

PRELIMINARY SPEC

Part Number: KAD1-9090QB9ZC 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.

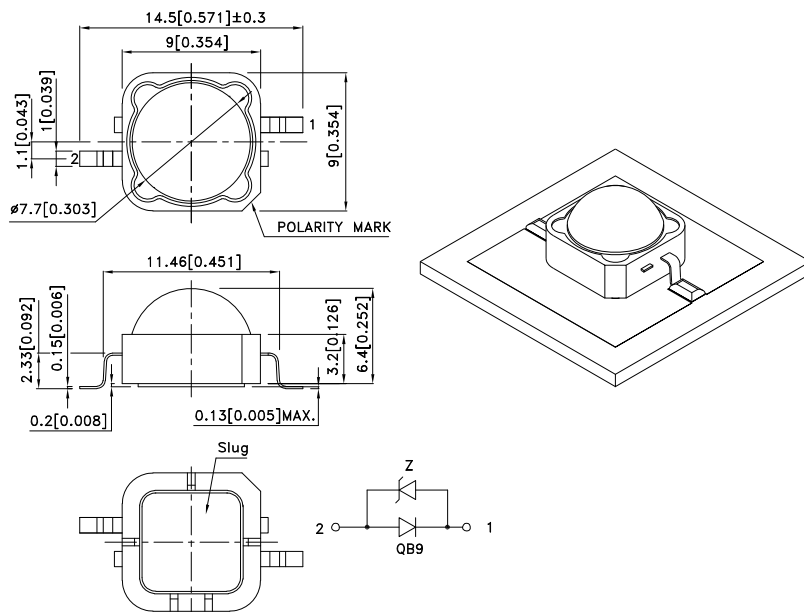
All devices, equipment and machinery must be electrically grounded.



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 $\pm 0.25(0.01)$ 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)@ 350 mA		Φ_v (lm) [2] @ 350 mA		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	2 θ 1/2
KAD1-9090QB9ZC	BLUE (AlInGaN)	WATER CLEAR	1.8	3.5	8	13	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 TA=25°C

Parameter	Symbol	Value	Unit
Power dissipation	Pt	1.23	W
Junction temperature	TJ	110	°C
Operating Temperature	Top	-40 To +100	°C
Storage Temperature	Tstg	-40 To +100	°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:

1. Metal Core PCB is mounted on the heat Fins.
2. 1/10 Duty Cycle, 0.1ms Pulse Width.
3. 1.29mm below package base.

Electrical / Optical Characteristics at TA=25°C

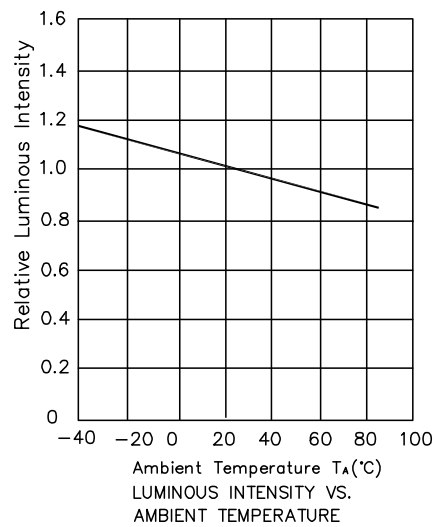
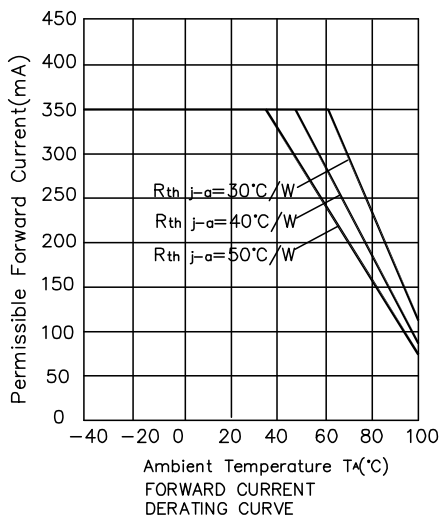
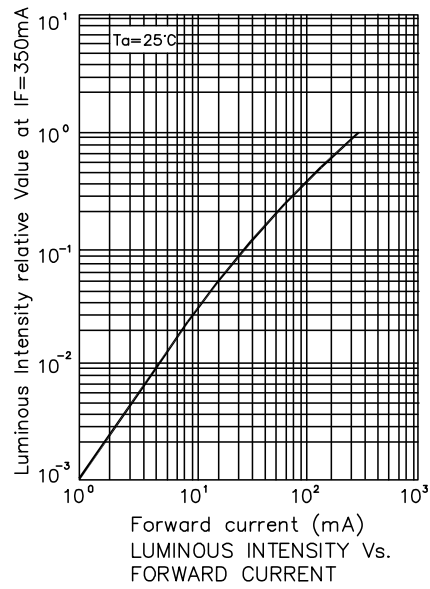
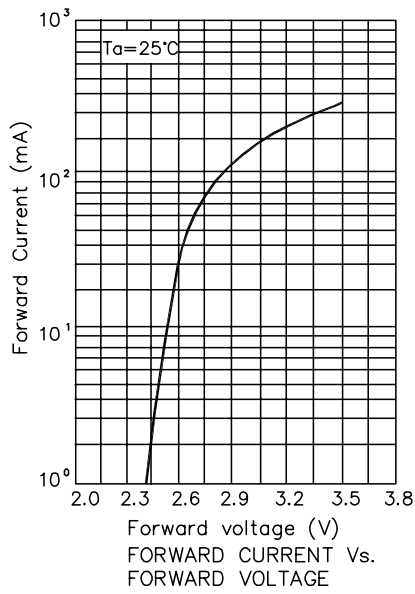
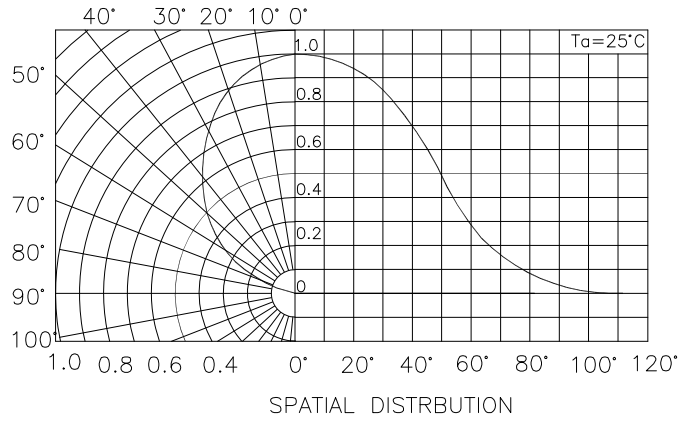
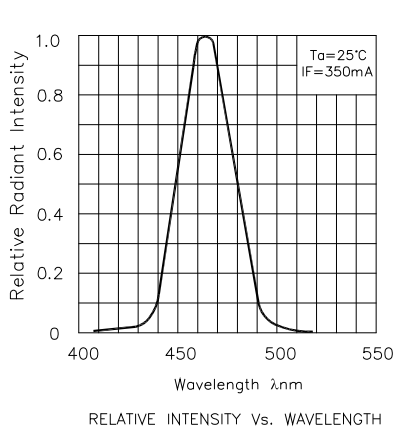
Parameter	Symbol	Value	Unit
Wavelength at peak emission IF=350mA [Typ.]	λ_{peak}	464	nm
Dominant Wavelength IF=350mA [Typ.]	λ_{dom} [1]	466	nm
Spectral bandwidth at 50% $\Phi_{REL MAX}$ IF=350mA [Typ.]	$\Delta\lambda$	30	nm
Forward Voltage IF=350mA [Min.]	VF [2]	2.7	V
Forward Voltage IF=350mA [Typ.]		3.5	
Forward Voltage IF=350mA [Max.]		3.8	
Temperature coefficient of λ_{peak} IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TC λ_{peak}	0.15	nm/°C
Temperature coefficient of λ_{dom} IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TC λ_{dom}	0.13	nm/°C
Temperature coefficient of VF IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TCV	-3.2	mV/°C

