Kingbright

XPower

PRELIMINARY SPEC

Part Number: AAD1-9090QB10ZC-S

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.
- NOT REFLOW COMPATIBLE.
- THE COMPONENT IS INTERNALLY PROTECTED WITH SILICONE GEL.
- 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.

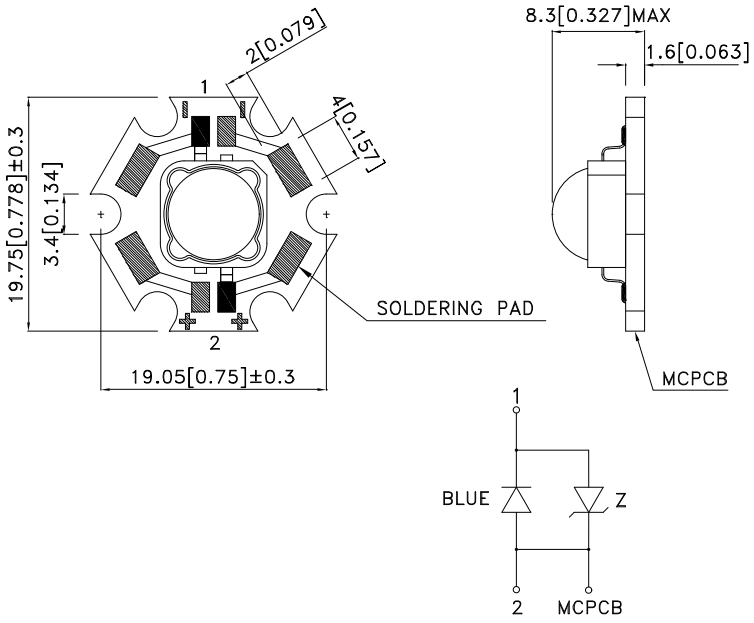
Application Note

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.

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.

Selection Guide

Part No.	Dice	Lens Type	luminous Intensity [2] Iv(cd)@ 350mA		Φv (lm) [2] @ 350mA		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	2θ1/2
AAD1-9090QB10ZC-S	BLUE (InGaAlN)	WATER CLEAR	3.8	5.5	12.5	23	100°

Notes:
1. θ1/2 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	1.25	W
Junction temperature	T_J	110	°C
Operating Temperature	Top	-40 To +100	°C
Storage Temperature	Tstg	-40 To +100	°C
DC Forward Current [1]	I_F	350	mA
Peak Forward Current [2]	I_{FM}	500	mA
Thermal resistance [1]	$R_{th\ j\text{-}slug}$	9	°C/W
Electrostatic Discharge Threshold (HBM)		8000	V

Notes:
1. Metal Core PCB is mounted on the heat Fins.
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.]	λpeak	452	nm
Dominant Wavelength I_F=350mA [Typ.]	λ dom [1]	458	nm
Spectral bandwidth at 50%$\Phi_{REL\ MAX}$ I_F=350mA [Typ.]	Δλ	20	nm
Forward Voltage I_F=350mA [Min.]	V_F [2]	2.8	V
Forward Voltage I_F=350mA [Typ.]		3.2	
Forward Voltage I_F=350mA [Max.]		3.6	
Temperature coefficient of λpeak I_F=350mA, -10°C≤ T≤100°C [Typ.]	TCλpeak	0.2	nm/°C
Temperature coefficient of λdom I_F=350mA, -10°C≤ T≤100°C [Typ.]	TCλdom	0.1	nm/°C
Temperature coefficient of V_F I_F=350mA, -10°C≤ T≤100°C [Typ.]	TC_V	-3.2	mV/°C

