



MASTER INSTRUMENT CORPORATION

MODEL NO. : ML5FW13H-CEG/I

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nFeatures:

- I HIGH LUMINOUS INTENSITY (WHITE EMISSION).
- I HIGH EFFICIENCY 5.0LM/W
- I TYPICAL EMISSION COLOR: X=0.29,Y=0.30
- I GRENERAL COLOR RENDERING INDEX, Ra=85
- I 20 DEGREE VIEW ANGLE

nApplications:

- I DIRECT LIGHT ONLY

Dics Material	Light Color	Lens Color
InGaN	White	Water Clear

Absolute Ratings

(Ta=25°C)

Item	Symbol	Maximum	Unit
Power Dissipation	P _D	110	mW
Continuous Forward Current	I _F	25	mA
Peak Forward Current (1/10 Duty Cycle 0.1ms Pulse Width)	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Derating Linear Form 25°C		0.36	MA/°C
Operating temperature Range	Topr	-20 to +80	°C
Storage Temperature Range	Tstg	-30 to +85	°C
Electrostatic Discharge Threshold (HBM)	E _{ot}	1000	V

**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 _F	IF=20mA		3.5	4.0	V
Reverse Current	I _R	VR=5V			10	uA
Viewing Angle	2θ _{1/2}	IF=20mA		20		Deg
Luminous Intensity	I _v	IF=20mA	5000	9000		mcd

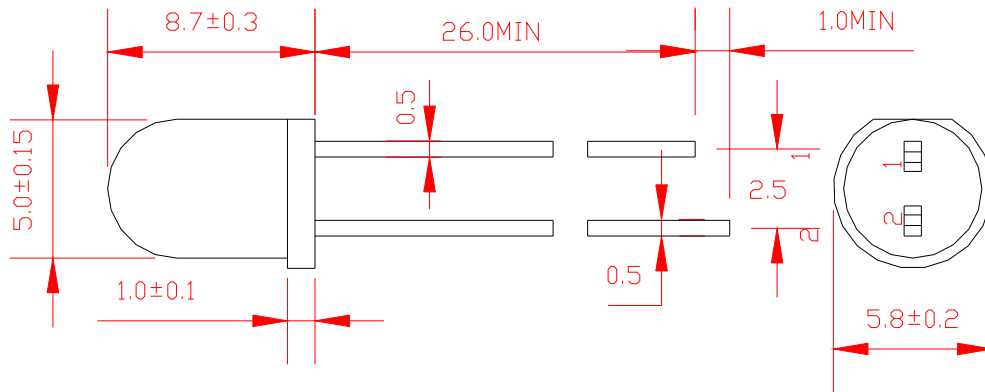
*Tolerance of Viewing Angle: -10/+5deg.



U Package Dimensions (Unit: mm)

P-8

- 1. Cathode
- 2. Anode





□ Typical Optical-Electrical Characteristic Curves

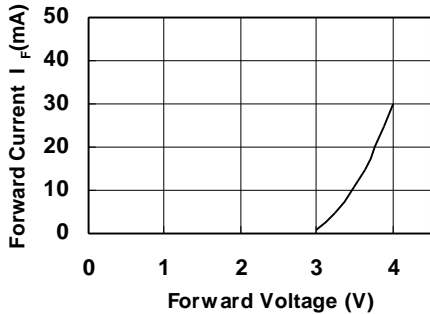


FIG1. FORWARD CURRENT VS. FORWARD VOLTAGE

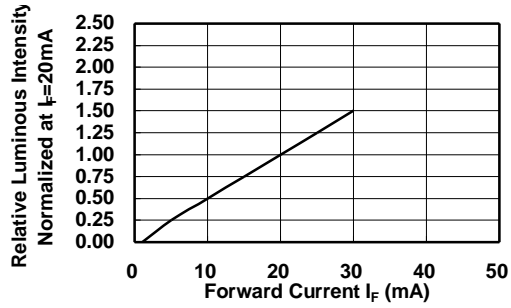


FIG2. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

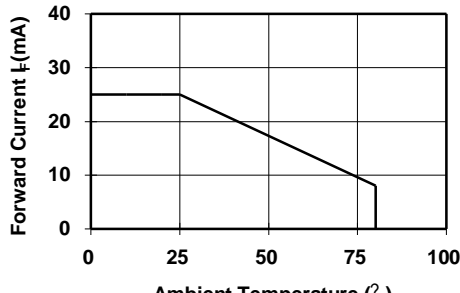


FIG3. FORWARD CURRENT VS. AMBIENT TEMPERATURE

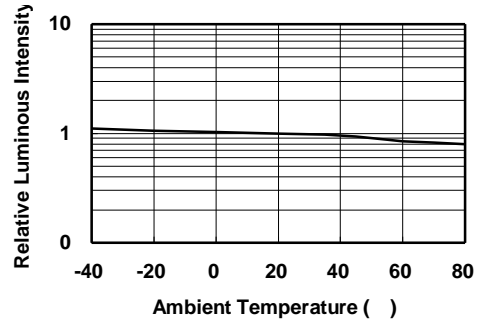
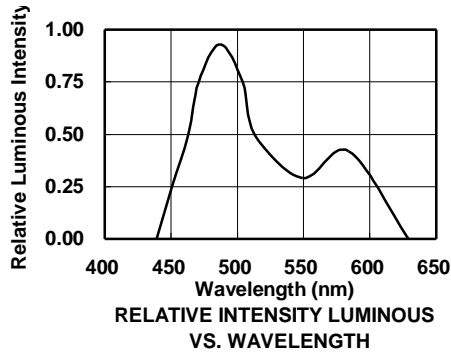


FIG4. LUMINOUS INTENSITY VS. AMBIENT TEMPERATURE



RELATIVE INTENSITY LUMINOUS VS. WAVELENGTH

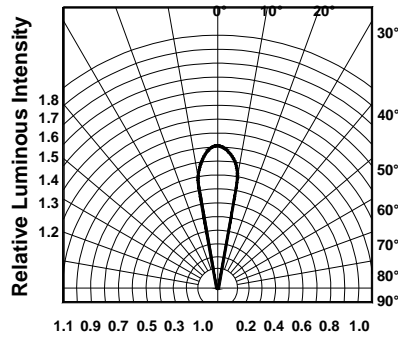


FIG6-53. SPATIAL DISTRIBUTION