INFRARED EMITTER

T-41-13

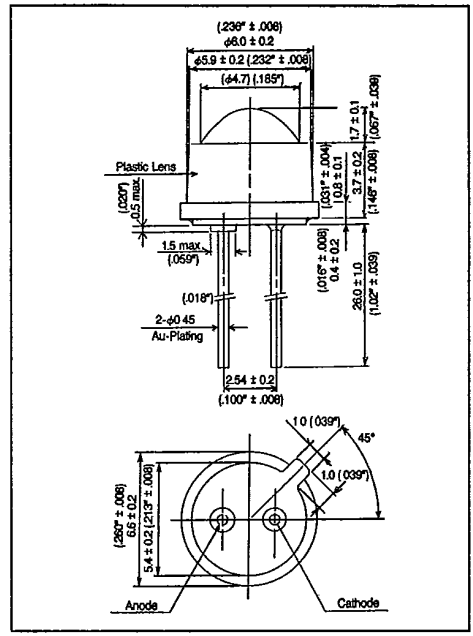
MTE108CL

APPLICATIONS

- ROTARY ENCODER (see graph**)
- BAR CODE SCANNING

FEATURES

- TO-46 metal can.
- Plastic lens and cover (optimal for superior light uniformity and output).
- Parts shipped individually to avoid scratching/marking lens.
- Fast switching speeds, capable of pulse operation.
- High power output GaAlAs IR die.



MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	100	mA
Reverse Voltage	V_R	6	V
Power Dissipation	P_D	180	mW
Peak Pulse Current	I_{FP}	2*	A
Operative Temperature Range	T_{opr}	-25 ~ 80	°C
Storage Temperature Range	T_{stg}	-30 ~ 80	°C

*tw 10 μs, T = 1mS.

OPTO-ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX.	UNIT
Forward Voltage	V_F	I_F=50mA	—	1.35	1.6	V
Reverse Current	I_R	V_R=6V	—	—	10	μA
Peak Wave Length	λP	I_F=50mA	—	890	—	nm
Viewing Angle	θ		—	12	—	°
Spectral Line Half Width	Δλ	I_F=50mA	—	80	—	nm
Power Output	P_O	I_F=50mA	3.0	6.0	—	mW
Capacitance	Cj	V_F=0V, f=1MHz	—	40	—	pf
Switching Speed	Tr	I_{FP} = 100mA		500		ns
	Tf					

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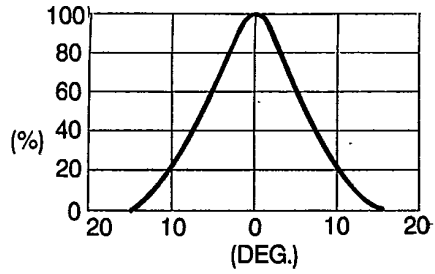
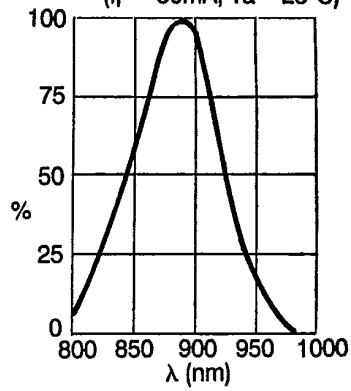
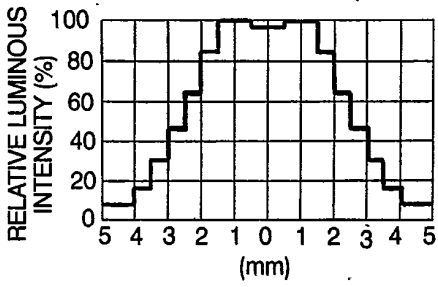


(IF = 50mA, Ta = 25°C)



** BRIGHTNESS DISTRIBUTION (D = 4mm)



(IF = 10mA)