



810nm single color LED Diode



- **Product Description**

The 810nm IR emitter series is designed for applications requiring high output and precise optical / mechanical axis alignment. Custom package solutions and sorting are available.

- **Product features**

Hermetically Sealed Package ; High Output Power ; Flat Lens ; High Reliability

- **Part Number**

MP-LED-810-15-TO18



● Application area

Optical Switches / Security Systems | Linear & Rotary Encoder | Remote Controls / Robotics | Card Readers / Medical Electronics

● Core parameters

Center wavelength
810nm

● General Parameters

Absolute Maximum Ratings (Ta=25°C)

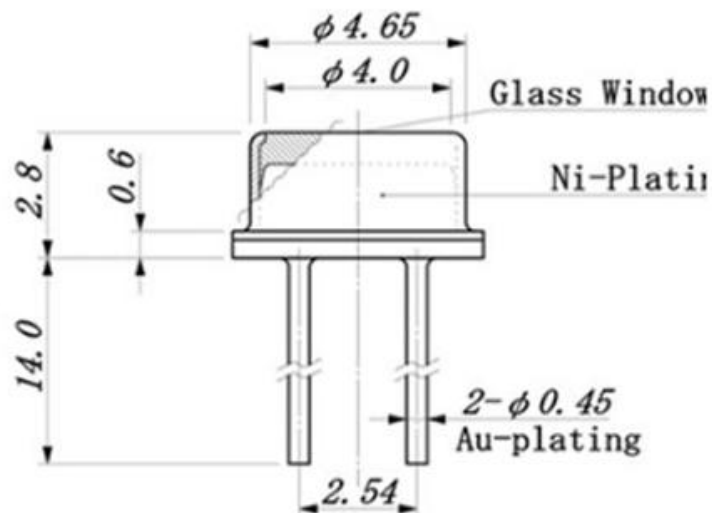
Items	Symbol	Ratings	Unit
Forward Current(DC)	IF	100	mA
Forwarded Current(Pulse)*1	IFP	1	A
Reverse Voltage	VR	5	V
Power Dissipation	PD	180	mW
Operating Temperature Range	Topr	-20 ~ +85	°C
Storage Temperature Range	Tstg	-30 ~ +100	°C
Lead Soldering Temperature*2	Tls	260	°C

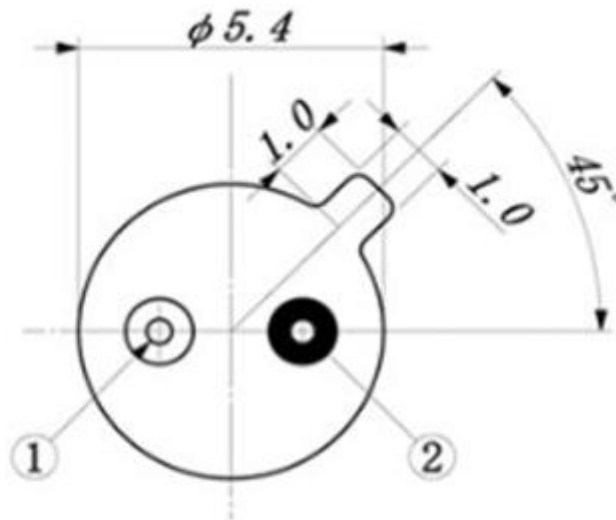
*1: Tw=10μsec, T=10msec. *2: Time 5 Sec max, Position: Up to 3mm from the body.

Electrical & Optical Characteristics (Ta = 25°C)

Items	Symb ol	Test Condition	Min.	Typic al	Max.	Unit
Power Output	PO	IF=50mA	--	18	--	mW
Forward Voltage	VF	IF=50mA	--	1.45	1.7	V
Reverse Current	IR	VR=5V	--	--	100	μA
Peak Emission Wavelength	λp	IF=50mA	--	810	--	nm
Spectra Line Half Width	Δλ	IF=50mA	--	20	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	±45	--	°
Rise Time	Tr	IF=100mA	--	30	--	ns
Fall Time	Tf	If=100mA	--	29.8	--	ns

