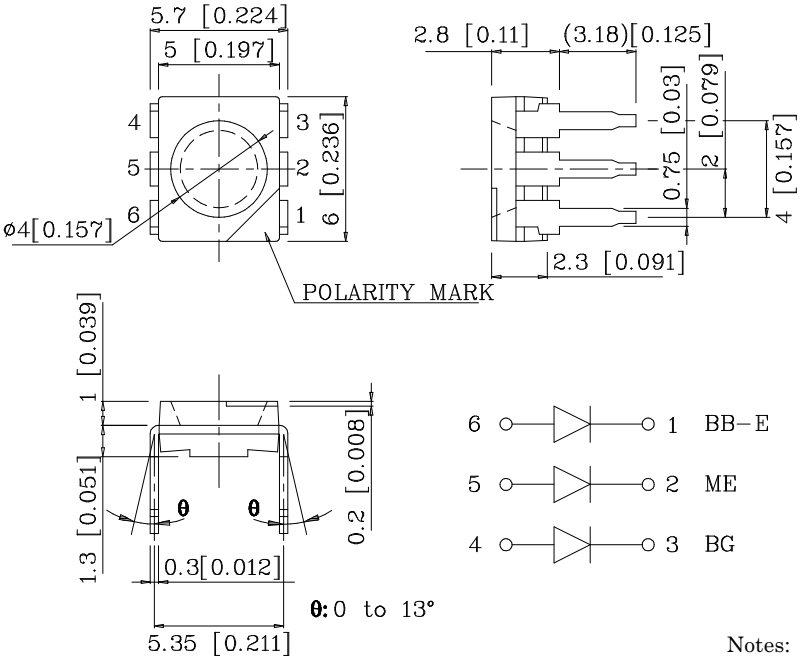
5.0x6.0mm FULL COLOR LED LAMP

SUN LED

XSBBEMEBG99W

Email : sales@us.sunled.com
Web Site : www.sunled.com



ATTENTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.

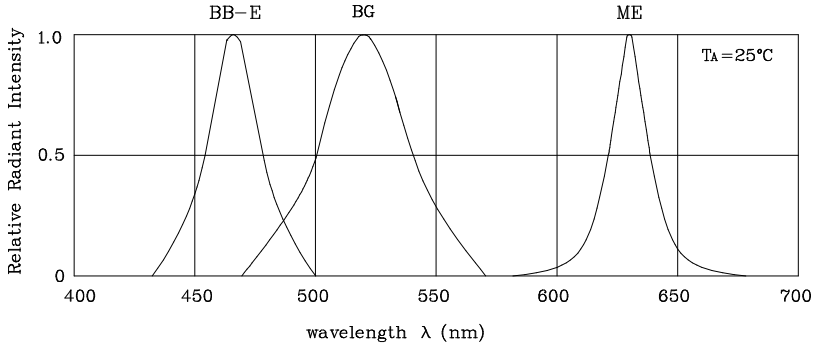
Absolute maximum ratings (T_A=25°C)		**BB-E** (InGaN)	**ME** (InGaAlP)	**BG** (InGaN)	**Unit**
Reverse voltage	V_R	5	5	5	V
Forward current	I_F	30	50	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	i_{FS}	160	195	150	mA
Total Power dissipation Within 350mW at all chips are lightened	PT	350			mW
Operating temperature	T_A	-40 ~ +85			°C
Storage temperature	Tstg	-40 ~ +85			
Lead solder temperature [2mm below package base]	260°C For 5 Seconds				

Operating Characteristics (T_A=25°C)		**BB-E** (InGaN)	**ME** (InGaAlP)	**BG** (InGaN)	**Unit**
Forward voltage (typ.) (IF=20mA)	V_F	3.7	2.0	3.5	V
Forward voltage (max.) (IF=20mA)	V_F	4.3	2.5	4.5	V
Reverse current (VR=5V)	I_R	10	10	10	uA
Wavelength at peak emission (IF=20mA)	λpeak	465	630	520	nm
Wavelength at Dominate emission (IF=20mA)	λD	470	621	525	nm
Spectral Line half-width (IF=20mA)	Δλ	25	20	38	nm
Capacitance (VF=0V, f=1MHz)	C	110	25	45	pF

