Marktech Optoelectronics

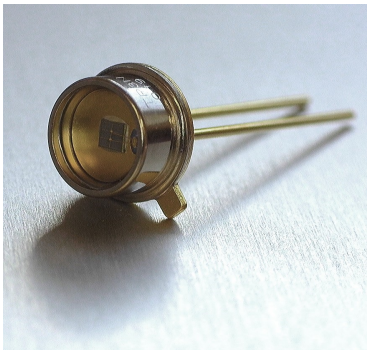
Preliminary

Infrared Emitter

Product No: **MTE8081W1-WRC**

Peak Emission Wavelength: 810nm

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.



FEATURES

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

APPLICATIONS

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

Absolute Maximum Ratings (Ta=25°C)

ITEMS	SYMBOL	RATINGS	UNIT
Forward Current (DC)	IF	100	mA
Forward 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	SYMBOL	CONDITIONS	MIN	TYP	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
Spectral Line Half Width	Δλ	IF=50mA	--	20	--	nm
Half Intensity Beam Angle	Θ	IF=50mA	--	±45	--	deg

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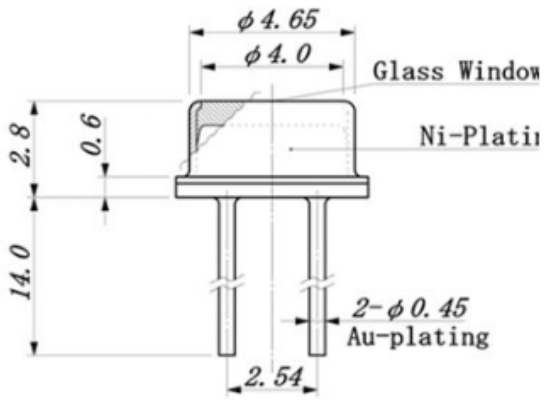
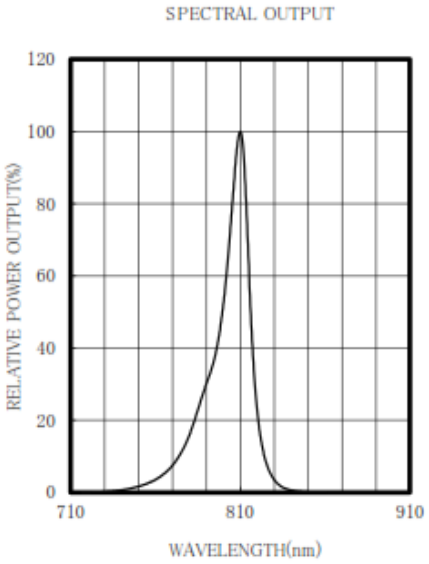
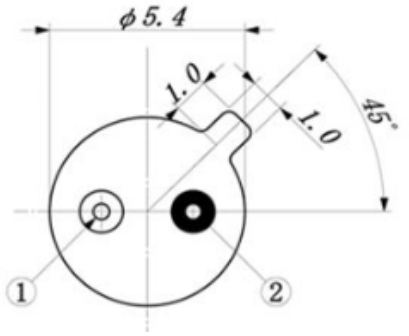
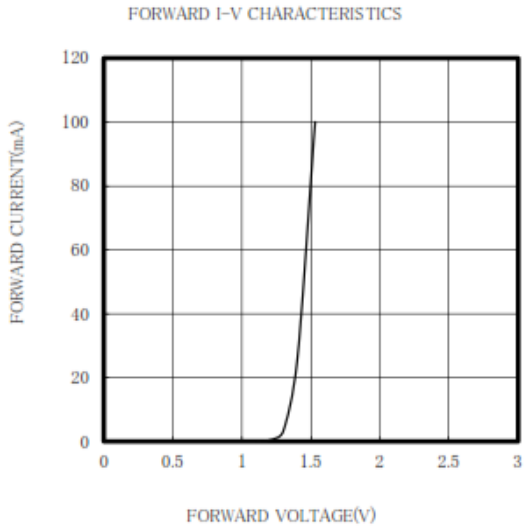


Unit: mm, Tolerance: ±0.2





① Anode ② Cathode



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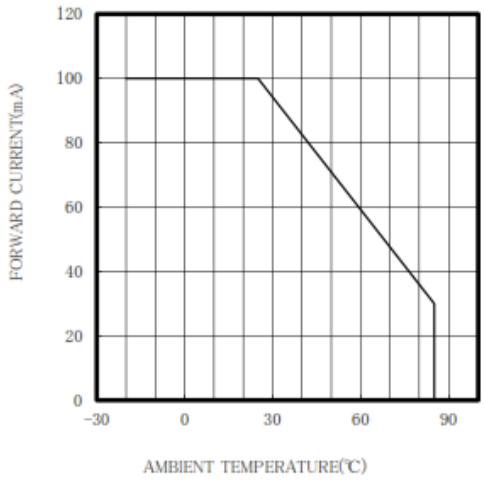
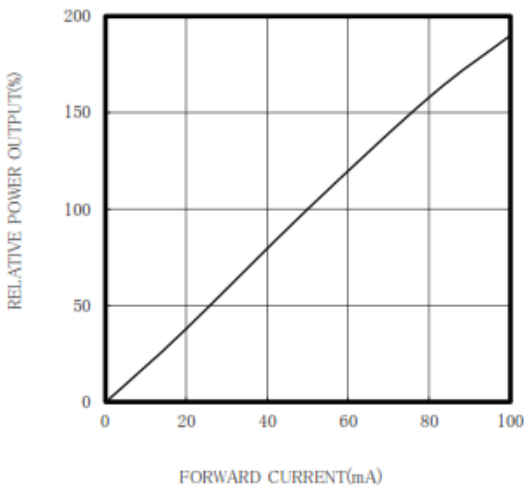
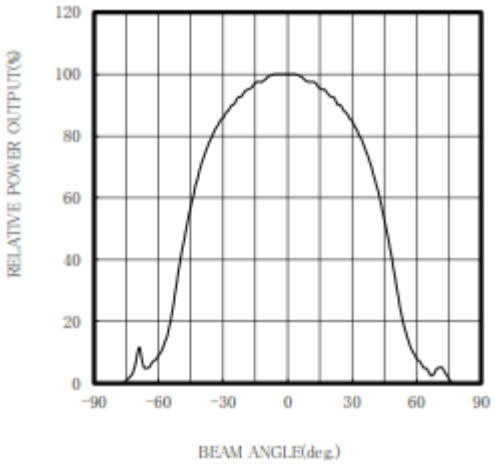
THERMAL DERATING CURVE



RELATIVE POWER vs FORWARD CURRENT



RADIATION PATTERN



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