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

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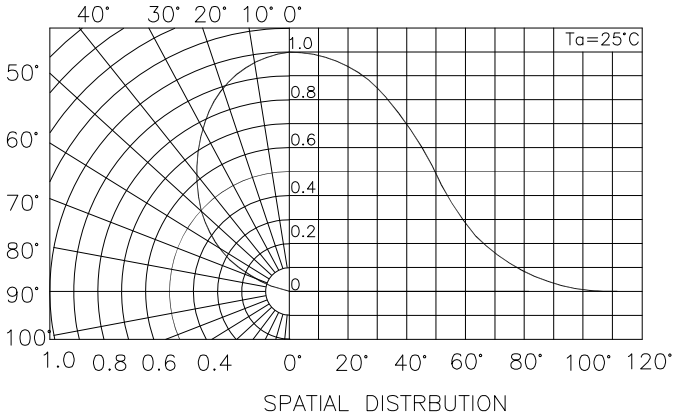
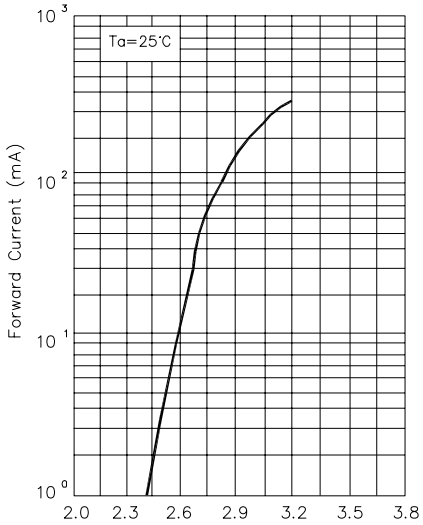
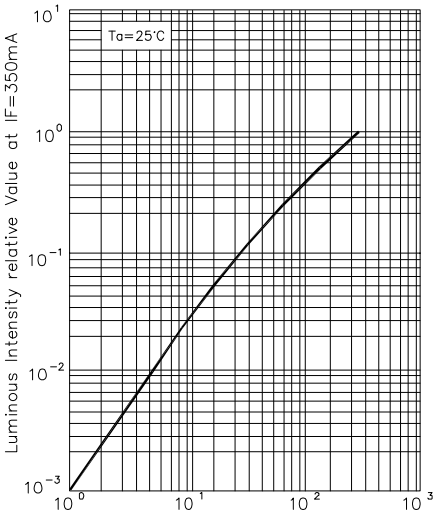


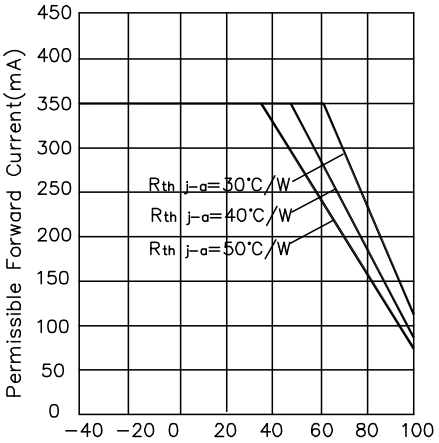
SPATIAL DISTRBUTION



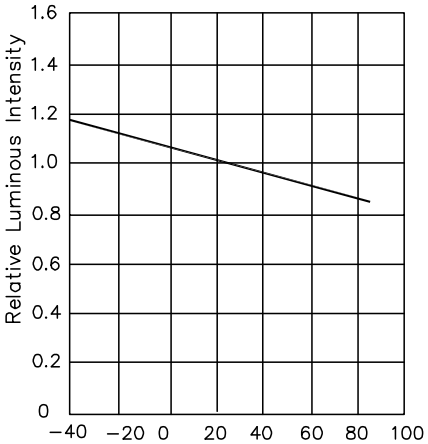
Forward voltage (V)
FORWARD CURRENT Vs.
FORWARD VOLTAGE



Forward current (mA)
LUMINOUS INTENSITY Vs.
FORWARD CURRENT

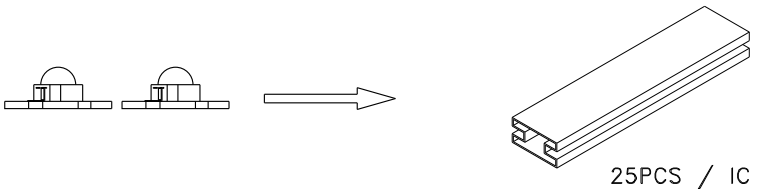


Ambient Temperature T_A(°C)
FORWARD CURRENT
DERATING CURVE

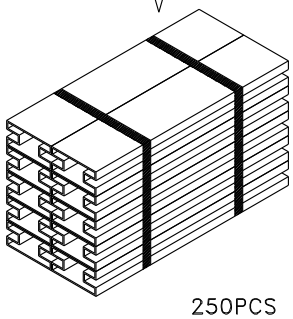


Ambient Temperature T_A(°C)
LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE

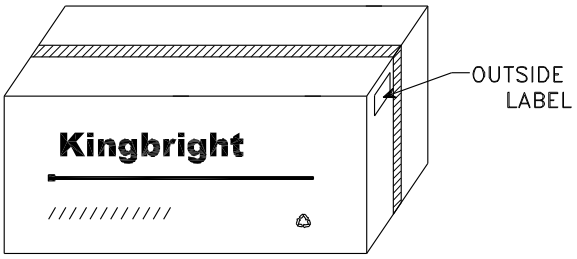
PACKING & LABEL SPECIFICATIONS **AAD1-9090QB10ZC-S**



25PCS / IC TUBE



250PCS / 10PCS IC TUBE



4K / 10# BOX