

PRELIMINARY SPEC

Part Number: AAD1-9090QB10ZC BLUE



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.

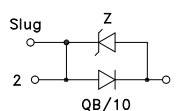
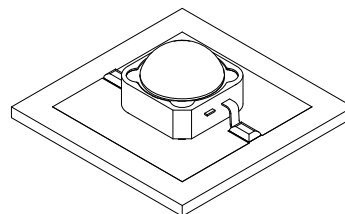
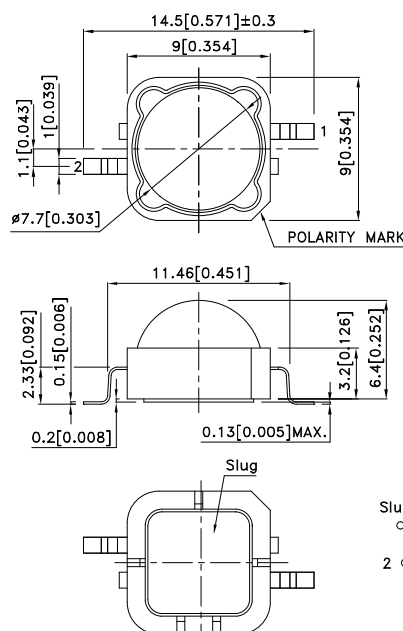
All devices, equipment and machinery must be electrically grounded.



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		Φv (lm) [2] @ 350mA		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	
AAD1-9090QB10ZC	BLUE (InGaAlN)	WATER CLEAR	3.8	5.5	12.5	23	100°

Notes:

- 01/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- Luminous intensity / luminous flux: +/-15%.

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power dissipation	Pt	1.25	W
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 [2]	IFM	500	mA
Thermal resistance [1]	Rth j-slug	9	°C/W
Electrostatic Discharge Threshold (HBM)		8000	V
Iron Soldering [3]		350°C For 3 Seconds	

Notes:

- Metal Core PCB is mounted on the heat Fins.
- 1/10 Duty Cycle, 0.1ms Pulse Width.
- 1.29mm below package base.

