



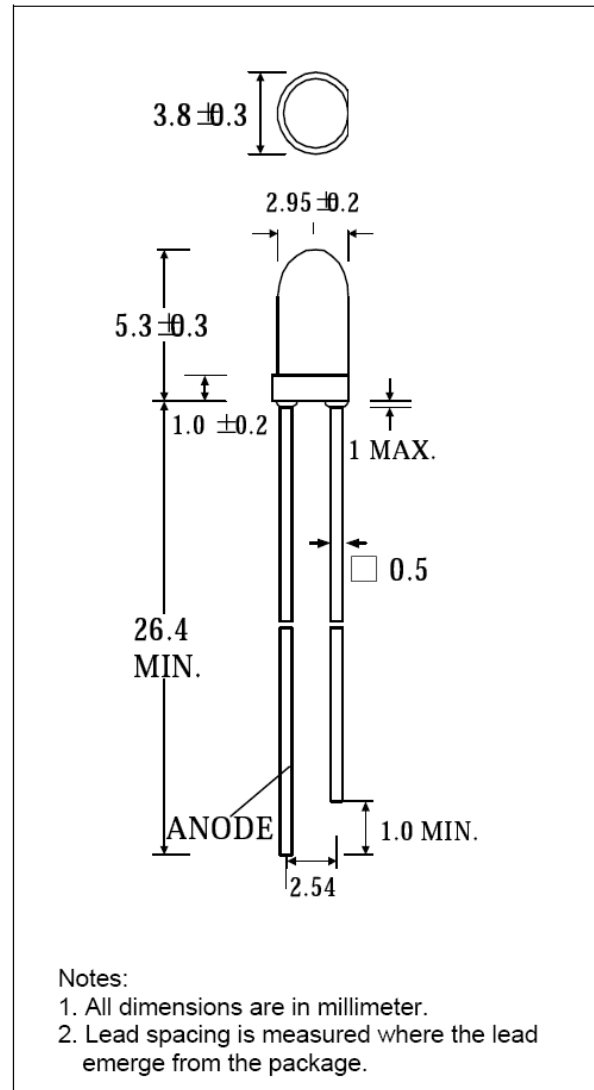
## B3b-446-30

### DESCRIPTION

- Super bright LED Lamp
- Round type
- T-1 3mm diameter
- Lens color: Water Clear
- With Flange
- Solder leads without stand-off
- Compliant with RoHS

### FEATURES

- Emitted color: Super Red
- High Luminous intensity
- Technology: GaAlAs
- Peak wavelength  $\lambda_p = 660\text{nm}$
- Viewing angle:  $20^\circ$



### SELECTION GUIDE

Chip Material	Chip Emitted	Lens Color	Viewing Angle
GaAlAs	Super Red	Water Clear	$20^\circ$



## ABSOLUTE MAXIMUM RATINGS

(Ta=25

°C)

PARAMETER	SYMBOL	MAX. RATING	Unit
Power Dissipation	P <sub>D</sub>	80	mW
Peak Forward Current (1/10 Duty Cycle @1KHz )	I <sub>FP</sub>	50	mA
Continuous Forward Current	I <sub>F</sub>	30	mA
Reverse Voltage	V <sub>R</sub>	5.0	V
Operating Temperature Range	T <sub>OPR</sub>	-40~+85	°C
Storage Temperature Range	T <sub>STG</sub>	-40~+85	°C

Solder temperature 1.6 mm from body for 3 seconds at 260°C

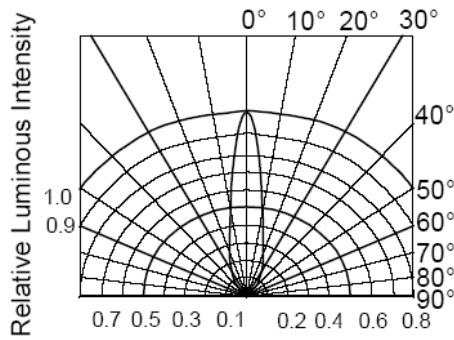
## OPTICAL-ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Luminous Intensity	I <sub>V</sub>	I <sub>F</sub> = 20mA	860	1300		mcd
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 20mA		1.9	2.4	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> = 5V			10	uA
Viewing Angle	2θ <sub>1/2</sub>	I <sub>F</sub> = 20mA		20		deg.
Peak Wavelength	λ <sub>P</sub>	I <sub>F</sub> = 20mA		660		nm
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> = 20mA		645		nm
Spectrum Radiation Bandwidth	Δλ	I <sub>F</sub> = 20mA		25		nm

