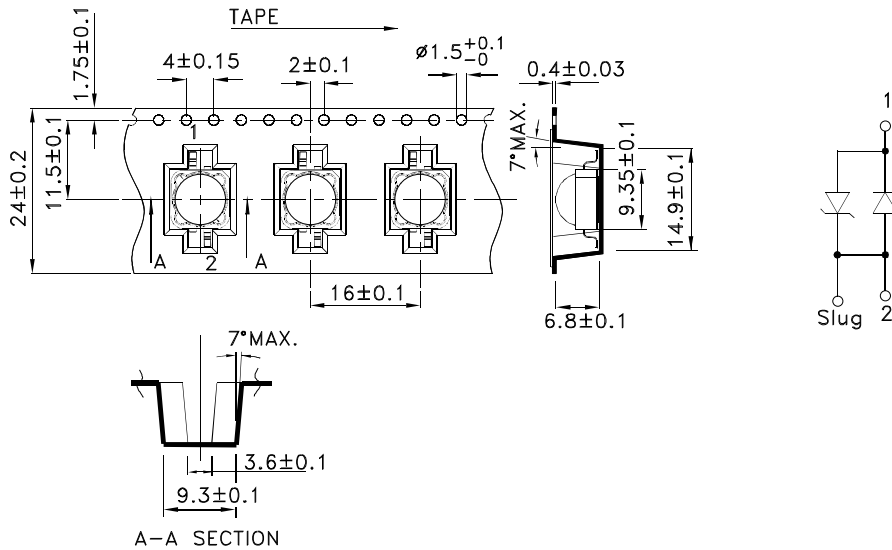
FORWARD CURRENT DERATING CURVE



AAD1-9090SE28ZC
Recommended Soldering Pattern
 (Units : mm; Tolerance: ± 0.1)

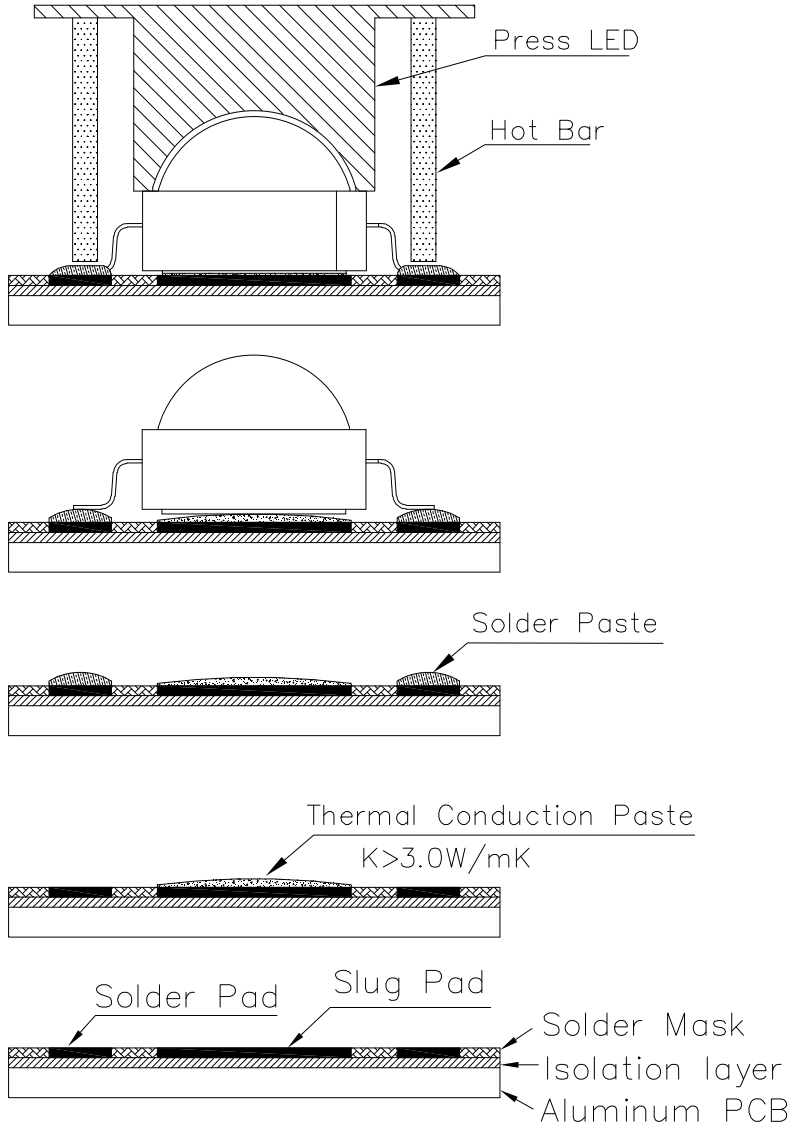


Tape Specifications
 (Units : mm)



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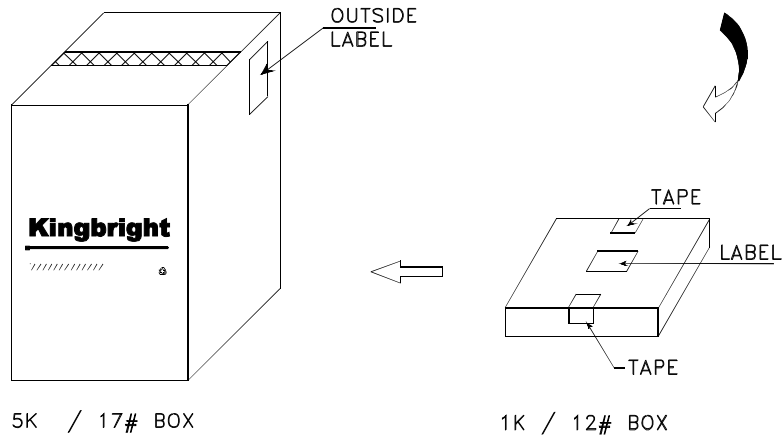
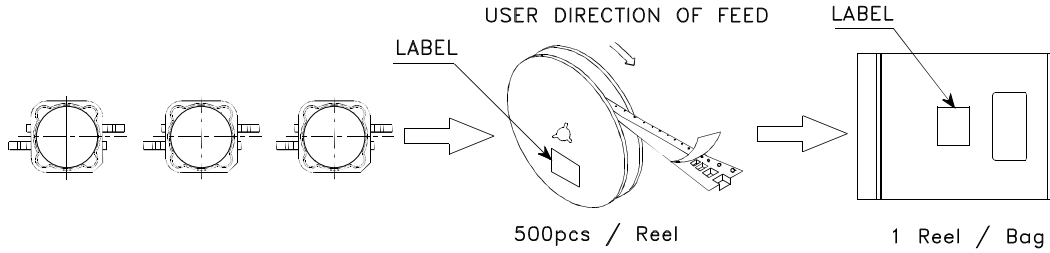
Recommended Solder Steps




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PACKING & LABEL SPECIFICATIONS

AAD1-9090SE28ZC



<h1>Kingbright</h1>	
P/NO: AAD1-9090xxx	
QTY: 500 pcs	Q.C. Q C XX XX XXXX PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	

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