



## 660nm single color LED Diode



- **Product Description**

The 660nm visible emitter series is designed for applications requiring high output and precise optical / mechanical axis alignment. Custom package solutions and sorting are available.

- **Product features**

TO-46 Metal Can Package; High Output Power; High Reliability

- **Part Number**

MP-LED-660-3-TO46

## ● Application area

Optical Switches | Linear & Rotary Encoder

## ● Core parameters

Center wavelength
660nm

## ● General Parameters

Absolute Maximum Ratings (Ta=25°C)

Items	Symbol	Ratings	Unit
Forward Current(DC)	IF	50	mA
Forwarded Current(Pulse)*1	IFP	0.5	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	130	mW
Operating Temperature Range	Topr	-20 ~ +100	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C
Junction Temperature	Tj	100	°C
Lead Soldering Temperature*2	Tls	260	°C

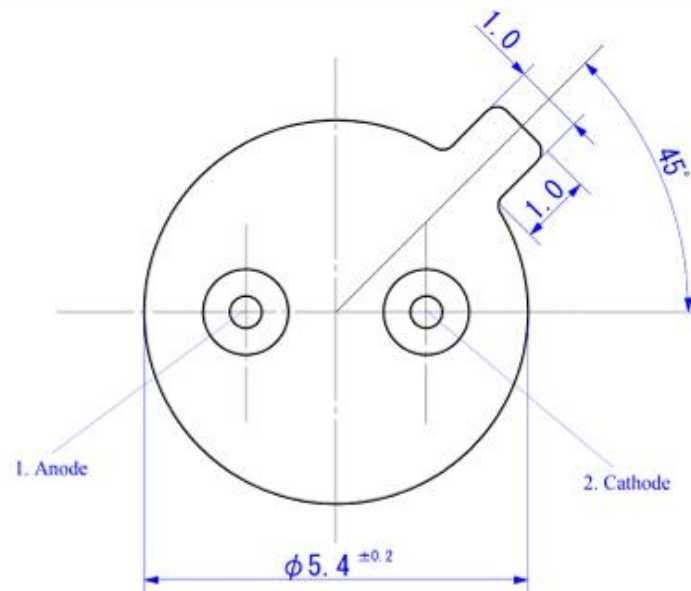
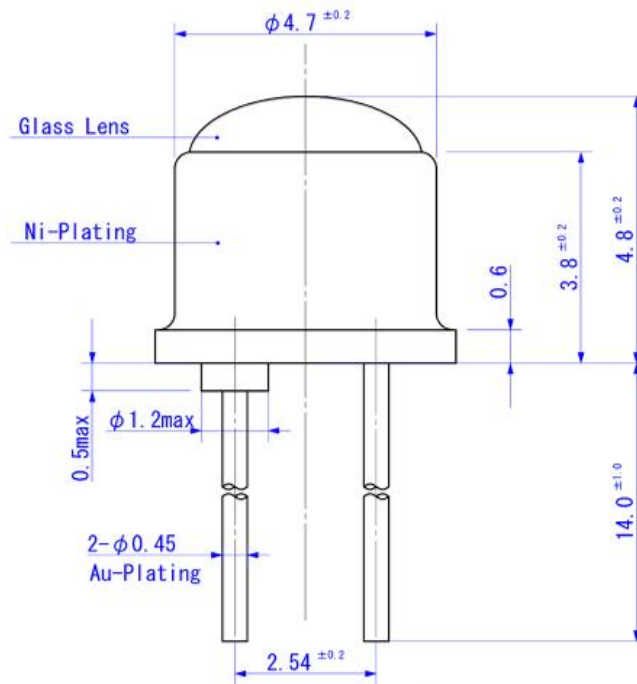
\*1: Tw=10μsec, T=10msec. \*2: Time 5 Sec max, Position: Up to 3mm from the body.



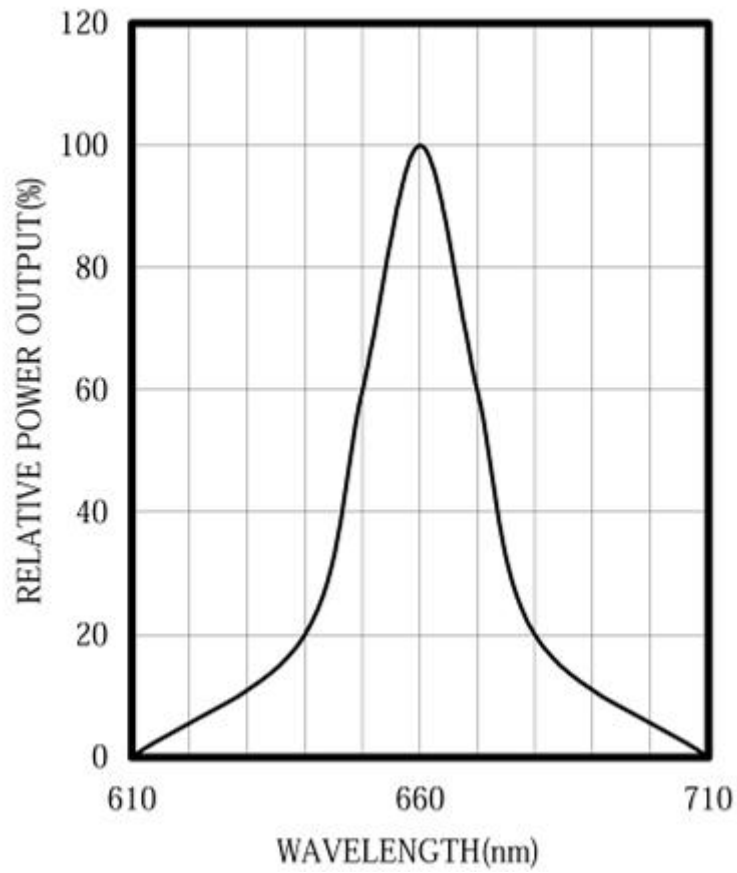
## Electrical & Optical Characteristics (Ta = 25°C)