Notes:

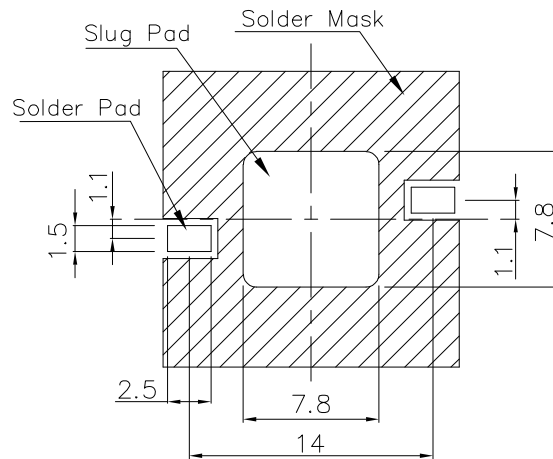
1. Wavelength: +/-1nm.
2. Forward Voltage: +/-0.1V.

Kingbright

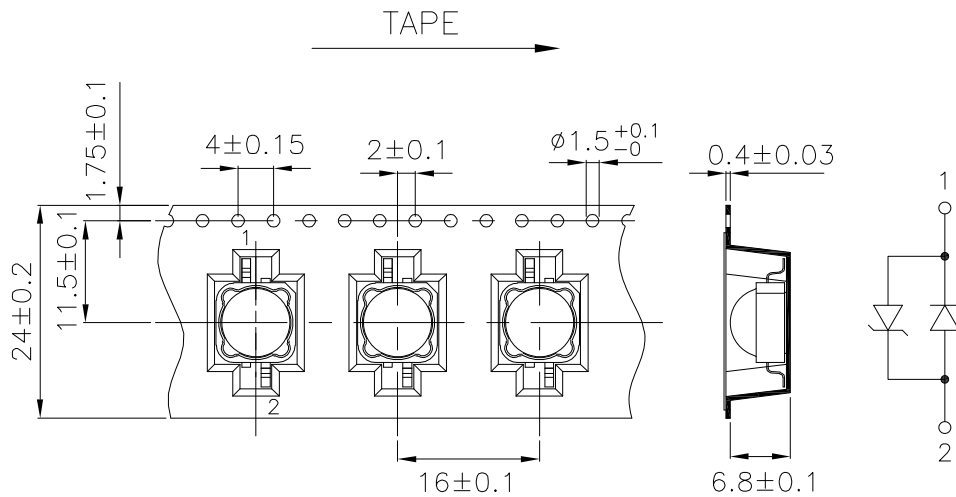
KAD1-9090QB9ZC



KAD1-9090QB9ZC
Recommended Soldering Pattern
 (Units : mm; Tolerance: ± 0.1)



Tape Specifications
 (Units : mm)



KAD1-9090QB9ZC

Recommended Solder Steps