Part Number	**Emitting** Color	**Emitting** Material	**Lens-color**	**Luminous** Intensity (IF=30 *50mA) mcd min.	typ.	**Wavelength** nm **λP**	**Viewing** Angle **2θ1/2**
XSBBEMEBG99W	Blue	InGaN	Water Clear	110	248	465	100°
	Red	InGaAlP		*650	*998	630	
	Green	InGaN		180	348	520	

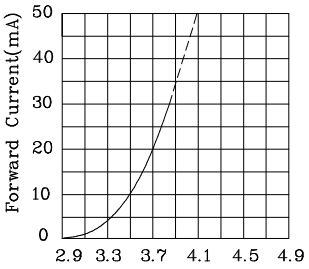
Note: * Luminous intensity with asterisk is measured at 50mA.

XSBBEMEBG99W

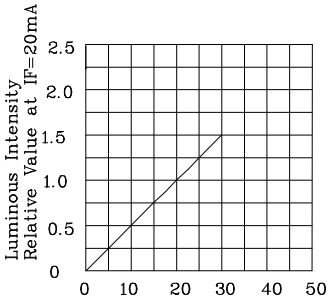


RELATIVE INTENSITY Vs. WAVELENGTH

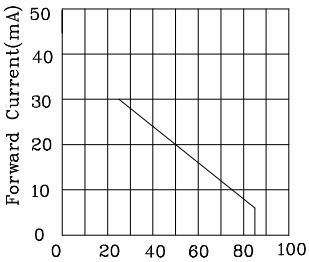
❖BB-E



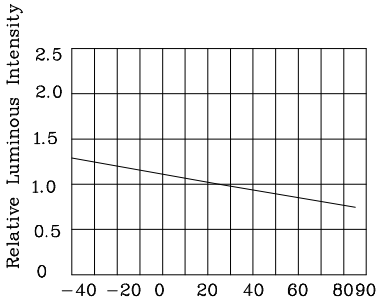
FORWARD CURRENT Vs.
FORWARD VOLTAGE



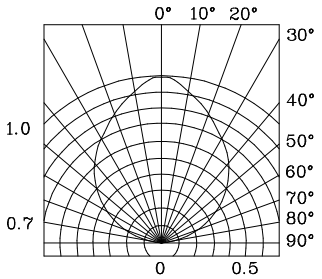
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

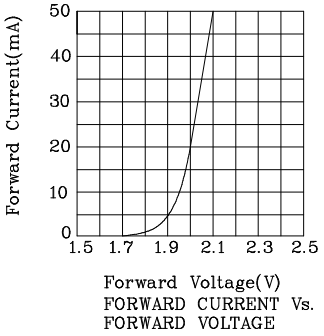


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

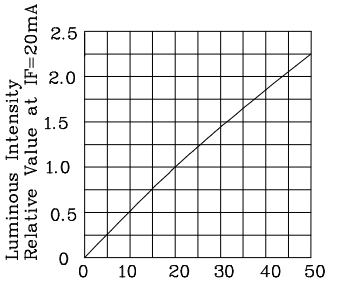


SPATIAL DISTRIBUTION

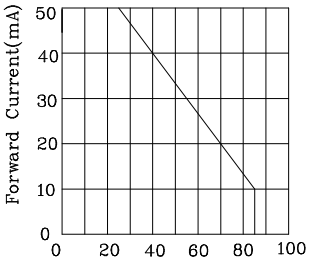
❖**ME**



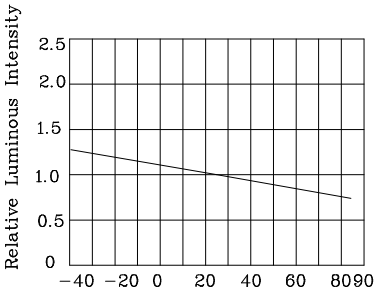
FORWARD CURRENT Vs.
FORWARD VOLTAGE



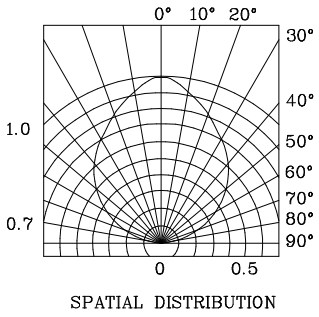
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

