

PRELIMINARY SPEC



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: AAD1-9090QB11ZC/3-S

Blue



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.

Application Note

Static electricity and surge damage the LEDs.

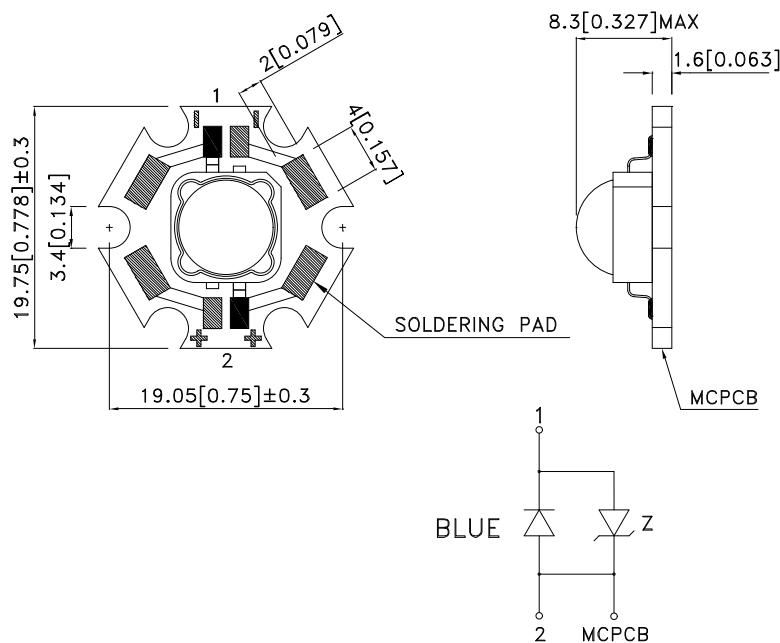
It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

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.



Selection Guide

Part No.	Dice	Lens Type	luminous Intensity [2] I _v (cd)@ 700mA		Φ _v (lm) [2] @ 700mA		Viewing Angle [1] 201/2
			Min.	Typ.	Min.	Typ.	
AAD1-9090QB11ZC/3-S	BLUE (AlInGaN)	WATER CLEAR	6.7	10	20	35.7	100°

Notes:

1. 01/2 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	3	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	700	mA
Peak Forward Current [2]	I _{FM}	1000	mA
Thermal resistance [1]	R _{th j-slug}	11	°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.

