



# MASTER INSTRUMENT CORPORATION

MODEL NO. : ML50B23H-BED

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### ■Features:

- HIGH EFFICIENCY, LOWPOWER CONSUMPTION LED.
- PEAK WAVELENGTH IS 470nm
- DOMINANT WAVELENGTH 465nm
- 15 DEGREE VIEW ANGLE

### ■Applications:

- DIRECT LIGHT ONLY

Dics Material	Light Color	Lens Color
InGaN	Blue	Water Clear

### Absolute Ratings

(Ta=25°C)

Item	Symbol	Maximum	Unit
Power Dissipation	P <sub>D</sub>	80	mW
Continuous Forward Current	I <sub>F</sub>	20	mA
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	I <sub>FP</sub>	100	mA
Reverse Voltage	V <sub>R</sub>	5	V
Derating Linear Form 25°C		0.36	MA/°C
Operating temperature Range	Topr	-20 to +80	°C
Storage Temperature Range	Tstg	-20 to +85	°C

\*\*Condition for IFP is pulse of 1/10 duty and 0.1 msec width.

\*\*Solder temperature 1.6mm from body for 5 seconds at 250°C ±5°C.

\*\*Caution in ESD: Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handling the LED. All devices, Equipment and machinery must be properly grounded.

### CHARACTERISITIC

(Ta=25° C)

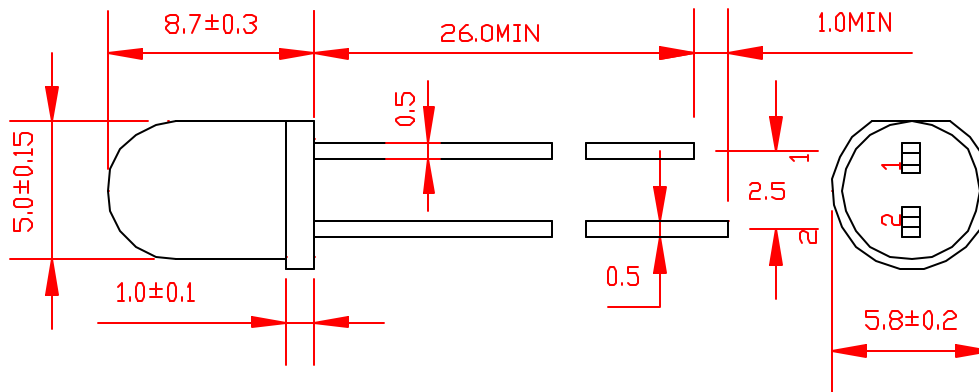
Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V <sub>F</sub>	IF=20mA		3.5	4.0	V
Reverse Current	I <sub>R</sub>	VR=5V			10	uA
Peak Emission Wavelength	λ <sub>p</sub>	IF=20mA	460	465	470	nm
Viewing Angle	2θ <sub>1/2</sub>	IF=20mA		15		Deg
Luminous Intensity	I <sub>v</sub>	IF=20mA	1800	2500		mcd



◆ Package Dimensions (Unit: mm)

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1. Cat hode
2. Anode





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◆ Typical Optical-Electrical Characteristic Curves

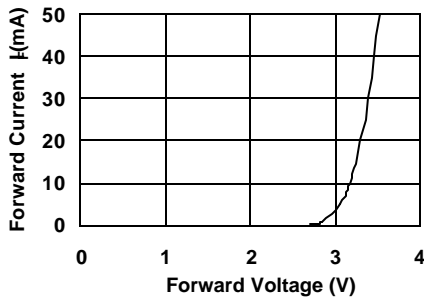


FIG1. FORWARD CURRENT VS. FORWARD VOLTAGE

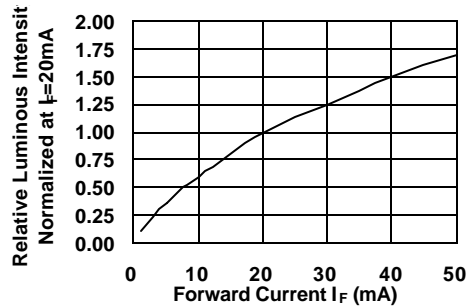


FIG2. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

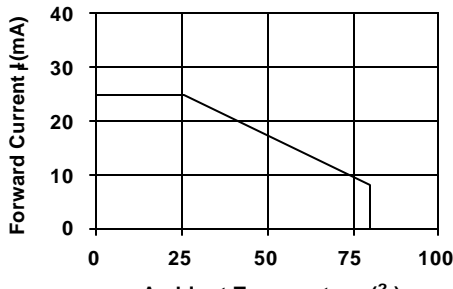


FIG3-27. FORWARD CURRENT VS. AMBIENT TEMPERATURE

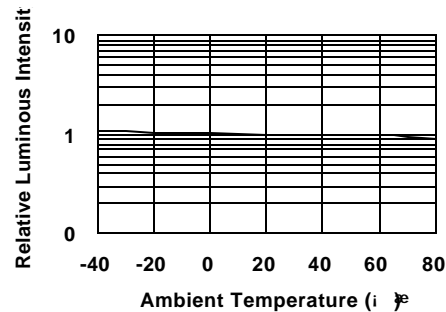
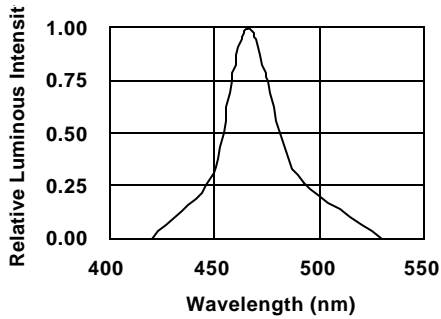


FIG4. LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE



RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

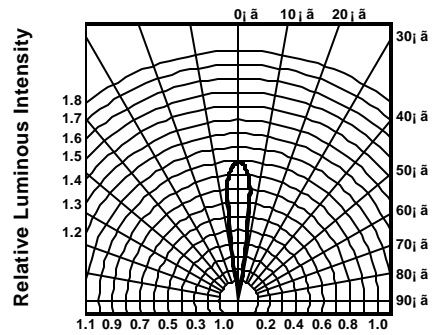


FIG6-46. SPATIAL DISTRIBUTION