

INFRARED LED

T-41-11

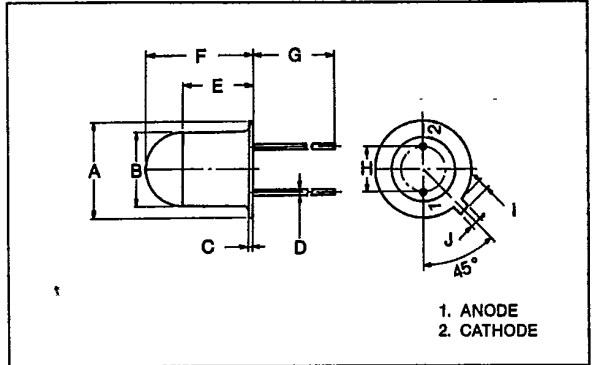
MTE1080 GaAs INFRARED EMITTER INFRARED LED FOR PHOTO SENSOR

APPLICATIONS

- OPTICAL SWITCH
- TAPE, CARD READER
- AUTOMOBILE POSITION SENSOR
- PHOTO ISOLATOR

FEATURES

- Output spectrally compatible with silicon sensor MTD6140.
- High radiant power.
- High radiant intensity: $I_E = 20\text{mW / sr}$ (Typ.)
- Glass-to-metal-seal header.



SYMBOL	INCHES	MM
A	0.228	5.8 MAX
B	0.185 ± 0.004	4.7 ± 0.1
C	0.020	0.5
D	0.018	0.45
E	0.177	4.5
F	0.256 ± 0.020	6.5 ± 0.5
G	0.512 MIN	13 MIN
H	0.100	2.54
I	0.039	1.0
J	0.039	1.0

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Forward Current	I_F	100	mA
Pulse Forward Current (Note)	I_{FP}	1	A
Reverse Voltage	V_R	5	V
Operating Temperature Range	T_{opr}	-40 ~ 125	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 ~ 150	$^\circ\text{C}$

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	$I_F = 50\text{mA}$	—	1.35	1.45	V
Pulse Forward Voltage	V_{FP}	$I_{FP} = 1\text{A}$	—	2.0	—	V
Reverse Current	I_R	$V_R = 5\text{V}$	—	—	10	μA
Radiant Intensity	I_E	$I_F = 50\text{mA}$	10	20	—	mW / sr
Radiant Power	P_O	$I_F = 50\text{mA}$	—	3	—	mW
Capacitance	C_T	$V_R = 0\text{V}, f = 1\text{MHz}$	—	20	—	pF
Peak Emission Wave Length	λ_P	$I_F = 50\text{mA}$	—	940	—	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 50\text{mA}$	—	50	—	nm

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