

INFRARED LED

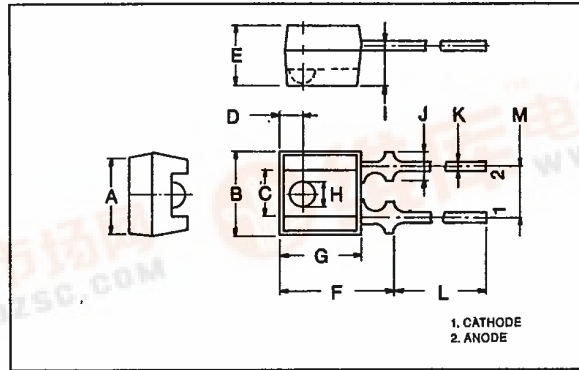
MTE1070A GaAs INFRARED EMITTER INFRARED LED FOR PHOTO SENSOR

APPLICATIONS

- OPTICAL SWITCH
- TAPE, CARD READERS

FEATURES

- Output spectrally compatible with silicon sensor MTD6170, MTD6180.
- High radiant power.
- High radiant intensity: $I_E = 2\text{mW/sr}$ (Typ.)
- Suitable for photo interrupter assembly.



SYMBOL	INCHES	MM
A	0.157	4.0
B	0.173 ± 0.010	4.4 ± 0.25
C	0.094 ± 0.012	2.4 ± 0.3
D	0.049	1.25
E	0.118 ± 0.010	3 ± 0.25
F	0.226	5.75
G	0.159	4.05
H	0.059	1.5
I	0.079	2.0
J	0.051	1.3
K	0.018	0.45
L	0.945	24 ± 1
M	0.100 ± 0.012	2.54 ± 0.3

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	50	mA
Pulse Forward Current (Note)	I_{FP}	600	mA
Reverse Voltage	V_R	5	V
Forward Current Derating	$\Delta I_F / ^\circ\text{C}$	-0.33	mA/ $^\circ\text{C}$
Operating Temperature Range	T_{opr}	-25 ~ 85	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-40 ~ 100	$^\circ\text{C}$

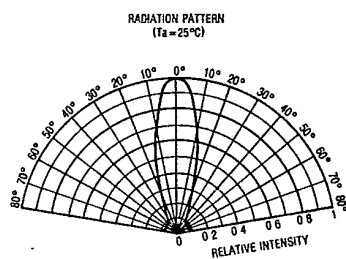
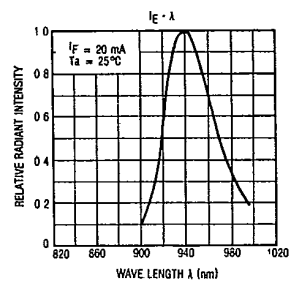
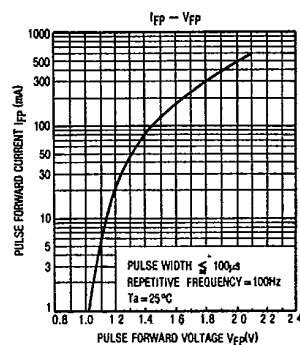
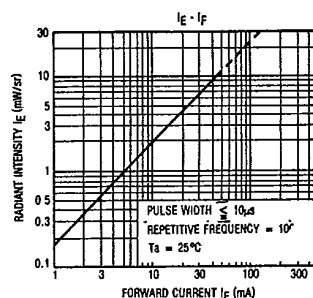
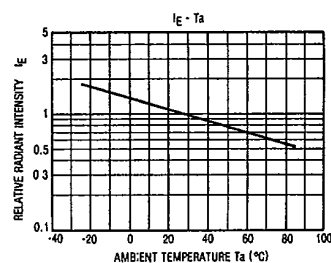
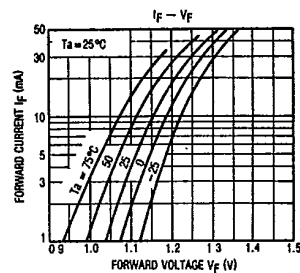
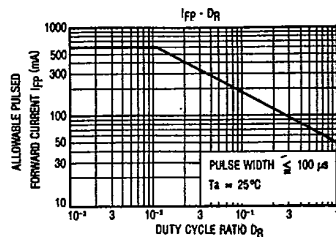
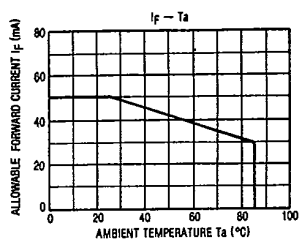
Note: Pulse width $\leq 100\mu\text{s}$, Repetitive frequency = 100Hz.

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F = 10\text{mA}$	1.00	1.15	1.30	V
Reverse Current	I_R	$V_R = 5\text{V}$	—	—	10	μA
Radiant Intensity	I_E	$I_F = 20\text{mA}$	0.8	2	—	mW/sr
Radiant Power	P_O	$I_F = 20\text{mA}$	—	2.0	—	mW
Capacitance	C_T	$V_R = 0, f = 1\text{MHz}$	—	30	—	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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