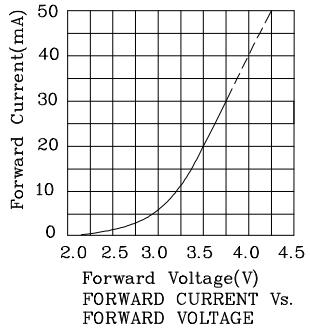


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

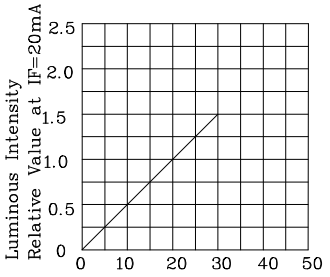


SPATIAL DISTRIBUTION

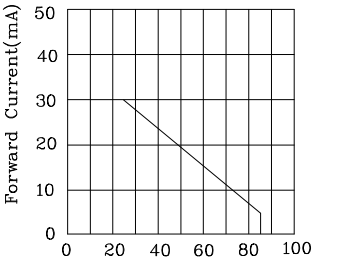
❖**BG**



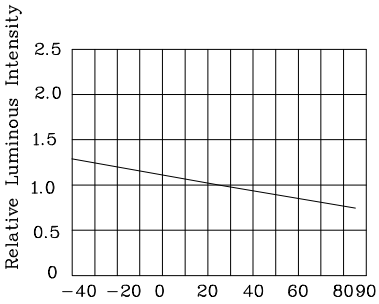
FORWARD CURRENT Vs.
FORWARD VOLTAGE



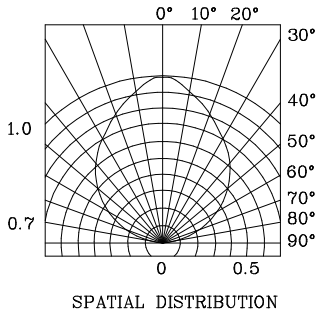
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

SunLED
www.SunLED.com

Part Number: **XSBBGZEBGE99W**

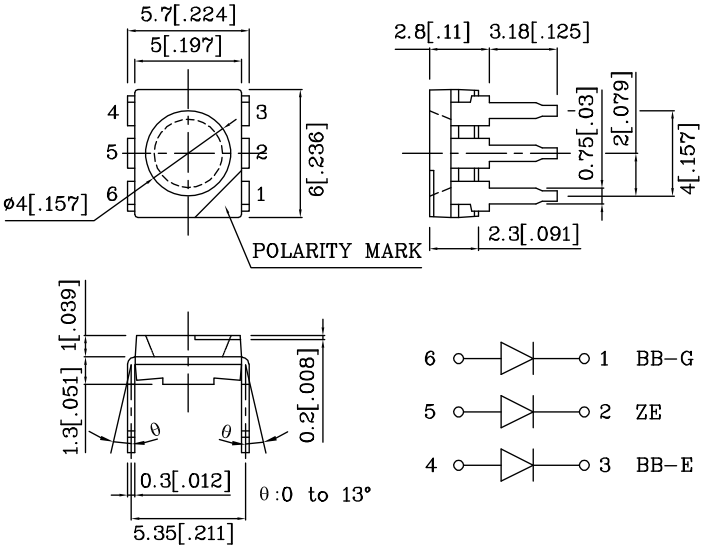
5.0x6.0mm FULL COLOR LED LAMP

PRELIMINARY SPEC

Features

- OUTSTANDING MATERIAL EFFICIENCY.
- RELIABLE AND RUGGED.
- WATER CLEAR LENS.
- LOW POWER CONSUMPTION.
- ONE BLUE, ONE ORANGE AND ONE GREEN CHIPS IN ONE PACKAGE.
- CAN PRODUCE ANY COLOR IN VISIBLE SPECTRUM,INCLUDING WHITE LIGHT.

