

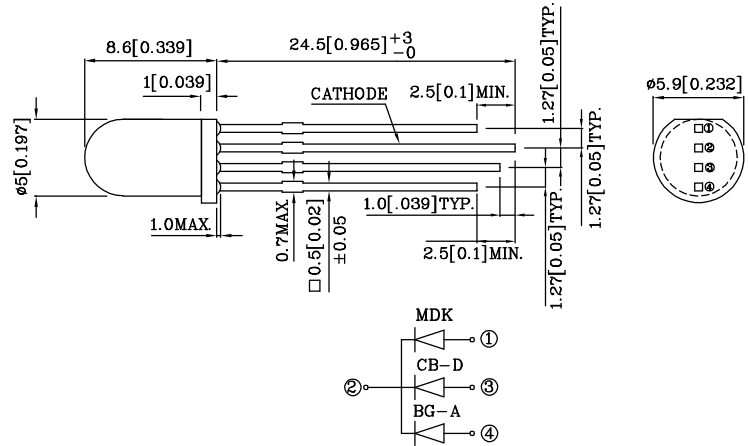
PRELIMINARY SPEC

Features

- UNIFORM LIGHT OUTPUT.
- LOW POWER CONSUMPTION.
- I.C. COMPATIBLE.
- LONG LIFE - SOLID STATE RELIABILITY.
- RoHS COMPLIANT.



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES



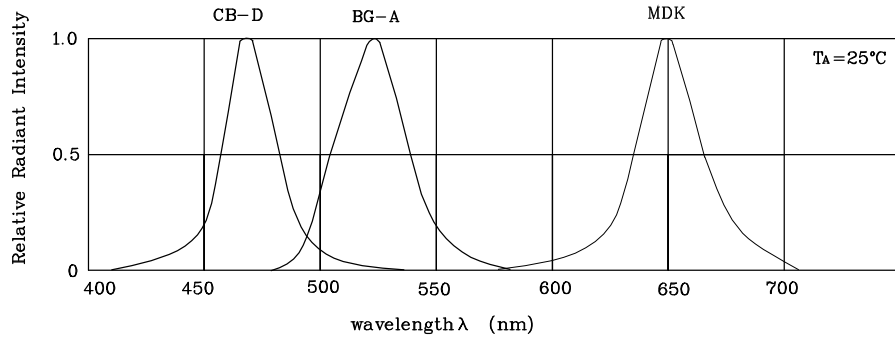
Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.25(0.01)$ unless otherwise noted.

Absolute Maximum Ratings (TA=25°C)		MDK (InGa IP)	CB-D (GaN)	BG-A (InGa N)	Unit
Reverse Voltage	VR	5	5	5	V
Forward Current	IF	30	30	30	mA
Forward Current (Peak) 1/10 Duty Cycle 0.1ms Pulse Width	iFS	185	150	100	mA
Power Dissipation	PT	75	120	120	mW
Operating Temperature	TA	-40 ~ +85			°C
Storage Temperature	Tstg	-40 ~ +85			
Electrostatic Discharge Threshold (HBM)		-	-	1000	V
Lead Solder Temperature [2mm Below Package Base]		260°C For 3 Seconds			
Lead Solder Temperature [5mm Below Package Base]		260°C For 5 Seconds			

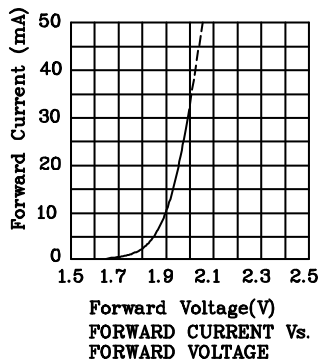
Operating Characteristics (TA=25°C)		MDK (InGa AlP)	CB-D (GaN)	BG-A (InGa N)	Unit
Forward Voltage (Typ.) (IF=20mA)	VF	1.95	3.5	3.2	V
Forward Voltage (Max.) (IF=20mA)	VF	2.5	4.0	4.0	V
Reverse Current (VR=5V)	IR	10	10	10	uA
Wavelength of Peak Emission (IF=20mA)	λ P	650	468	520	nm
Wavelength of Dominant Emission (IF=20mA)	λ D	635	470	525	nm
Spectral Line Full Width At Half-Maximum (IF=20mA)	Δλ	28	25	35	nm
Capacitance (VF=0V, f=1MHz)	C	35	100	100	pF