Items	Sym bol	Test Condition	Min.	Typic al	Max.	Unit
Power Output	PO	IF=20mA	1.5	3.0	--	mW
Forward Voltage	VF	IF=20mA	--	1.8	2.2	V
Reverse Current	IR	VR=5V	--	--	100	μA
Peak Emission Wavelength	λp	IF=20mA	--	660	--	nm
Spectra Line Half Width	Δλ	IF=20mA	--	25	--	nm
Half Intensity Beam Angle	Θ	IF=20mA	--	±4	--	°
Rise/Fall Time	Tr, Tf	IFP=20mA	--	30	--	ns
Junction Capacitance	Cj	1MHz, V-0V	--	20	--	pF
Temperature Coefficient of PO	P/T	IF=10mA	--	-0.5	--	%/°C
Temperatire Coefficient of VF	V/T	IF=10mA	--	-1.5	--	mV/ °C

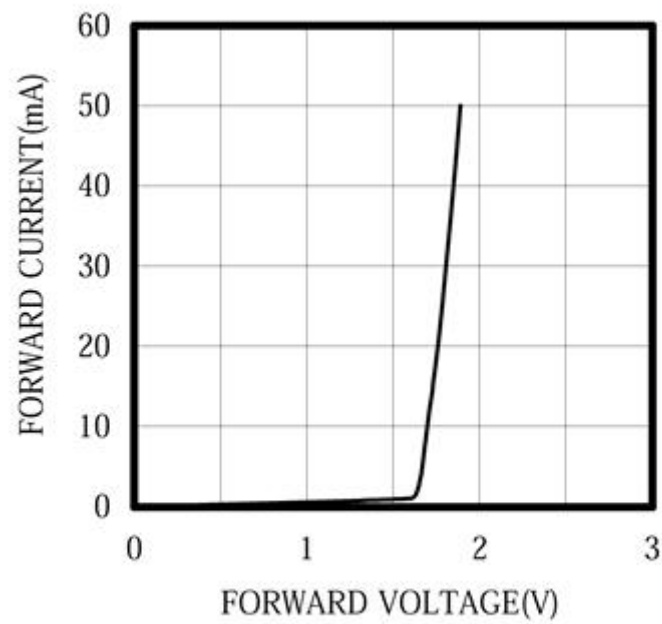
## Package Dimensions and Electro-Optical Characteristics