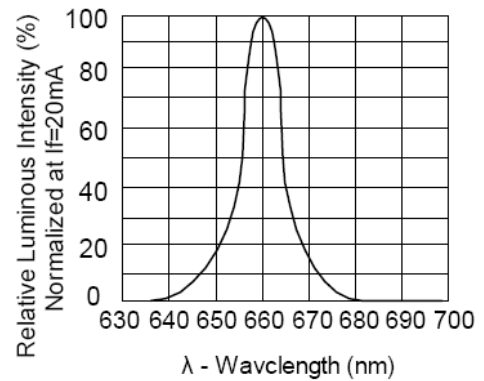
\*Tolerance of Viewing Angle: -10 / +5 deg.



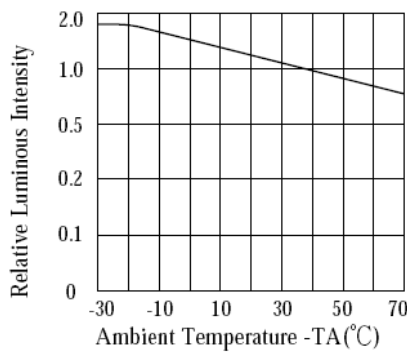
## TYPICAL OPTICAL-ELECTRICAL CHARACTERISTIC CURVES



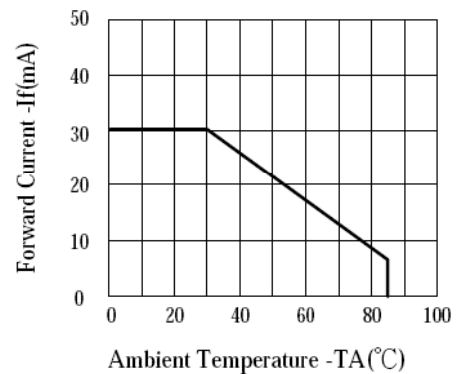
**RADIATION DIAGRAM**



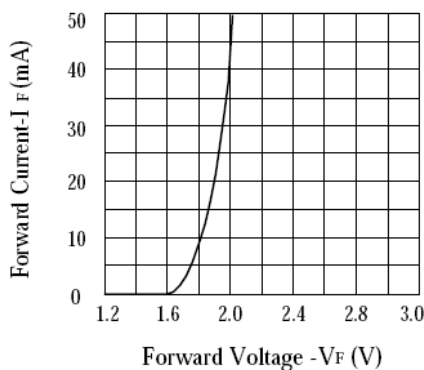
**RELATIVE LUMINOUS INTENSITY Vs. WAVELENGTH**



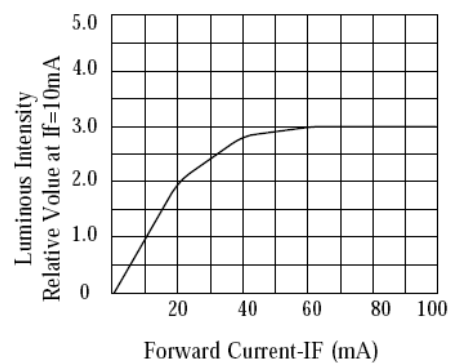
**LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE**



**FORWARD CURRENT Vs. AMBIENT TEMPERATURE**



**FORWARD CURRENT Vs. FORWARD VOLTAGE**



**LUMINOUS INTENSITY Vs. FORWARD CURRENT**