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=20mA) mcd	Wavelength nm λ P	Viewing Angle 2 θ 1/2	
				min.	typ.		
XLMDKCBDBGA107M	Red	InGaAlP	White Diffused	280	497	650	
	Blue	GaN		110	347	468	60°
	Green	InGaN		180	497	520	

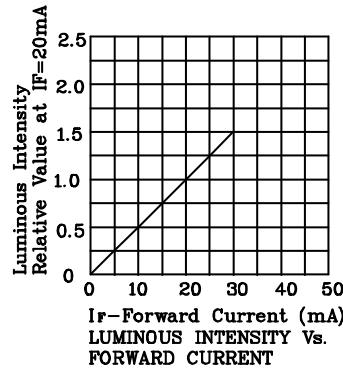


RELATIVE INTENSITY Vs. WAVELENGTH

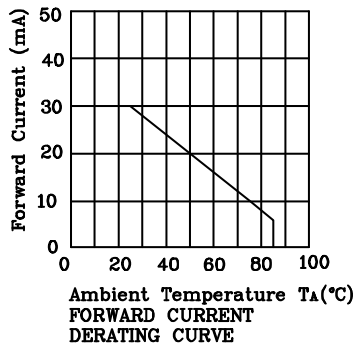
❖ MDK



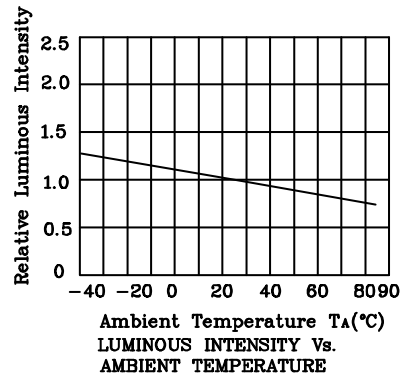
FORWARD CURRENT Vs. FORWARD VOLTAGE



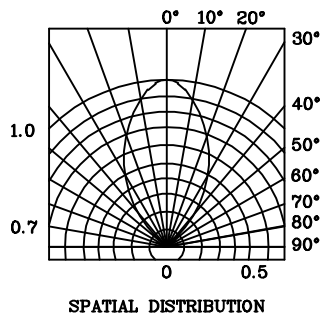
LUMINOUS INTENSITY Vs. FORWARD CURRENT



FORWARD CURRENT DERATING CURVE

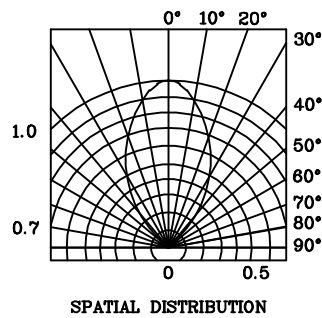
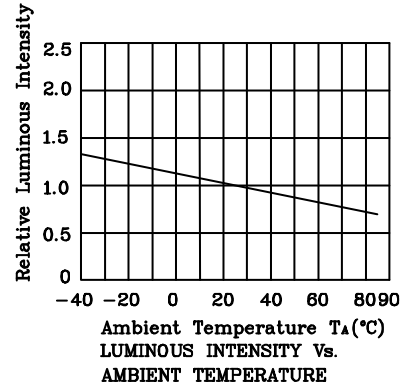
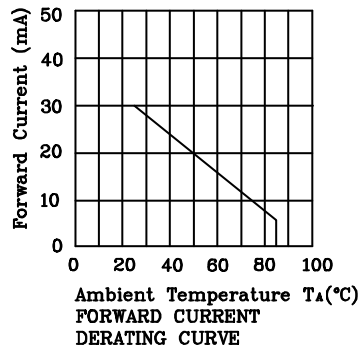
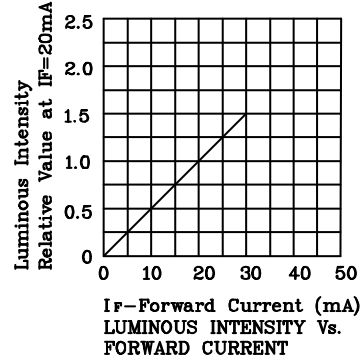
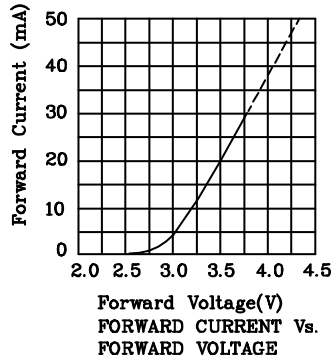