Package Dimensions and Electro-Optical Characteristics

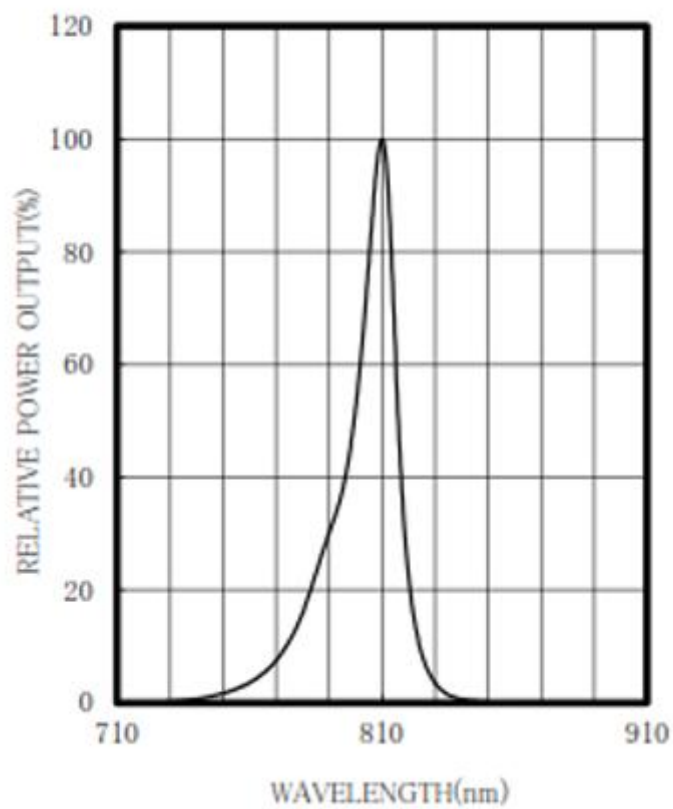




① Anode

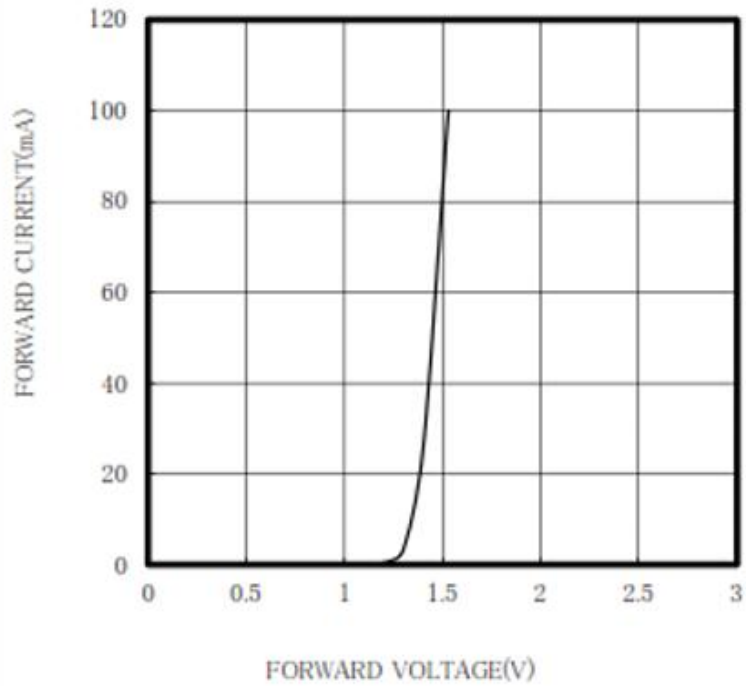
② Cathode

SPECTRAL OUTPUT

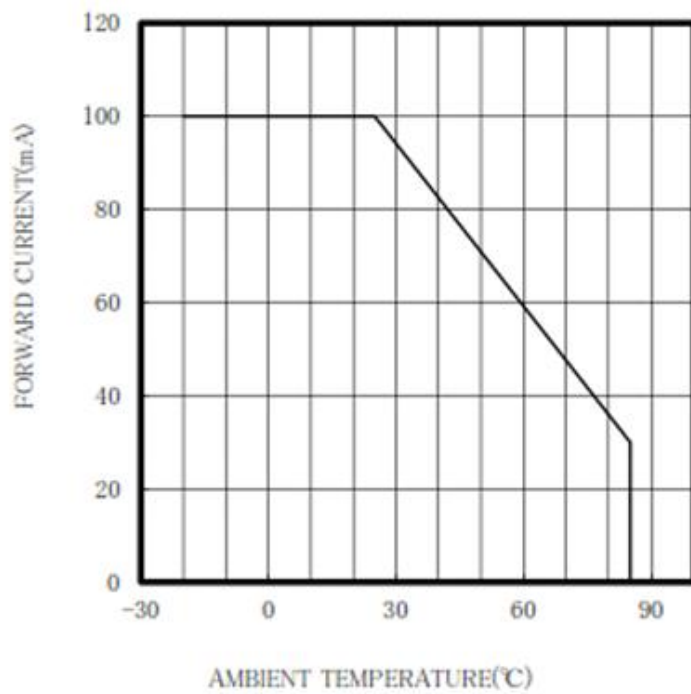




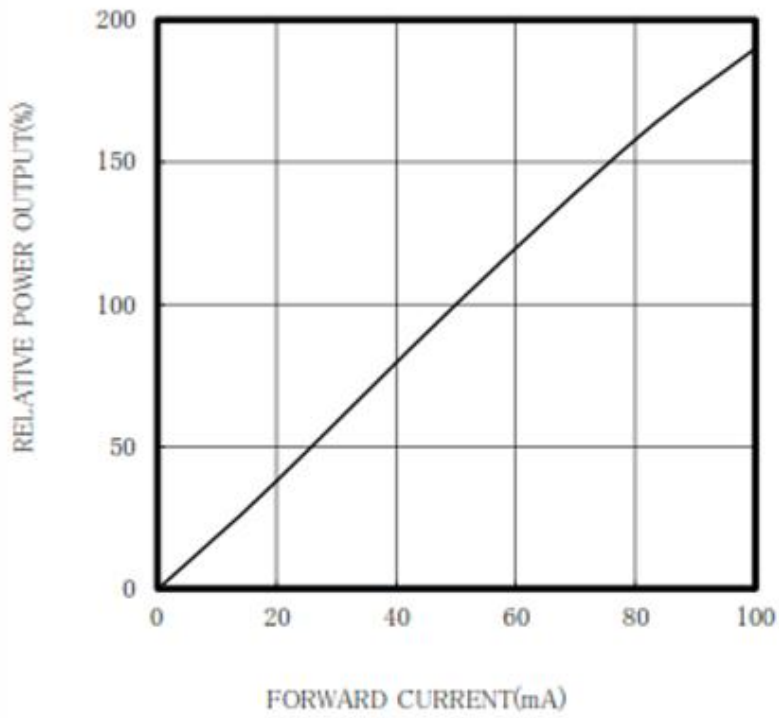
FORWARD I-V CHARACTERISTICS



THERMAL DERATING CURVE



RELATIVE POWER vs FORWARD CURRENT



RADIATION PATTERN