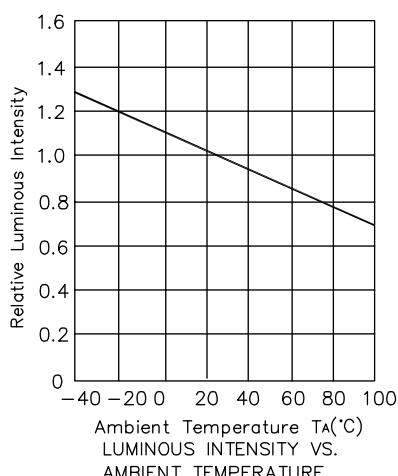
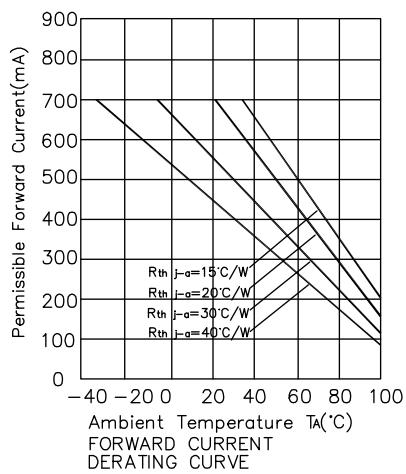
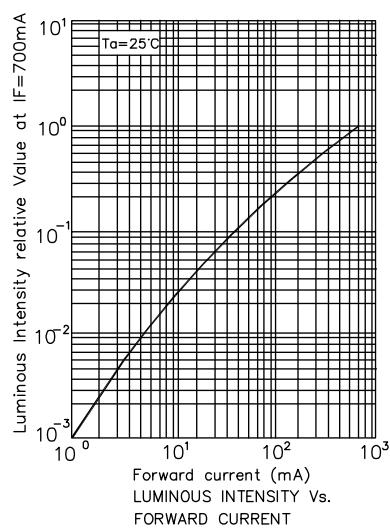
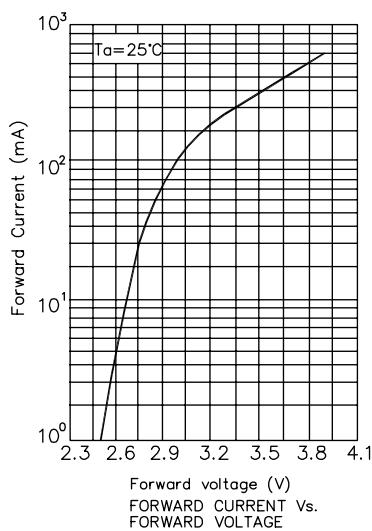
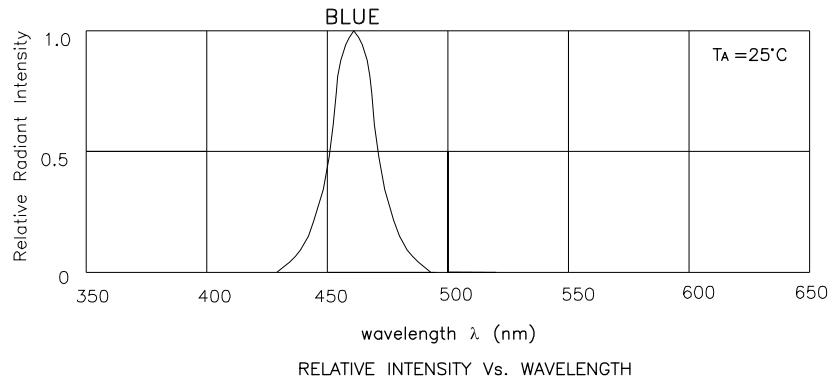
Electrical / Optical Characteristics at T_A=25°C

Parameter	Symbol	Value	Unit
Wavelength at peak emission I _F =700mA [Typ.]	λ _{peak}	461	nm
Dominant Wavelength I _F =700mA [Typ.]	λ _{dom} [1]	460	nm
Spectral bandwidth at 50%Φ _{REL MAX} I _F =700mA [Typ.]	Δλ	20	nm
Forward Voltage I _F =700mA [Min.]	V _F [2]	3.5	V
Forward Voltage I _F =700mA [Typ.]		3.9	
Forward Voltage I _F =700mA [Max.]		4.3	
Temperature coefficient of λ _{peak} I _F =700mA, -10°C≤ T≤100°C [Typ.]	TC _λ peak	0.04	nm/°C
Temperature coefficient of λ _{dom} I _F =700mA, -10°C≤ T≤100°C [Typ.]	TC _λ dom	0.03	nm/°C
Temperature coefficient of V _F I _F =700mA, -10°C≤ T≤100°C [Typ.]	TC _V	-4.3	mV/°C

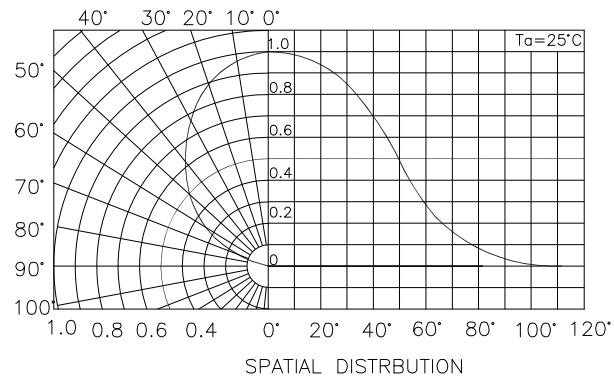
Notes:

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

AAD1-9090QB11ZC/3-S



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Kingbright

PACKING & LABEL SPECIFICATIONS

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