LUMINOUS INTENSITY Vs. AMBIENT TEMPERATURE

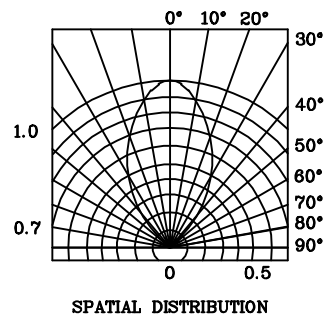
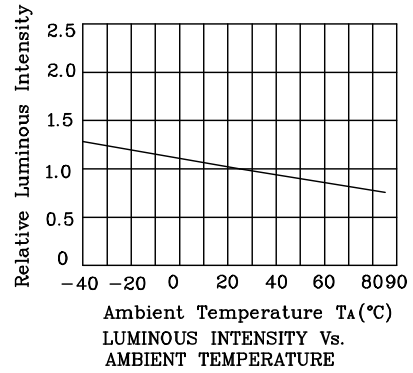
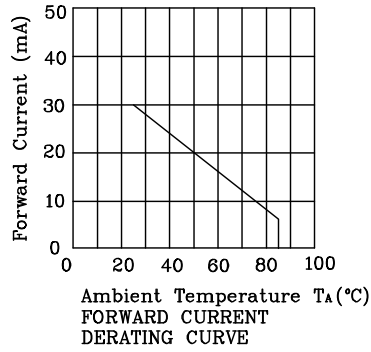
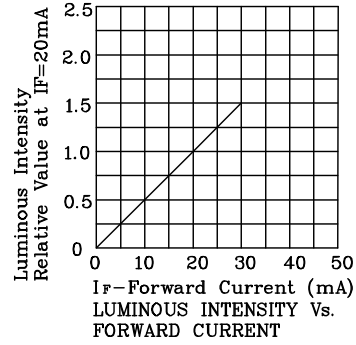
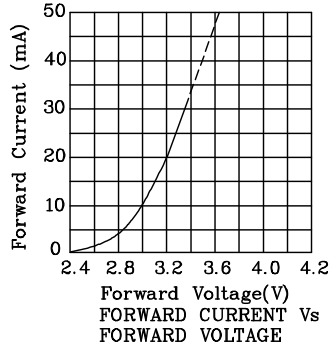


SPATIAL DISTRIBUTION

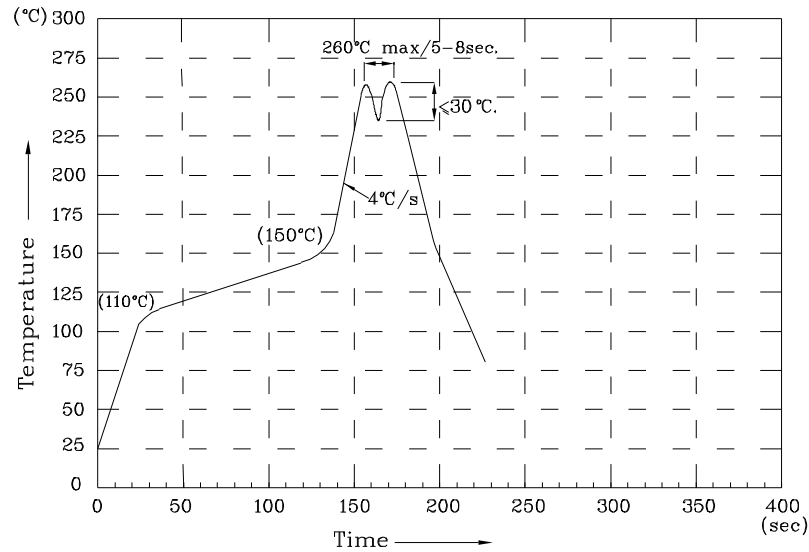
❖ CB-D



❖ BG-A



Wave Soldering Profile For Lead-free Through-hole LED.



NOTES:

1. Recommend the wave temperature 245°C~260°C. The maximum soldering temperature should be less than 260°C.
2. Do not apply stress on epoxy resins when temperature is over 85 degree°C.
3. The soldering profile apply to the lead free soldering (Sn/Cu/Ag alloy).
4. No more than once.

Remarks:

If special sorting is required (e.g. binning based on forward voltage, Luminous intensity/ luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity/ Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.