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



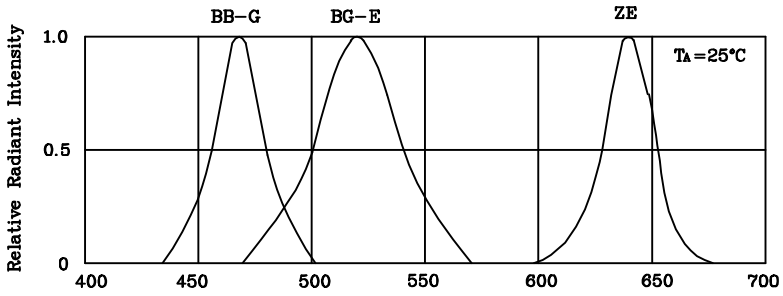
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Absolute maximum ratings (TA=25°C)		**BB-G (InGaN)**	**ZE (InGaAlP)**	**BG-E (InGaN)**	**Unit**
Reverse voltage	VR	5	5	5	V
Forward current	IF	30	50	30	mA
Forward current (peak) 1/10Duty cycle 0.1ms pulse width	iFS	150	150	150	mA
Total Power dissipation Within 350mW at all chips are lightened	PT	350			mW
Operating temperature	TA	-40 ~ +85			°C
Storage temperature	Tstg	-40 ~ +85			

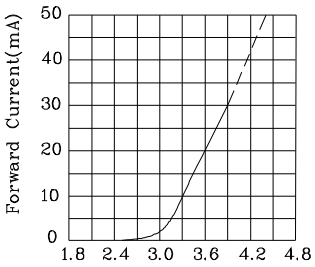
Operating Characteristics (TA=25°C)		**BB-G (InGaN)**	**ZE (InGaAlP)**	**BG-E (InGaN)**	**Unit**
Forward voltage (typ.) (IF=20mA)	VF	3.6	2.2	3.5	V
Forward voltage (max.) (IF=20mA)	VF	4.3	2.8	4.5	V
Reverse current (VR=5V)	IR	10	10	10	uA
Wavelength at peak emission (IF=20mA)	λ peak	468	640	518	nm
Wavelength at Dominate emission (IF=20mA)	λ D	470	630	525	nm
Spectral Line half-width (IF=20mA)	Δλ	26	25	36	nm
Capacitance (VF=0V, f=1MHz)	C	110	27	50	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=30mA *50mA) mcd min.	Luminous Intensity (IF=30mA *50mA) mcd typ.	Wavelength nm λ P	Viewing Angle 2θ 1/2
XSBBGZEBGE99W	Blue	InGaN	Water Clear	180	298	468	100°
	Red	InGaAlP		*1500	*2298	640	
	Green	InGaN		280	598	518	

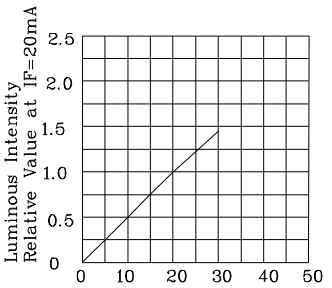


RELATIVE INTENSITY Vs. WAVELENGTH

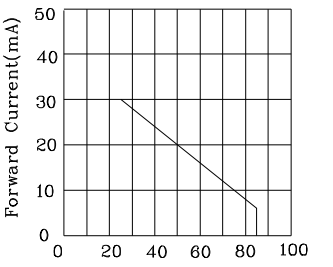
❖ **BB-G**



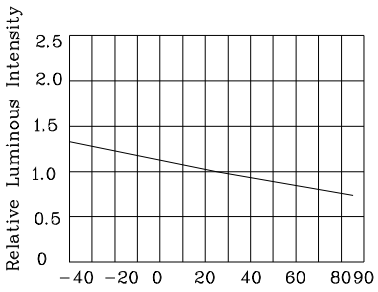
FORWARD CURRENT Vs
FORWARD VOLTAGE



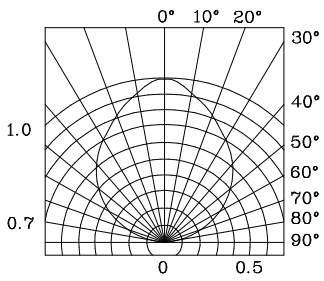
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