### SPECTRAL OUTPUT

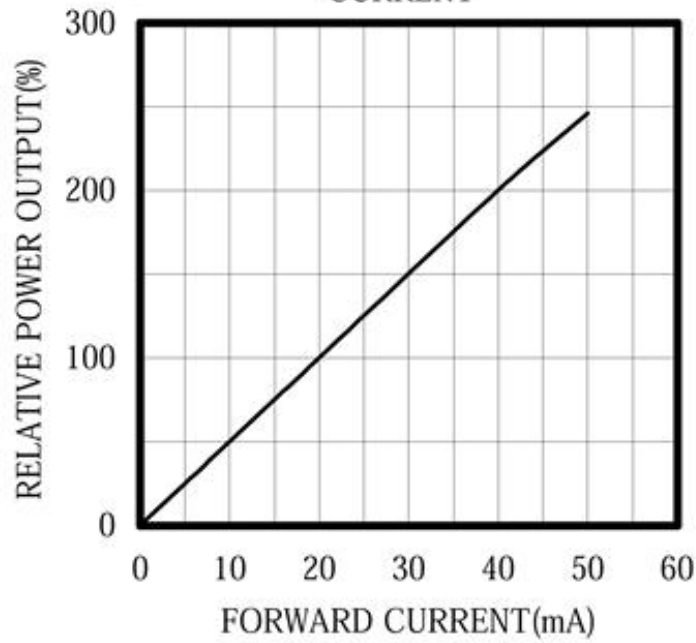


### FORWARD I-V CHARACTERISTICS

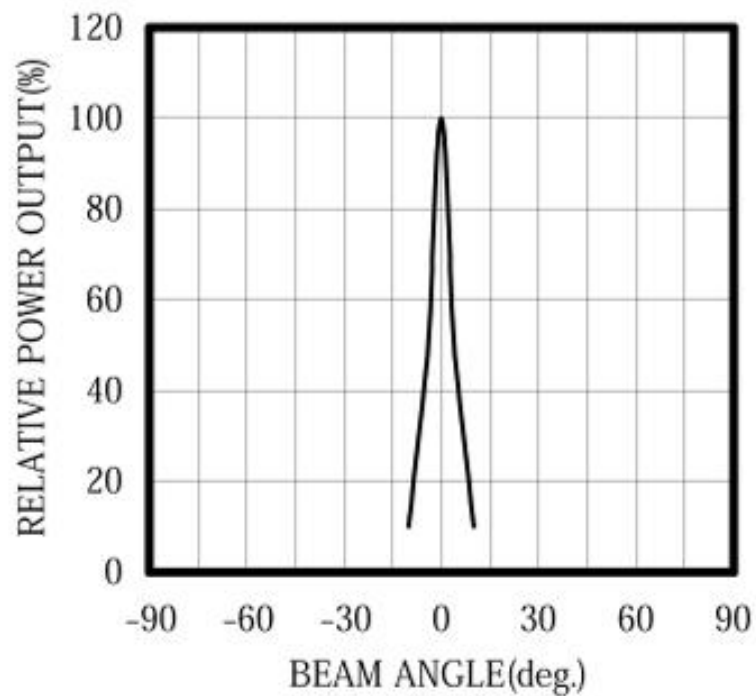




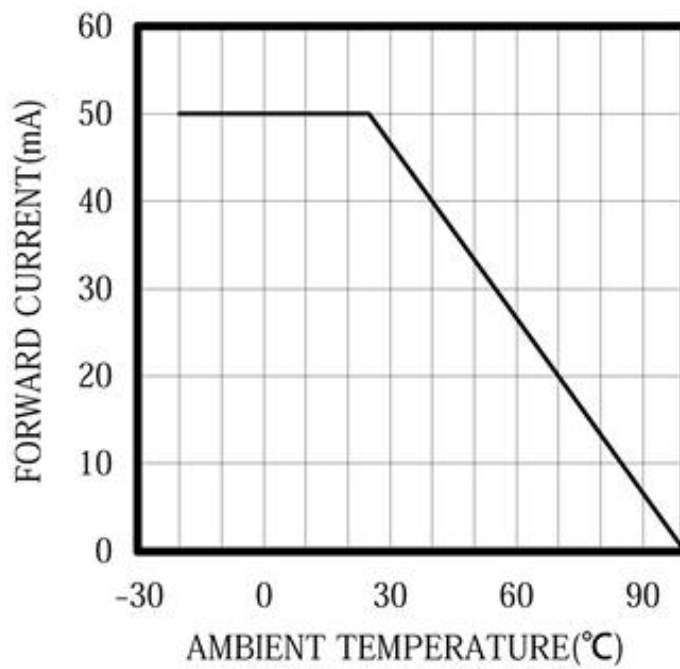
RELATIVE POWER vs FORWARD CURRENT



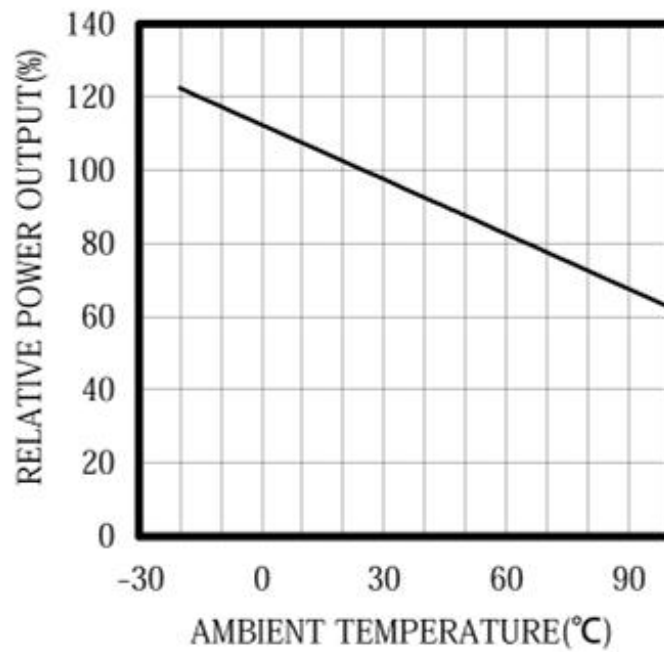
RADIATION PATTERN



THERMAL DERATING CURVE



POWER OUTPUT vs TEMPERATURE  
IF=10mA





### FORWARD VOLTAGE vs TEMPERATURE

$I_F = 10\text{mA}$

