



# Ledman Optoelectronic Co., Ltd.

## DATA SHEET

MODEL No : LS-COSB-BSN1-01

DOC. No: LSL-13-011

Revision. 02

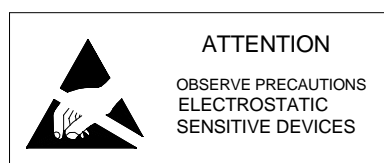
Description:

- 3.0 x 2.0mm Top SMD
- Colloid Color: Water Transparent
- Emitting Color: Blue
- Viewing Angle :120°



Dice Material: InGaN

PREPARED BY	CHECKED BY	APPROVED BY	CUSTOMER APPROVED SIGNATURES
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**Applications:**

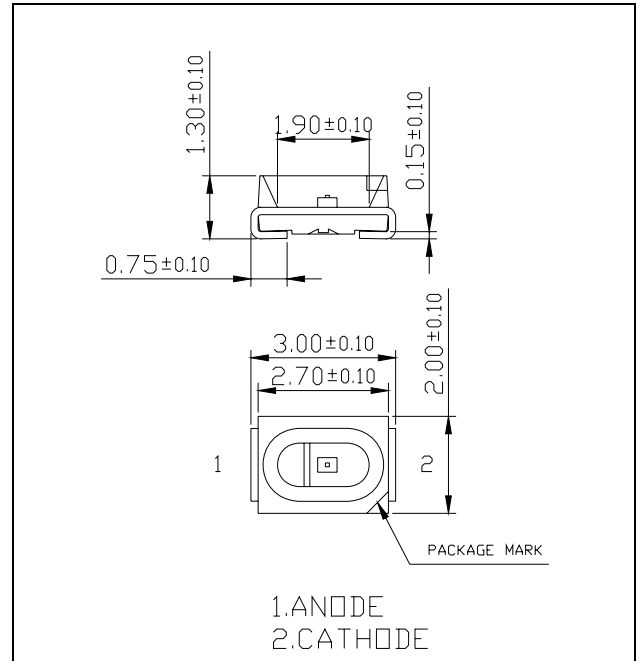
- Indicators
- Illuminations
- LCD Back Lights
- Automobile's Applications

**Absolute Maximum Ratings at Ta = 25°C**

Items	Symbol	Absolute maximum Rating	Unit
Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current*	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Power Dissipation	P <sub>D</sub>	110	mW
Operation Temperature	T <sub>opr</sub>	-20 ~ + 75	°C
Storage Temperature	T <sub>stg</sub>	-30 ~ + 80	°C

\*pulse width<=0.1msec duty <=1/10

**Dimension Drawing**



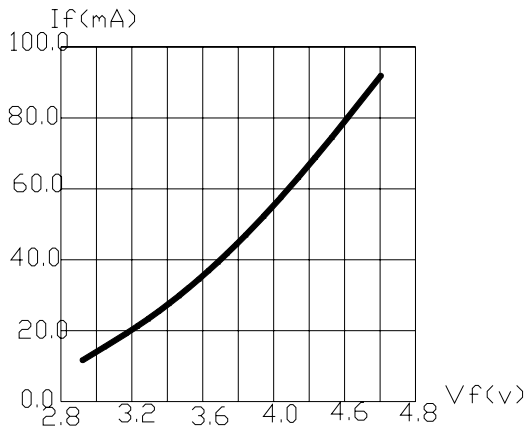
**Typical Electrical & Optical Characteristics ( Ta = 25°C)**

Items	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA	---	3.2	3.6	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V	---	---	10	μA
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> = 20mA	180	250	---	mcd
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA	465	470	475	nm
50% Power Angle	2 θ½	I <sub>F</sub> = 20mA	---	120	---	deg

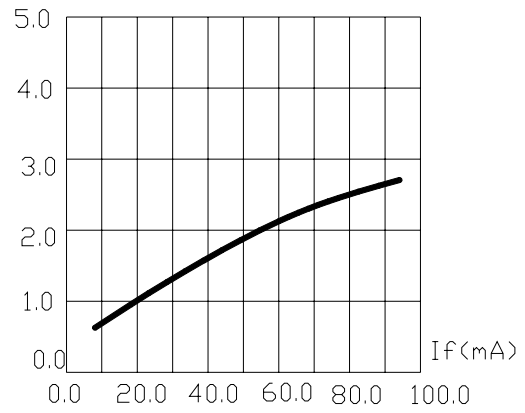
**Important Notes:**

- 1) All data will be included per delivery; rank ratio will be based on Dices distribution.
- 2) Tolerance of measurement of luminous intensity is ±10%
- 3) Tolerance of measurement of dominant wavelength is ±1nm.
- 4) Tolerance of measurement of Vf is ±0.05 V.
- 5) Packaging methods are available for selection, please refer to PACKAGING STANDARD.
- 6) Please refer to LED LAMP RELIABILITY TEST STANDARD for reliability test conditions.
- 7) Please refer to APPLICATION NOTES for Application.
- 8) Do not handle the device by the SMD surface. Care must be taken to avoid damage to the SMD surface or the interior of the device that can be damaged by excessive force to the SMD surface.

