### PRELIMINARY SPEC



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.

### **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.

### XPower

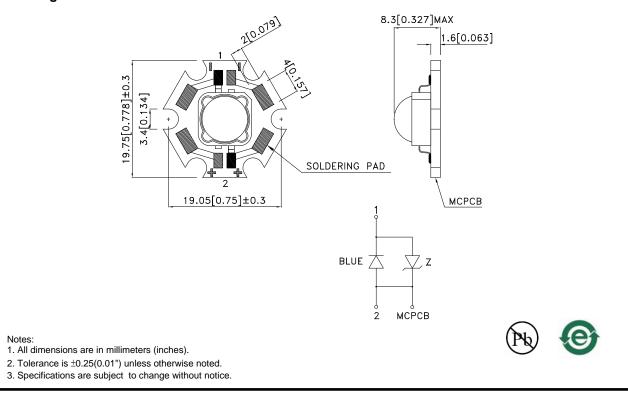
Part Number: AAD1-9090QB10ZC-S

Blue



### 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.



#### SPEC NO: DSAI0986 APPROVED: WYNEC

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### Package Dimensions

#### **Selection Guide** Viewing luminous Intensity [2] Φv (lm) [2] Angle [1] lv(cd)@ 350mA @ 350mA Part No. Dice Lens Type Min. Min. 201/2 Тур. Тур. AAD1-9090QB10ZC-S BLUE (InGaAIN) WATER CLEAR 3.8 5.5 12.5 23 100°

Notes:

1.  $\theta$ 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	1.25	W
Junction temperature	TJ	110	°C
Operating Temperature	Тор	-40 To +100	°C
Storage Temperature	Tstg	-40 To +100	٥°
DC Forward Current [1]	lF	350	mA
Peak Forward Current [2]	IFM	500	mA
Thermal resistance [1]	Rth j-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 TA=25°C

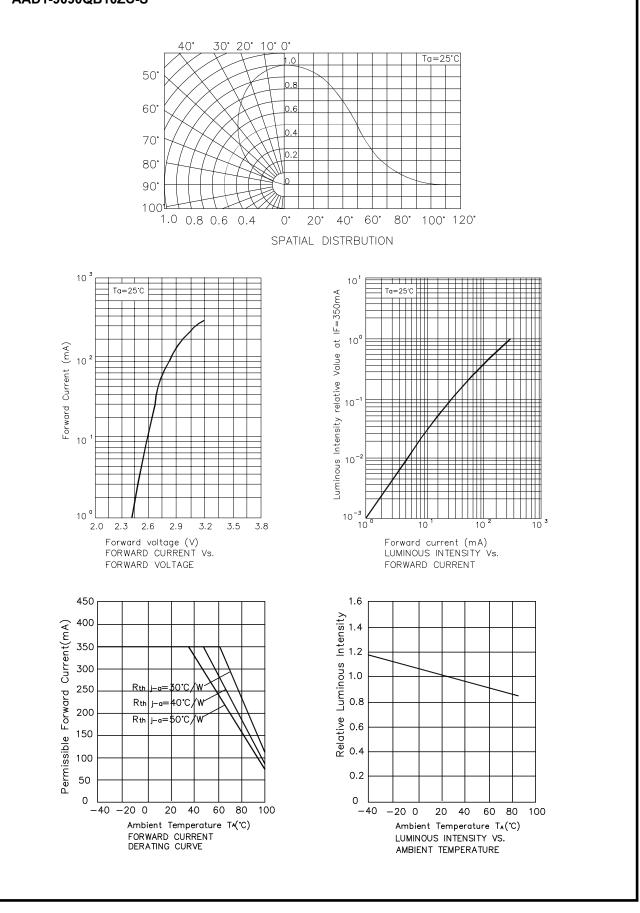
Parameter	Symbol	Value	Unit
Wavelength at peak emission IF=350mA [Typ.]	λpeak	452	nm
Dominant Wavelength I⊧=350mA [Typ.]	λ dom [1]	458	nm
Spectral bandwidth at 50% $\Phi_{\text{REL MAX}}$ IF=350mA [Typ.]	Δλ	20	nm
Forward Voltage IF=350mA [Min.]		2.8	V
Forward Voltage IF=350mA [Typ.]	VF [2]	3.2	
Forward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

Notes:

1. Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.

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