

# INFRARED LED

T-41-11

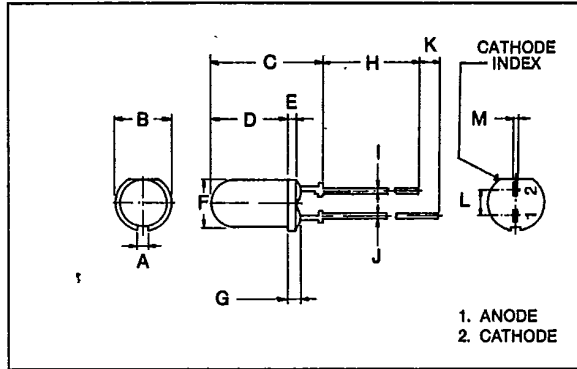
## MTE1050A GaAs INFRARED EMITTER INFRARED LED FOR PHOTO SENSOR

### APPLICATIONS

- REMOTE CONTROL SYSTEM
- OPTICAL SWITCH

### FEATURES

- Output spectrally compatible with silicon sensor MTD7030.
- High radiant power.
- High radiant intensity:  $I_E = 15 \text{mW / sr (Typ.)}$



SYMBOL	INCHES	MM
A	0.039	1.0
B	0.228 ± 0.008	5.8 ± 0.2
C	0.439 <sup>+0.018</sup> / <sub>-0.004</sub>	11.15 <sup>+0.4</sup> / <sub>-0.1</sub>
D	0.301 ± 0.008	7.65 ± 0.2
E	0.039	1.0
F	0.197 ± 0.008	5 ± 0.2
G	0.098 MAX	2.5 MAX
H	0.689 ± 0.039	17.5 ± 1
I	0.020	0.5
J	0.020	0.5
K	0.079	2.0
L	0.100	2.54
M	0.020	0.5

### MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	$I_F$	100	mA
Pulse Forward Current (Note)	$I_{FP}$	1	A
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_D$	150	mW
Forward Current Derating	$\Delta I_F / ^\circ\text{C}$	-1.34	mA/°C
Operating Temperature Range	$T_{opr}$	-20 ~ 75	°C
Storage Temperature Range	$T_{stg}$	-30 ~ 100	°C

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

### OPTO-ELECTRICAL CHARACTERISTICS (Ta=25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F$	$I_F = 100 \text{mA}$	—	1.35	1.5	V
Reverse Current	$I_R$	$V_R = 5 \text{V}$	—	—	10	$\mu\text{A}$
Radiant Intensity	$I_E$	$I_F = 50 \text{mA}$	7	15	—	mW / sr
Radiant Power	$P_O$	$I_F = 50 \text{mA}$	—	9	—	mW
Capacitance	$C_T$	$V_R = 0, f = 1 \text{MHz}$	—	20	—	pF
Peak Emission Wave Length	$\lambda_P$	$I_F = 50 \text{mA}$	—	940	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 50 \text{mA}$	—	45	—	nm

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