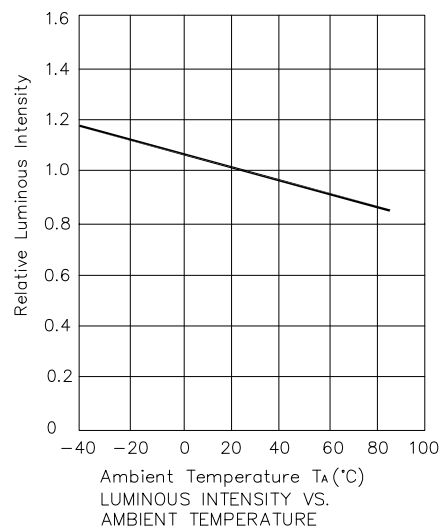
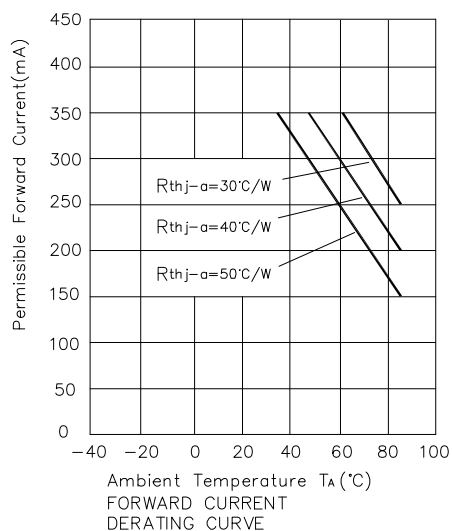
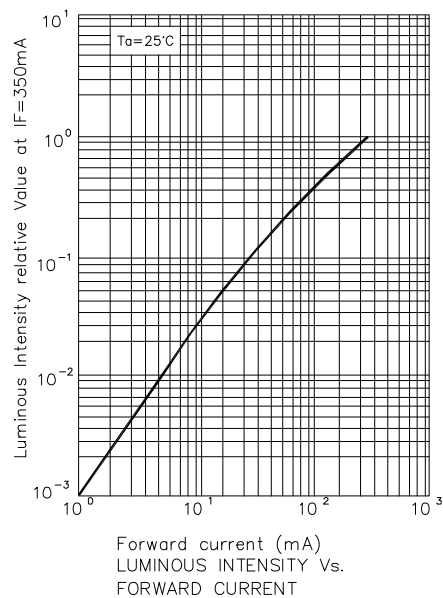
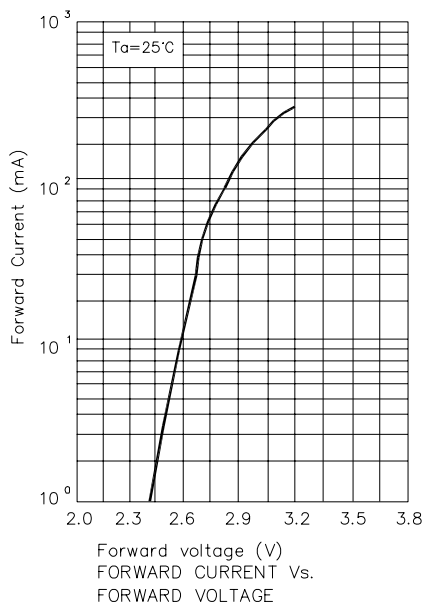
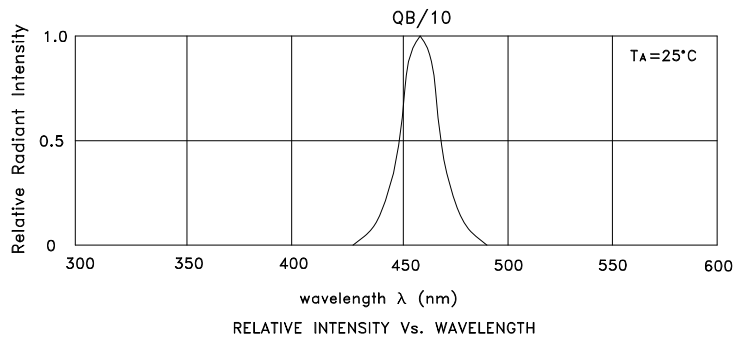
Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Value	Unit
Wavelength at peak emission IF=350mA [Typ.]	λpeak	452	nm
Dominant Wavelength IF=350mA [Typ.]	λ dom [1]	458	nm
Spectral bandwidth at 50%ΦREL MAX IF=350mA [Typ.]	Δλ	20	nm
Forward Voltage IF=350mA [Min.]	VF [2]	2.8	V
Forward Voltage IF=350mA [Typ.]		3.2	
Forward Voltage IF=350mA [Max.]		3.6	
Temperature coefficient of λpeak IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TCλpeak	0.2	nm/°C
Temperature coefficient of λdom IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TCλdom	0.1	nm/°C
Temperature coefficient of VF IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TCv	-3.2	mV/°C

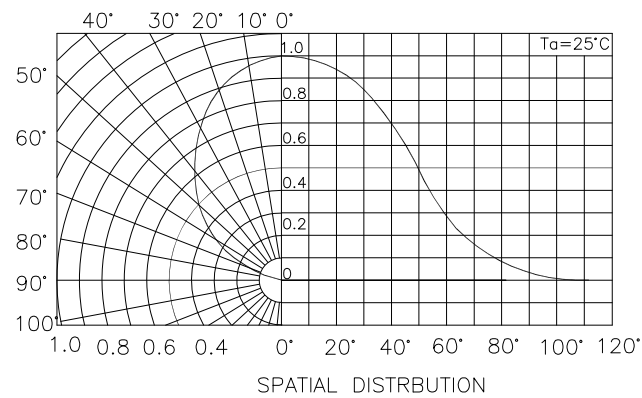
Notes:

