



5mm Metal Can IR Emitter

MTE8080P

Features

High Output Power
Parallel Rays
High Reliability in Demanding Environments

Applications

Optical Switches
Linear Rotary Encoder

Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Max.	Test Condition	Unit
Forward Current	I _F	100	—	mA
Pulsed Forward Current	I _{FP}	1.00	tw=10μs, T=10ms	A
Reverse Voltage	V _R	5	—	V
Power Dissipation	P _D	180.00	—	mW
Operating Temperature	T _{opr}	-30 ~ +80	—	°C
Storage Temperature	T _{stg}	-40 ~ +125	—	°C
Junction Temperature	T _j	125	—	°C
Soldering Temperature	T _{sol}	260	for 5 sec. max	°C

Opto-Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V _F	I _F =50mA	—	1.45	1.80	V
Reverse Current	I _R	V _R =5V	—	—	10	μA
Power Output	P _O	I _F =50mA	3.00	5.00	—	mW
Half Intensity Beam Angle	θ	—	—	± 5°	—	deg.
Peak Wavelength	λ _p	I _F =50mA	—	880	—	nm
Spectral Line Half Width	Δλ	I _F =50mA	—	60	—	nm
Rise Time	T _r	I _{FP} =50mA	—	.80	—	ns
Fall Time	T _f	I _{FP} =50mA	—	1.50	—	ns
Temp Coefficient of PO	P/T	I _F =10mA	—	-.50	—	%/°C
Temp Coefficient of VF	V/T	I _F =10mA	—	-1.50	—	mV/°C
Junction Capacitance	C _j	1 MHz, V=0V	—	15	—	pF

Company Headquarters

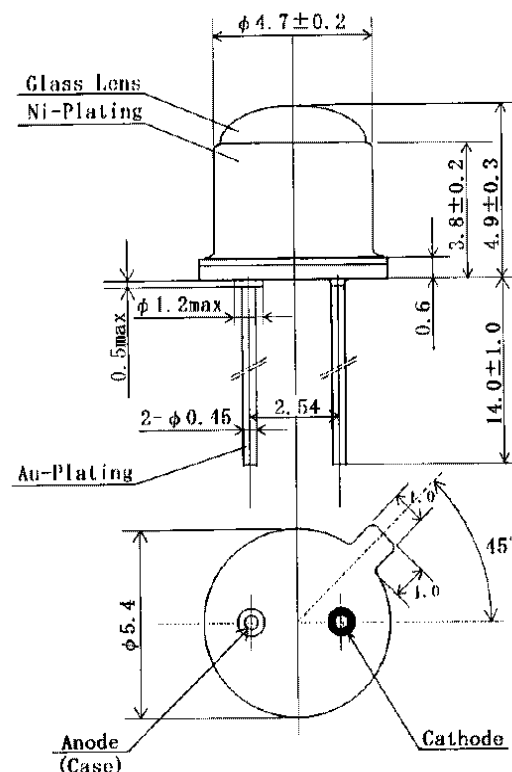
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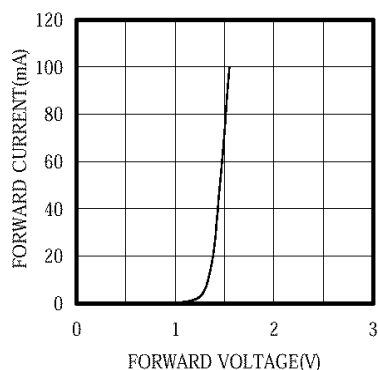
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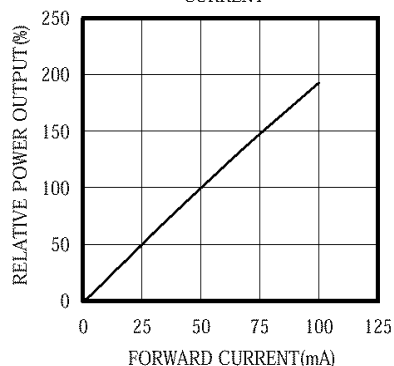


MTE8080P Graphs

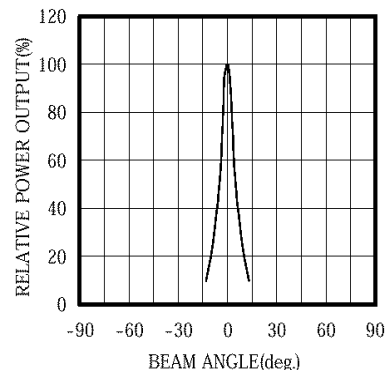
FORWARD I-V CHARACTERISTICS



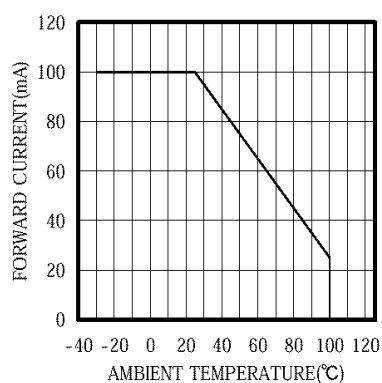
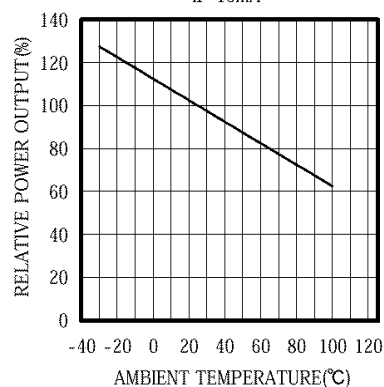
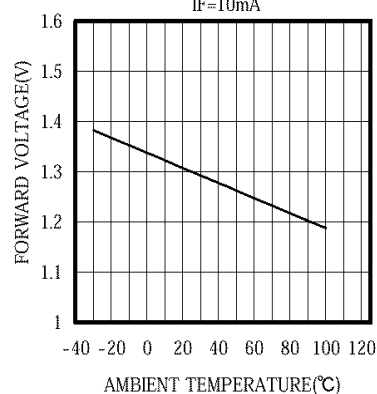
RELATIVE POWER vs FORWARD CURRENT



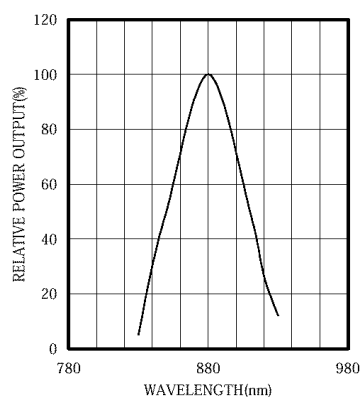
RADIATION PATTERN



THERMAL DERATING CURVE

POWER OUTPUT vs TEMPERATURE
IF=10mAFORWARD VOLTAGE vs TEMPERATURE
IF=10mA

SPECTRAL OUTPUT



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