

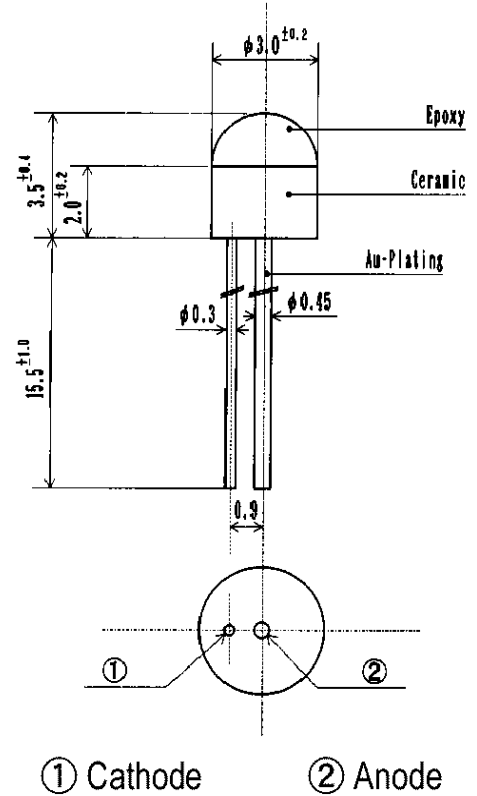
MTE8090M

Features

High Output Power
High Reliability
Compact Package

Applications

Optical Switches
Optical Sensors



Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Max.	Test Condition	Unit
Forward Current	I _F	50	–	mA
Pulsed Forward Current	I _{FP}	.50	tw=10μ S, T=10mS	A
Reverse Voltage	V _R	5	–	V
Power Dissipation	P _D	100.00	–	mW
Operating Temperature	T _{opr}	–20~+85	–	°C
Storage Temperature	T _{stg}	–30 ~+100	–	°C
Junction Temperature	T _j	100	–	°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 =20mA	–	1.30	1.60	V
Reverse Current	I _R	V _R =5V	–	–	10	μA
Power Output	PO	I _F =20mA	–	4.50	–	mW
Half Intensity Beam Angle	θ	–	–	± 80°	–	deg.
Peak Wavelength	λ _p	I _F =20mA	–	880	–	nm
Spectral Line Half Width	Δλ	I _F =20mA	–	60	–	nm
Rise Time	T _r	I _{FP} =50mA	–	1.50	–	ns
Fall Time	T _f	I _{FP} =50mA	–	.80	–	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

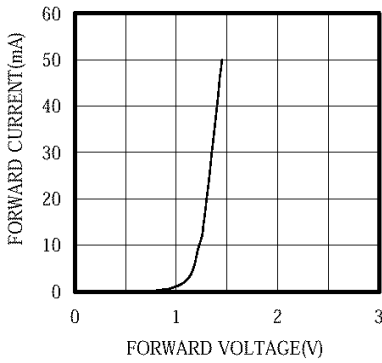
3 Northway Lane North
Latham, New York 12110
Toll Free: 800.984.5337
Fax: 518.785.4725

West Coast Sales Office

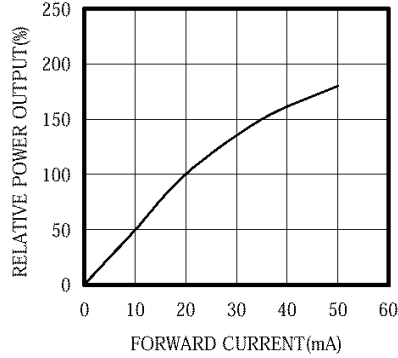
950 South Coast Drive, Suite 265
Costa Mesa, California 92626
Toll Free: 800.984.5337
Fax: 714.850.9314

MTE8090M Graphs

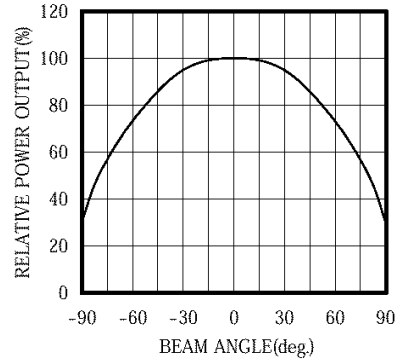
FORWARD I-V CHARACTERISTICS



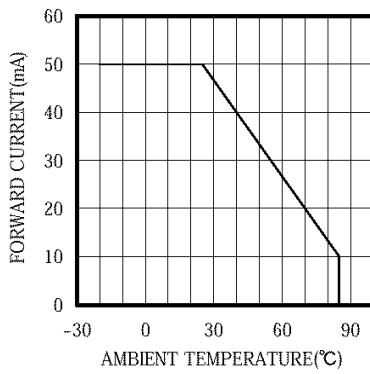
RELATIVE POWER vs FORWARD CURRENT



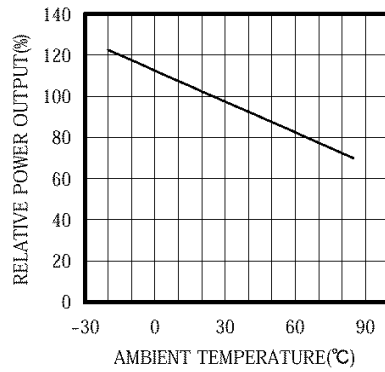
RADIATION PATTERN



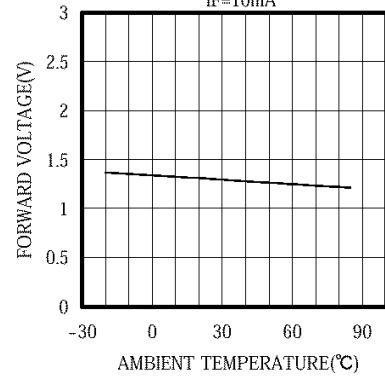
THERMAL DERATING CURVE



POWER OUTPUT vs TEMPERATURE
IF=10mA



FORWARD VOLTAGE vs TEMPERATURE
IF=10mA



SPECTRAL OUTPUT