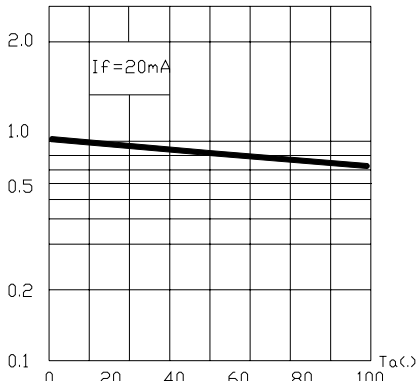
### Typical Optical-Electronic Characteristic Curves



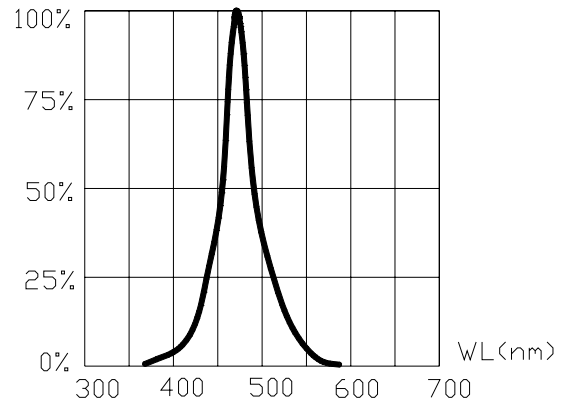
**Fig.1 Forward Current vs. Forward Voltage**



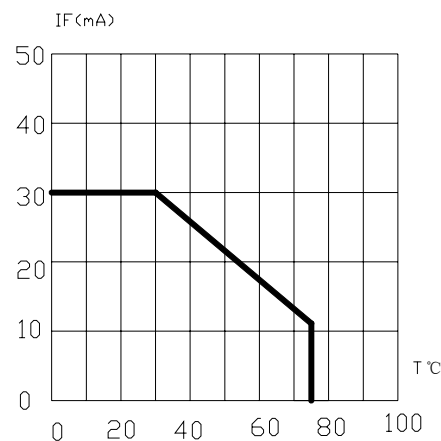
**Fig.2 Relative Luminous Intensity vs. Forward Current**



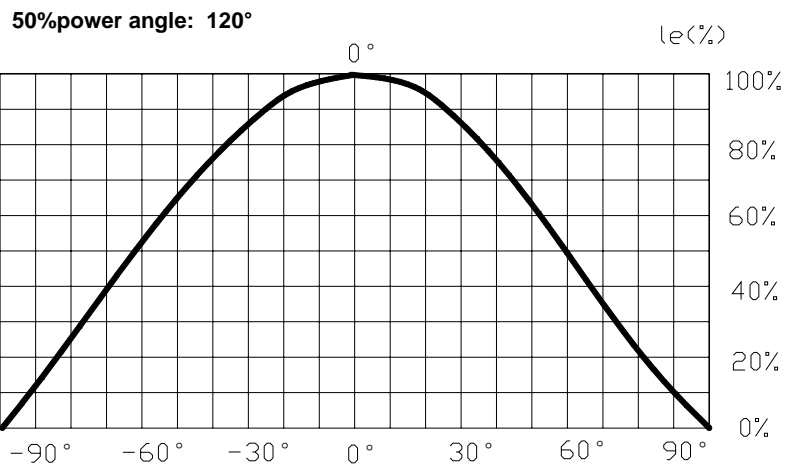
**Fig.3 Relative Luminous Intensity vs. Ambient Temperature**



**Fig.4 Relative Luminous Flux vs. Wavelength**



**Fig.5 Maximum Forward Current vs. Ambient Temperature**



**Fig.6 For Field Pattern.**

Items	Signatures	Date	
Prepared by	Zhen Feng	2008-12-12	
Checked by	ShangSheng Zhang	2008-12-12	
Approved by	JianDong Huang	2008-12-12	