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MTD6160 SILICON NPN EPITAXIAL PLANER

APPLICATIONS

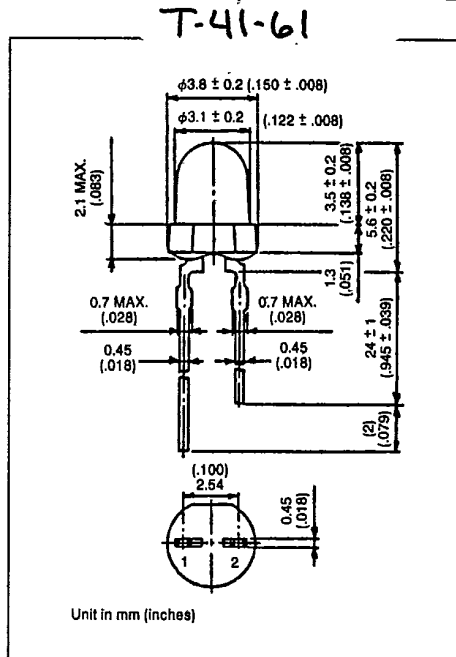
- OPTICAL SWITCH
- TAPE, CARD READERS
- POSITION SENSOR
- ENCODERS

FEATURES

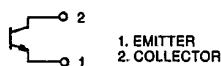
- Spectrally and Mechanically Matched with IR Emitter MTE1090.
- Saturation Level Directly Compatible with Most TTL.

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

CHARACTERISTIC	SYMBOL	RATING	UNIT
Collector-Emitter Voltage	V_{CEO}	30	V
Emitter-Collector Voltage	V_{ECO}	5	V
Collector Current	I_C	20	mA
Collector Power Dissipation	P_C	75	mW
Collector Power Dissipation Derating	$\Delta P_C/^\circ\text{C}$	-1.0	mW/ $^\circ\text{C}$
Operating Temperature Range	T_{opr}	-30 ~ 85	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-30 ~ 100	$^\circ\text{C}$



PIN CONNECTION



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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP.	MAX.	UNIT
Dark Current	$I_D(I_{CEO})$	$V_{CE}=24\text{V}, E=0$	—	10	100	nA
Light Current	$I_L(I_C)$	$V_{CE}=3\text{V}, E=0.1\text{mW/cm}^2$ (Note 1)	10	30	—	μA
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5\mu\text{A}, E=0.1\text{mW/cm}^2$ (Note 1)	—	0.2	0.4	V
Switching Time	Rise Time	$V_{CC}=10\text{V}, I_C=1\text{mA}, R_L=1\text{k}\Omega$ (Fig. 1)	—	9	—	μs
	Fall Time		—	10	—	

Note: Color temperature = 2870°K Standard Tungsten Lamp.

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Fig. 1 SWITCHING TIME TEST CIRCUIT

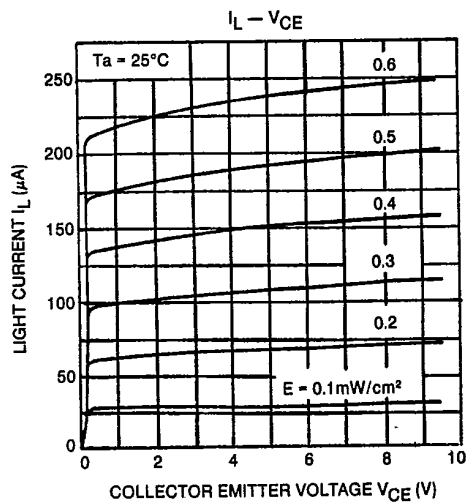
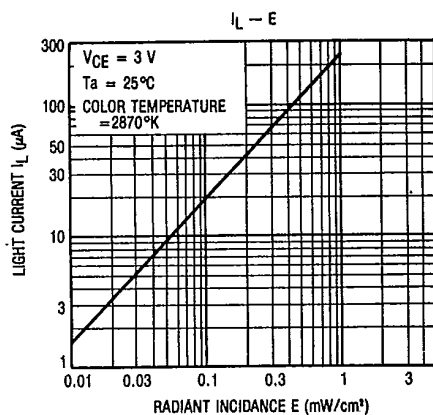
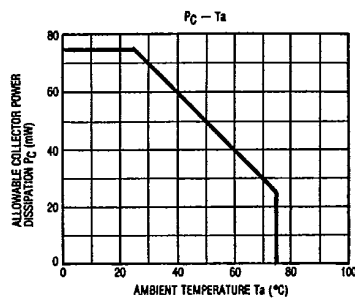
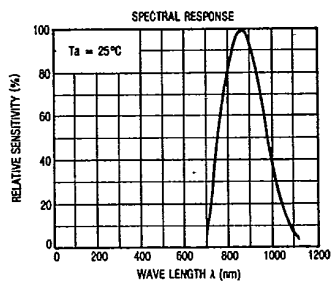
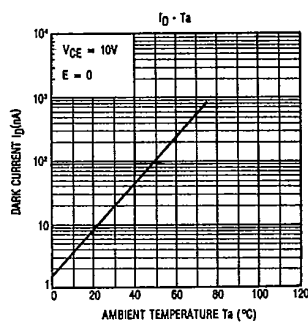
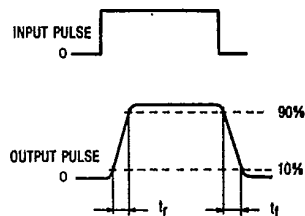
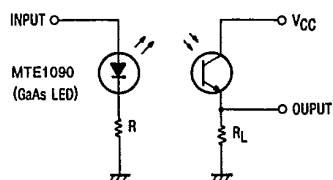


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