

Peak Sensitivity Wavelength: 880nm

The MTD8000D3 is a photo transistor in a 3mm clear plastic package. It is well suited for high reliability and high speed applications.

FEATURES

- > High Reliability in Demanding Environments
- > Wide Angular Response
- > Compact

APPLICATIONS

- > Optical Switches
- > Edge Sensing
- > Fiber Optical Communications
- > Smoke Detectors



Absolute Maximum Ratings (Ta=25°C)



ITEMS	SYMBOL	RATINGS	UNIT
Collector-Emitter Voltage	V _{ceo}	30	V
Emitter-Collector Voltage	V _{eco}	5	V
Collector Current	I _c	50	mA
Collector Power Dissipation	P _c	200	mW
Operating Temperature Range	T _{opr}	-20 to 85	°C
Storage Temperature Range	T _{stg}	-30 to 100	°C
Junction Temperature	T _j	100	°C
Lead Soldering Temperature *1	T _{ls}	260	°C

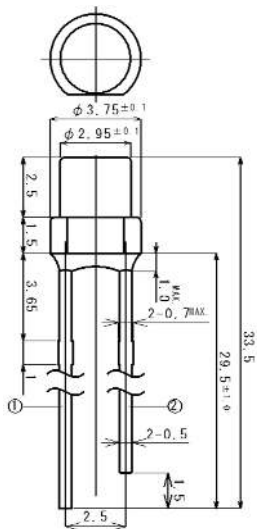
*1: Time 5 Sec max, Position: Up to 3mm from the body.

Electrical & Optical Characteristics (Ta = 25°C)

ITEMS	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNIT
Collector Emitter Current	I _{cel}	V _{ce} =10V, L=0.5mW/cm ² *1	--	0.5	--	mA
Collector Dark Current	I _{ceo}	V _{ce} =10V	--	--	100	nA
C-E Saturation Voltage	V _{CE(sat)}	I _c =0.2mA, L=5.0mW/cm ² *1	--	0.2	--	V
Spectral Sensitivity	λ	--	--	450~1050	--	nm
Peak Sensitivity Wavelength	λ _p	--	--	880	--	nm
Switching Time	T _r , T _f	R _L =1000Ω, V _c =5V, I _c =1mA	--	20, 20	--	uS
Angular Response	Θ	--	--	±65	--	deg

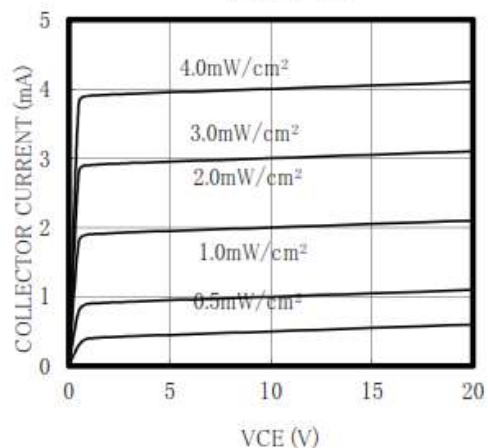
*1: Color Temperature=2870°K Standard Tungsten Lamp

Unit: mm, Tolerance: ± 0.2

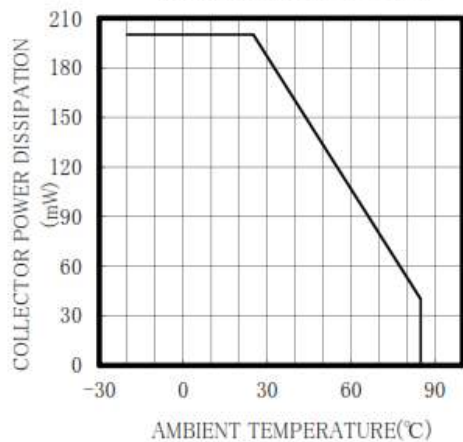


① Collector ② Emitter

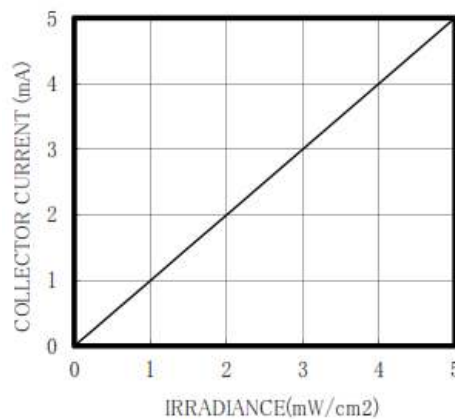
ICEL vs VCE

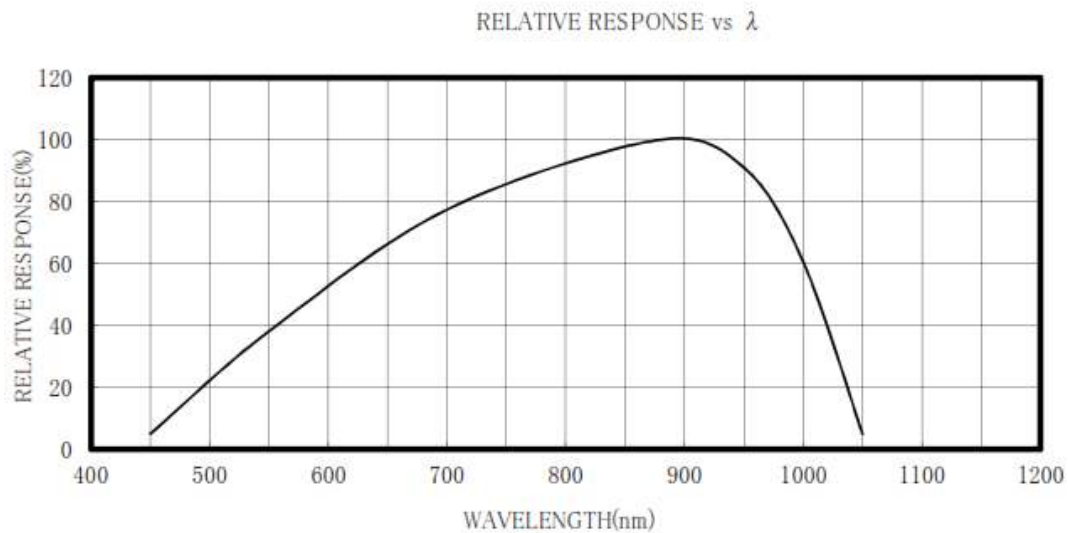
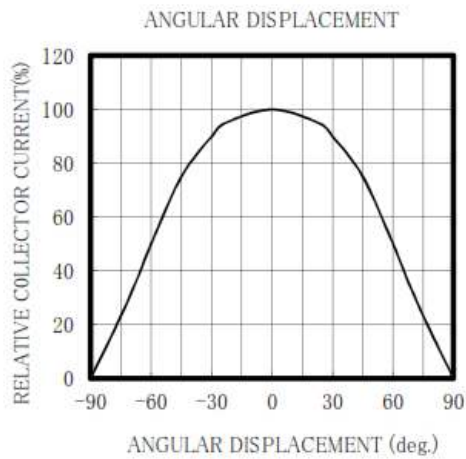


THERMAL DERATING CURVE



ICEL vs IRRADIANCE





The information contained herein is subject to change without notice.

2018-08-07