



# Technical Data Sheet

## HIGH POWER LED

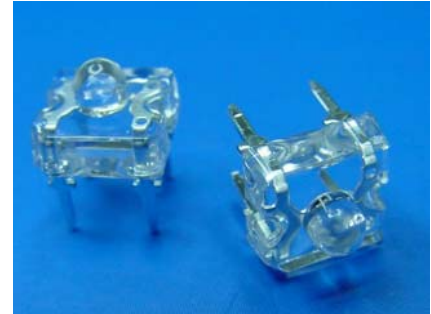
### 31-01SUBC/MB

#### Benefits

- . Fewer LEDs Required
- . Lower Lighting System Cost
- . Viewing angle 40°

#### Features

- . High Flux Output.
- . Low Profile.
- . Low Thermal Resistance.
- . Low Power Consumption.
- . Pb free.



#### Descriptions

This revolutionary package design allows the light designer to reduce the number of LEDs required and provide a more uniform and unique illuminated appearance than with other LED solutions. This is possible through the efficient optical package design and high-current capabilities.

The low profile package can be easily coupled with reflectors or lenses to efficiently distribute light and provide the desired light appearance.

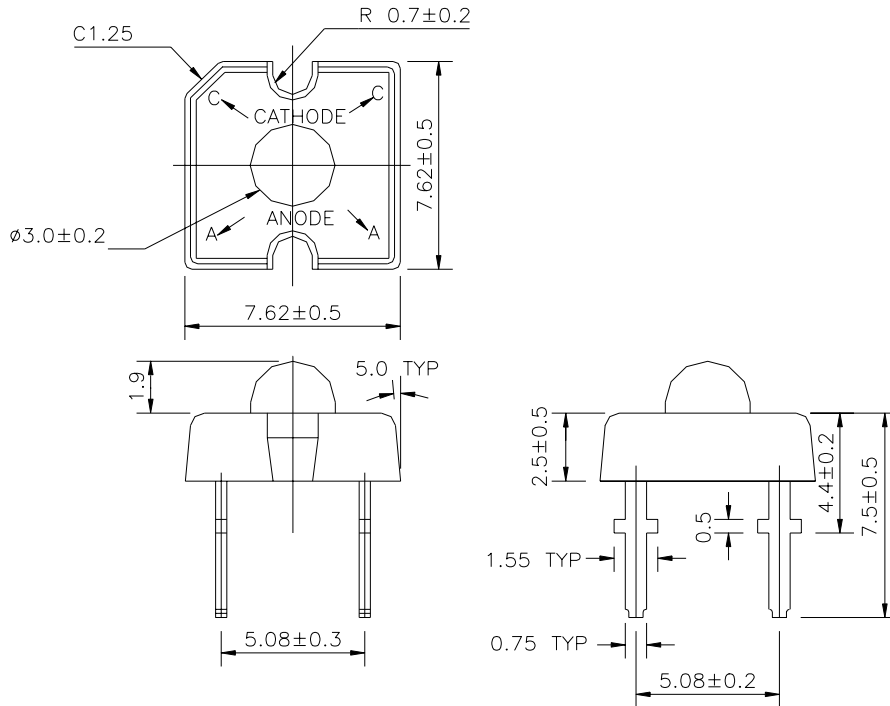
#### Applications

- . Automotive Exterior Lighting
- . Electronic Signs and Signals
- . Special Lighting application

#### Device Selection Guide

PART NO.	Chip		Lens Color
	Material	Emitted Color	
31-01SUBC/MB	InGaN/SiC	Super Blue	Water Clear

**Package Dimensions**



- Notes:**
1. All dimensions are in millimeters
  2. An epoxy meniscus may extend about 1.5mm(0.059") down the leads
  3. Tolerances unless dimensions ±0.25mm

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

Parameter	Symbol	Rating	Units
Continuous Forward Current	I <sub>F</sub>	30	mA
Peak Forward Current(Duty 1/10 @ 1KHZ)	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Operating Temperature	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +100	°C
Soldering Temperature(T=5 sec)	T <sub>sol</sub>	260 ± 5	°C
Power Dissipation	P <sub>d</sub>	129	mW
Electrostatic Discharge	ESD	1000	V

**Electro-Optical Characteristics (Ta=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Condition	Unit
Total Flux	$\Phi_v$	400	630	----	$I_F=20mA$	mlm
Viewing Angle	$2\theta_{1/2}$	----	40	----	$I_F=20mA$	deg
Peak Wavelength	$\lambda_p$	----	468	----	$I_F=20mA$	nm
Dominant Wavelength	$\lambda_d$	----	470	----	$I_F=20mA$	nm
Spectrum Radiation Bandwidth	$\Delta\lambda$	----	26	----	$I_F=20mA$	nm
Forward Voltage	$V_F$	----	3.5	4.3	$I_F=20mA$	V
Reverse Current	$I_R$	----	----	50	$V_R=5V$	$\mu A$

**Rank**

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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(1)	(2)	(3)

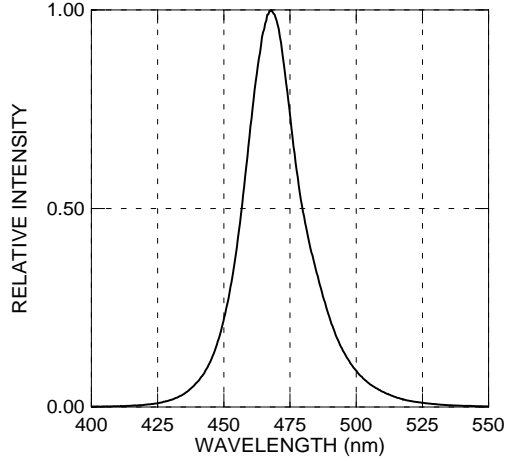
(1) $V_F(v)$			(2) $\lambda_d(nm)$			(3) $\Phi_v(mlm)$		
Bin	Min	Max	Bin	Min	Max	Bin	Min	Max
0	2.80	3.00	1	465	471	U	400	800
1	3.00	3.20	2	470	476	V	630	1250
2	3.20	3.40	3	475	481			
3	3.40	3.60						
4	3.60	3.80						
5	3.80	4.00						
6	4.00	4.20						
7	4.20	4.40						