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

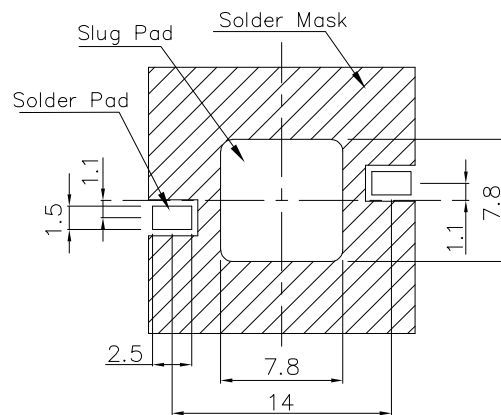
AAD1-9090QB10ZC



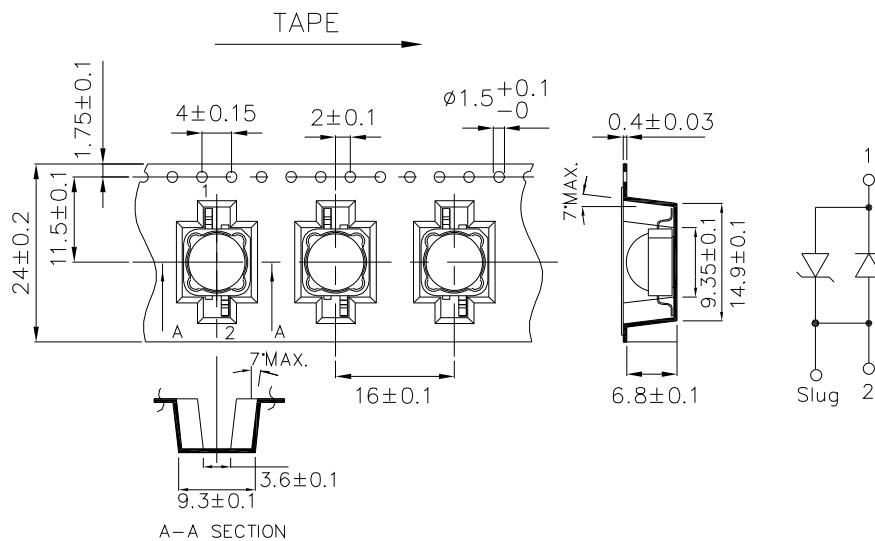
AAD1-9090QB10ZC



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

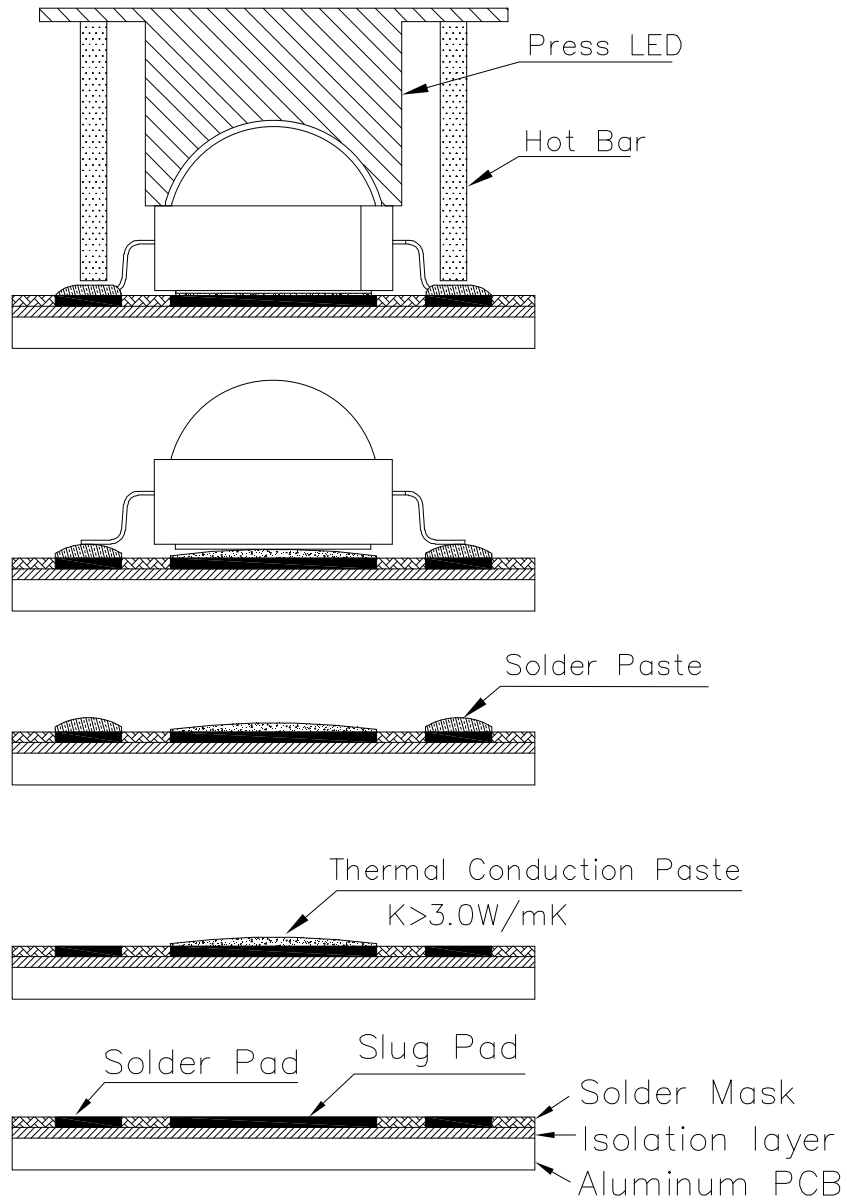


Tape Specifications
