

LD120CUB500-3.8VF

Ultra Blue

3mm, Domed, 4.1mm Height
45° viewing angle

DWG BY:
BL / GP
10-23-06

CHK BY:
PL
10-24-06

QA:
10-__-06

MFG:
__-__-__

REVISION LTR: -
10-23-06

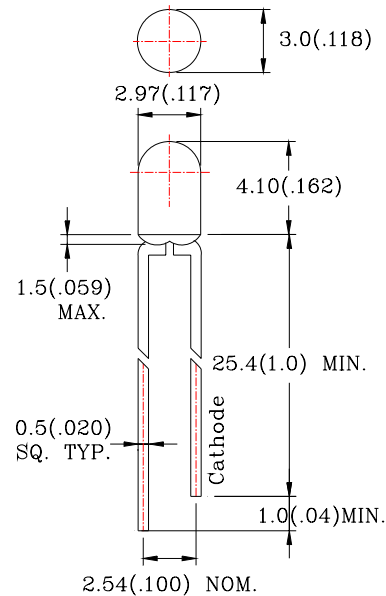
● **Features:**

1. Chip material: AlInGaN
2. Emitted color : Ultra blue
3. Lens Appearance : water clear
4. Low power consumption.
5. High efficiency.
6. Versatile mounting on P.C. Board or panel.
7. Low current requirement.
8. 3mm diameter package.
9. This product is RoHS compliant.

● **Applications:**

1. TV set
2. Monitor
3. Telephone
4. Computer
5. Circuit board

● **Package dimensions:**



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25\text{mm}$ ($0.01''$) unless otherwise specified.
3. Lead spacing is measured where the leads emerge from the package.
4. Specifications are subject to change without notice.

● **Absolute Maximum Ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	120	mW
Forward Current	I _F	30	mA
Peak Forward Current* ¹	I _{FP}	150	mA
Reverse Voltage	V _R	5	V
Operating Temperature	Topr	-40°C~80°C	
Storage Temperature	Tstg	-40°C~85°C	
Soldering Temperature	Tsol	260°C (for 5 seconds)	

*¹Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width.

● **Electrical and optical characteristics(Ta=25°C)**

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=20mA$	-	3.8	4.5	V
Luminous Intensity	I_v	$I_F=20mA$	-	100	-	mcd
Reverse Current	I_R	$V_R=5V$	-	-	100	μA
Peak Wave Length	λ_p	$I_F=20mA$	-	427	-	nm
Dominant Wave Length	λ_d	$I_F=20mA$	-	463	-	nm
Spectral Line Half-width	$\Delta \lambda$	$I_F=20mA$	-	61	-	nm
Viewing Angle	$2\theta_{1/2}$	$I_F=20mA$	-	45	-	deg
Radiant Intensity		$I_F=20mA$	-	-	-	$\mu W/sr$
Chromaticity Coordinates	X	$I_F=20mA$	-	0.15	-	
	Y		-	0.06	-	

● **Typical electro-optical characteristics curves**

Fig.1 Relative intensity vs. Wavelength

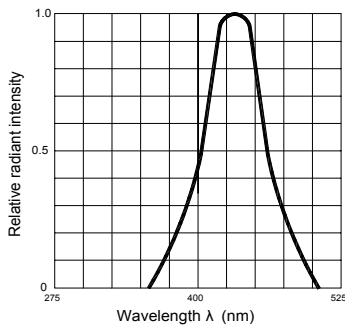


Fig.2 Forward current derating curve vs. Ambient temperature

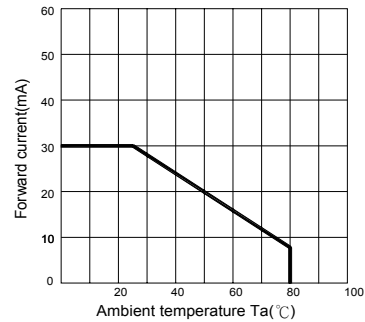


Fig.3 Forward current vs. Forward voltage

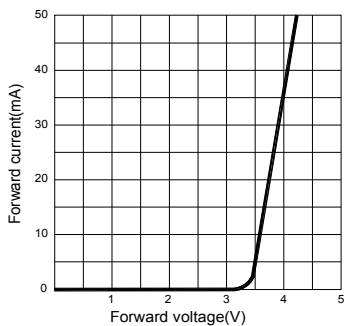


Fig.4 Relative luminous intensity vs. Ambient temperature

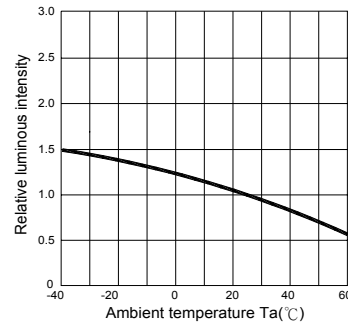


Fig.5 Relative luminous intensity vs. Forward current

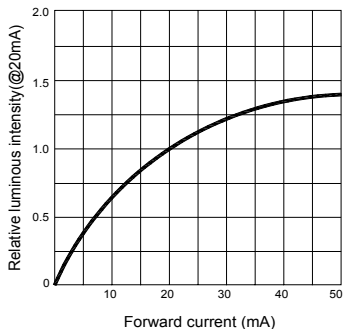
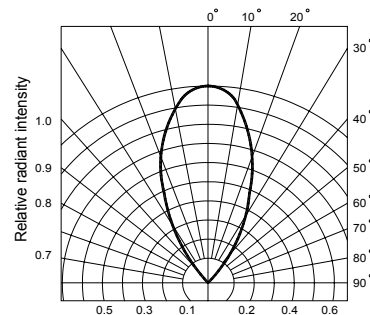


Fig.6 Radiation diagram



● **Bin Limits**

1. Intensity bin limits (At $I_F=20\text{mA}$)

Bin Code	Min. (mcd)	Max. (mcd)
:	:	:
N	37	72
P	55	110
Q	82	160
R	120	240
S	180	360
:	:	:

2. Color Bin Limits (At $I_F=20\text{mA}$) : Dominant Wave Length $\lambda_d(\text{nm})$

Bin Code	Min. (nm)	Max. (nm)
3	459	466
4	464	471
5	469	476

3. V_F Bin limits (At $I_F=20\text{mA}$)

Bin Code	Min. (v)	Max. (v)
L	3.55	3.85
M	3.75	4.05
N	3.95	4.25
P	4.15	4.45
Q	4.35	4.65