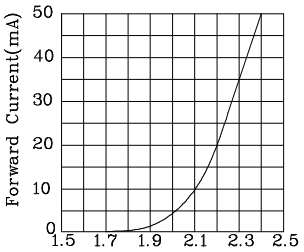


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

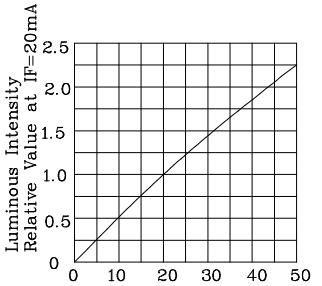


SPATIAL DISTRIBUTION

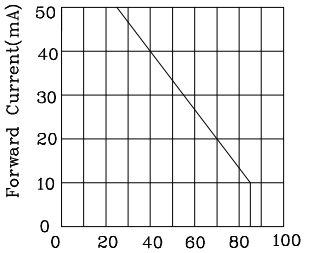
❖ **ZE**



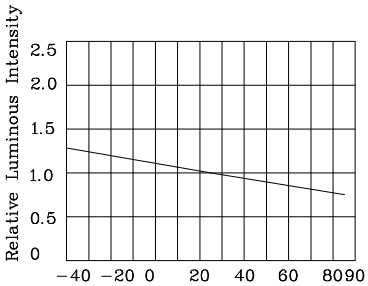
FORWARD CURRENT Vs.
FORWARD VOLTAGE



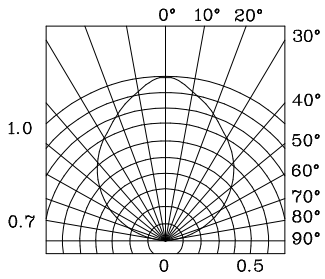
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE

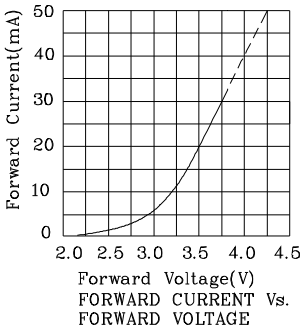


LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE

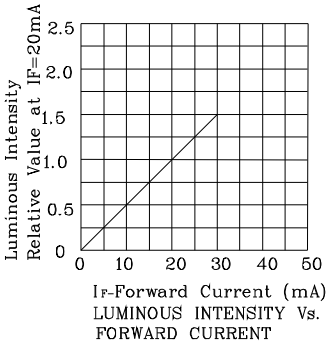


SPATIAL DISTRIBUTION

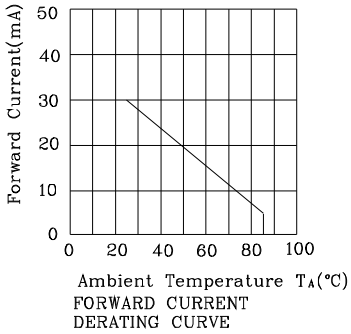
❖ **BG-E**



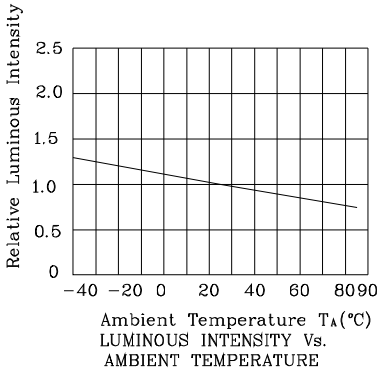
FORWARD CURRENT Vs.
FORWARD VOLTAGE



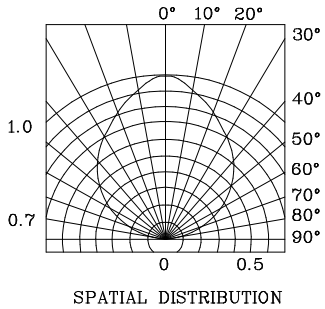
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION