

INFRARED LED

T:41-11

MTE1100

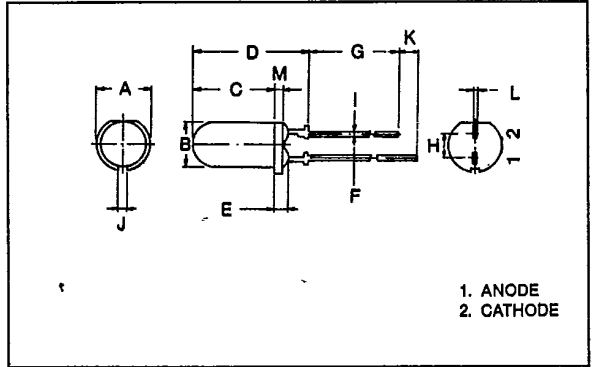
GaAs INFRARED EMITTER INFRARED LED FOR PHOTO SENSOR

APPLICATIONS

- REMOTE CONTROL SYSTEM
- OPTICAL SWITCH

FEATURES

- Output spectrally compatible with silicon sensor MTD7030.
- High radiant power.
- High radiant intensity: $I_E = 30\text{mW/sr}$.



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
Diode Power Dissipation	P_D	150	mW
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.

SYMBOL	INCHES	MM
A	0.228 ± 0.008	5.8 ± 0.2
B	0.197 ± 0.008	5 ± 0.2
C	0.341 ± 0.008	8.65 ± 0.2
D	0.478 ± 0.016	12.15 ± 0.4
E	0.100 MAX	2.5 MAX
F	0.020	0.5
G	0.691 ± 0.039	17.5 ± 1
H	0.100	2.54
I	0.020	0.5
J	0.039	1.0
K	0.079	2.0
L	0.020	0.5
M	0.039	1.0

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	μA
Radiant Intensity	I_E	$I_F = 50\text{mA}$	15	30	—	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	λ_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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