(Units : mm)



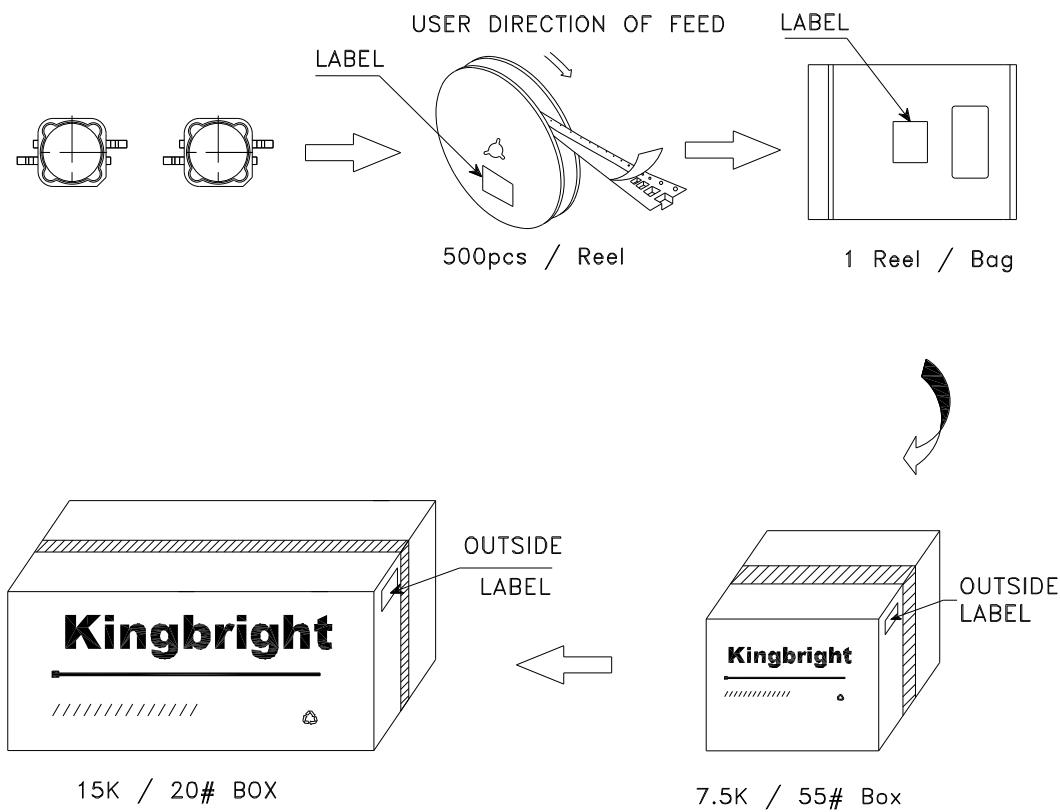
AAD1-9090QB10ZC


Recommended Solder Steps



PACKING & LABEL SPECIFICATIONS

AAD1-9090QB10ZC



Kingbright	
P/NO: AAD1-9090xxx	
QTY: 500 pcs	Q.C. <div>QC xx xx xxxx PASSED</div>
S/N: XXXX	
CODE: XXX	
LOT NO:	
 xxxxxxxxxxxxxxxxxxxxxxxx	
RoHS Compliant	