

INFRARED LED

MTE1040

GaAs INFRARED EMITTER INFRARED LED FOR PHOTO SENSOR

APPLICATIONS

- OPTICAL SWITCH
- ENCODERS
- TAPE, CARD READERS

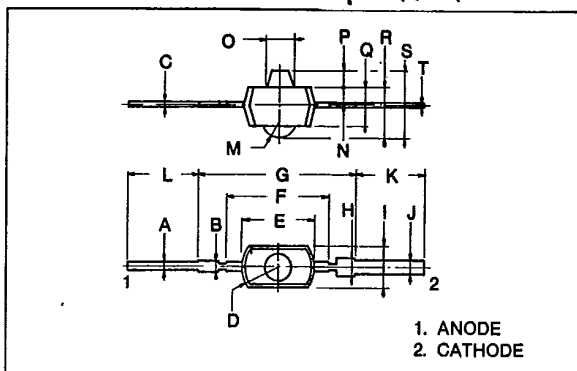
FEATURES

- Output spectrally compatible with silicon sensor MTD6060, MTD6050.
- High radiant power: $P_O \approx 3.0\text{mW}$ (Typ.)
- Small size package.

MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	40	mA
Pulse Forward Current (Note)	I_{FP}	400	mA
Reverse Voltage	V_R	5	V
Forward Current Derating	$\Delta I_F/^\circ\text{C}$	-0.53	mA/ $^\circ\text{C}$
Operating Temperature Range	T_{opr}	-20 ~ 75	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-30 ~ 80	$^\circ\text{C}$

Note: Pulse width $\leq 100\mu\text{s}$. Repetitive frequency=100Hz.



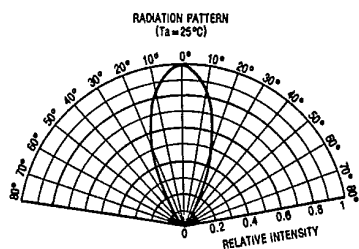
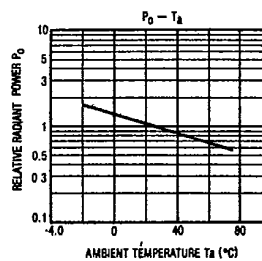
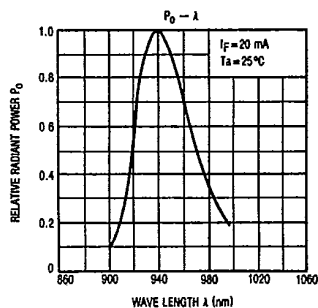
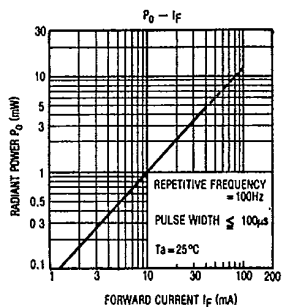
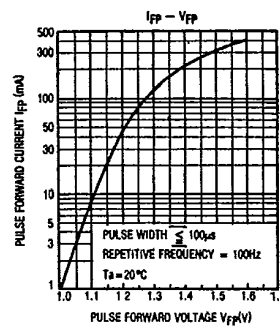
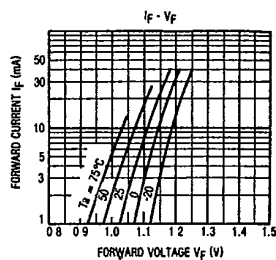
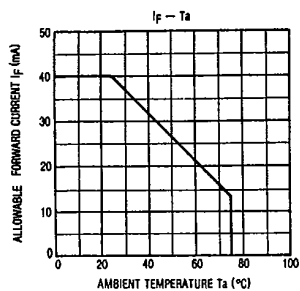
SYMBOL	INCHES	MM
A	0.020	0.5
B	0.022	0.55
C	0.005	0.125
D	0.065	1.65
E	0.130	3.3
F	0.188	4.78
G	0.291	7.38
H	0.030	0.75
I	0.075	1.9
J	0.028	0.7
K	0.118 MIN	3 MIN
L	0.118 MIN	3 MIN
M	0.031	0.8
N	0.031	0.8
O	0.047	1.2
P	0.031	0.8
Q	0.070	1.77
R	0.089	2.27
S	0.121	3.07
T	0.005	0.125

OPTO-ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 10\text{mA}$	—	1.13	1.35	V
Reverse Current	I_R	$V_R = 5\text{V}$	—	—	10	μA
Radiant Power	P_O	$I_F = 20\text{mA}$	1.5	3.0	—	mW
Capacitance	C_T	$V_R = 0, f = 1\text{MHz}$	—	50	—	pF
Peak Emission Wave Length	λ_P	$I_F = 20\text{mA}$	—	940	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20\text{mA}$	—	50	—	nm

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