 \*Measurement Uncertainty of Forward Voltage :  $\pm 0.1V$ 

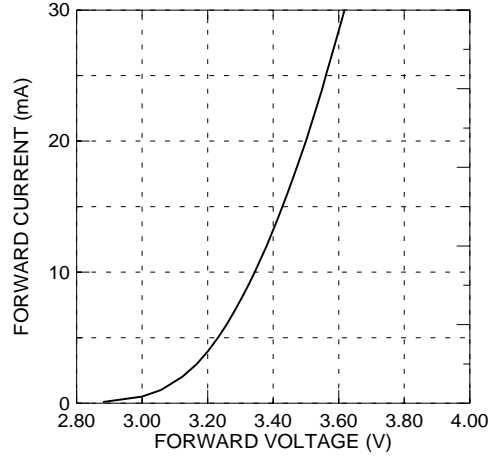
 \*Measurement Uncertainty of Luminous Intensity:  $\pm 15\%$

**Typical Electro-Optical Characteristics Curves**

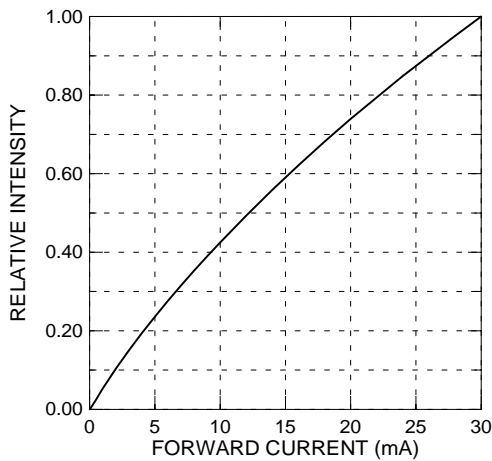
**Relative Intensity vs. Wavelength**



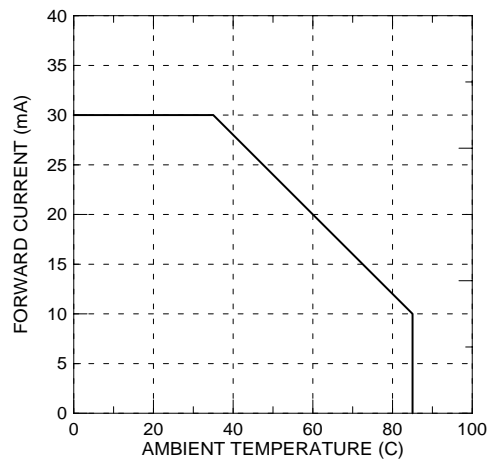
**Forward Current vs. Forward Voltage**



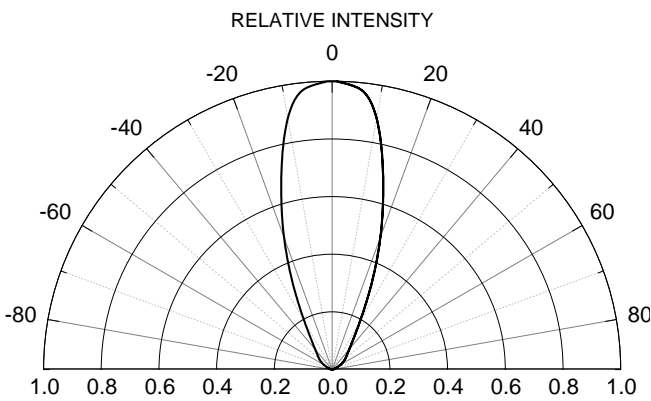
**Relative Intensity vs. Forward Current**



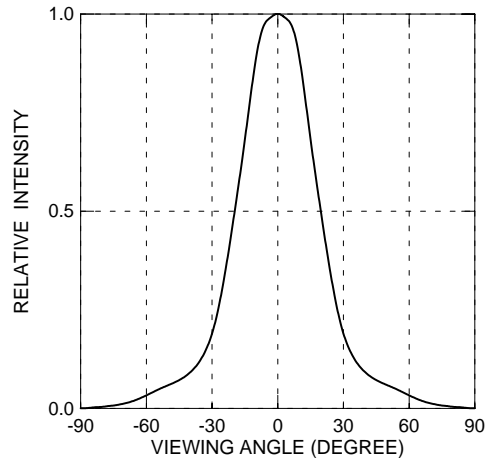
**Forward Current vs. Ambient Temp.**



**Relative Intensity vs. Angle Displacement**



**Relative Intensity vs. Off Axis Angle**



**Label Form Specification**

	
CPN:	
P/N:	
	
31-01SUBC/MB	
QTY :	CAT:
	HUE:
LOT NO :	REF:
	
MADE IN TAIWAN	

CPN: Customer's Production Number  
P/N : Production Number  
QTY: Packing Quantity  
CAT: Color Bin Grade  
HUE: Space  
REF: Reference  
LOT No: Lot Number  
MADE IN TAIWAN: Production Place

**Notes**

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
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