

Infrared Emitter

MTE108CL-J

Applications -

- Linear and Rotary Encoder
- Optical Switch

Features -

- High Output Power
- Optical Grade Glass Lens
- Precise Optical/Mechanical Axis Alignment
- Narrow Beam Pattern

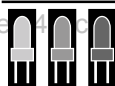
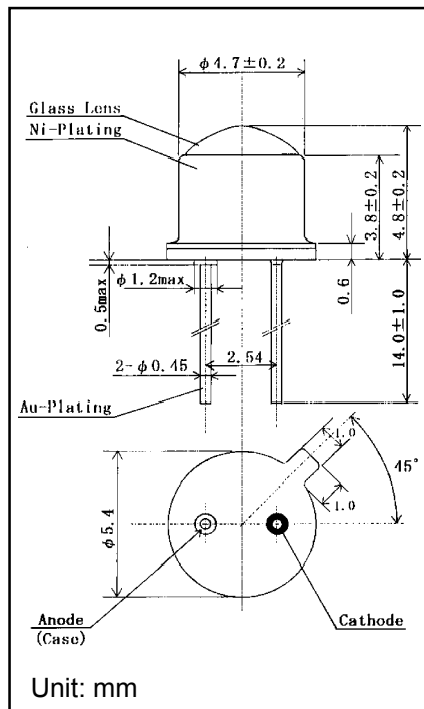
MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	100	mA
Pulse Forward Current	I_{FP}	1.0*	A
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	180	mW
Operating Temperature	T_{opr}	-30~100	°C
Storage Temperature	T_{sig}	-40~125	°C
Junction Temperature	T_j	125	°C

* $t_w = 10\mu s$, $T = 10ms$

OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Power Output	PO	IF = 50mA	—	4.0	—	mW
Forward Voltage	V_F	IF = 50mA	—	1.45	1.7	V
Reverse Current	I_R	VR = 5V	—	—	10	μA
Peak Wavelength	λ_p	IF = 20mA	—	880	—	nm
Spectral Line Half Width	$\Delta\lambda$	IF = 20mA	—	60	—	nm
Rise Time	T_r	—	—	1500	—	ns
Fall Time	T_f	—	—	800	—	ns
Beam Angle	θ	—	—	± 4	—	°
Temperature Coefficient of PO	TC of PO	IF = 10mA	—	-0.5	—	% / °C
Temperature Coefficient of VF	TC of VF	IF = 10mA	—	-1.5	—	mV / °C
Junction Capacitance	Cj	1MHz, V = 0V	—	15	—	pF



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120 Broadway • Menands, New York 12204

Toll Free: (800) 98-4LED5 • Fax: (518) 432-7454

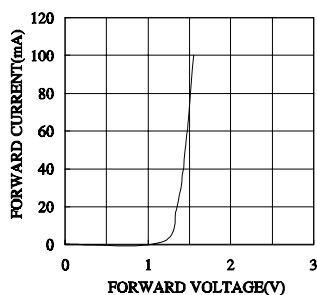
For up-to-date product info visit our web site at www.marktechopto.com

All specifications subject to change.

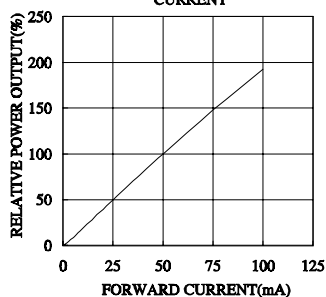
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MTE108CL-J Graphs -

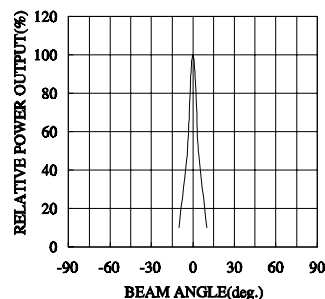
FORWARD I-V CHARACTERISTICS



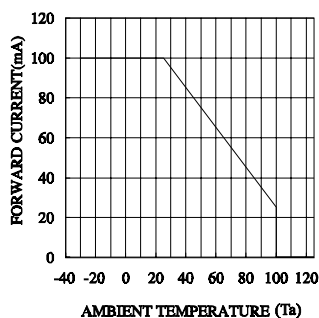
RELATIVE POWER vs FORWARD CURRENT



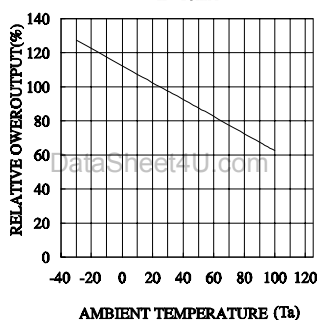
RADIATION PATTERN



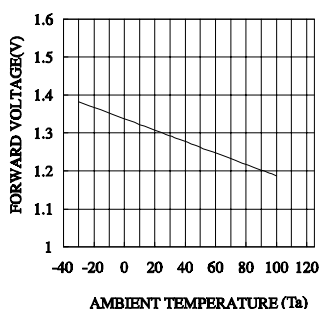
THERMAL DERATING CURVE



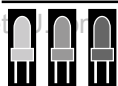
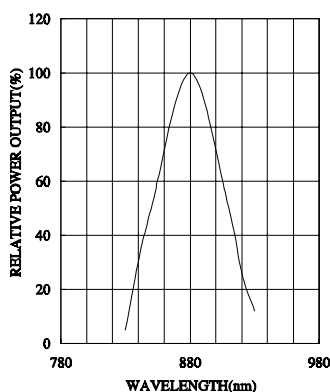
POWER OUTPUT vs TEMPERATURE
IF=10mA



FORWARD VOLTAGE vs TEMPERATURE
IF=10mA



SPECTRAL OUTPUT



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