

## MTPS9087D

### Features

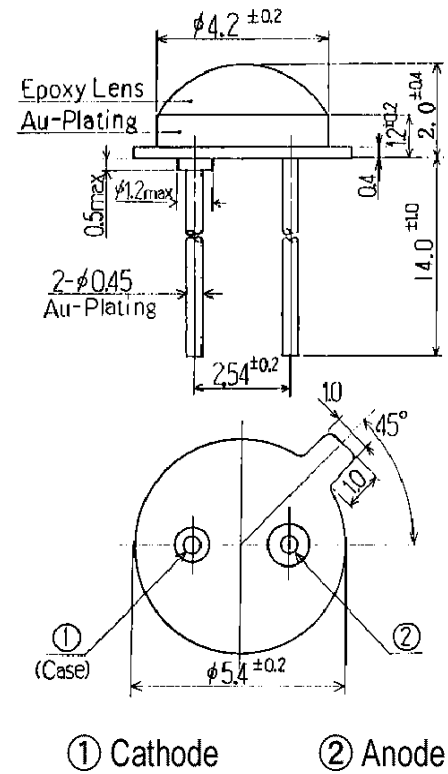
High Power Output  
Point Source LED  
Small Temp. Coefficient of PO  
Emitting Window Diameter 150 $\mu$ m

### Applications

Optical Sensors  
Optical Switches

### Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Max.	Test Condition	Unit
Forward Current	I <sub>F</sub>	80	–	mA
Pulsed Forward Current	I <sub>FP</sub>	.80	tw=10 $\mu$ S, T=10mS	A
Reverse Voltage	V <sub>R</sub>	5	–	V
Power Dissipation	P <sub>D</sub>	150.00	–	mW
Operating Temperature	T <sub>opr</sub>	–20~+85	–	°C
Storage Temperature	T <sub>stg</sub>	–30 ~+100	–	°C
Junction Temperature	T <sub>j</sub>	100	–	°C
Soldering Temperature	T <sub>sol</sub>	260	for 5 sec. max	°C



### Opto-Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =50mA	–	1.45	1.80	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =5V	–	–	10	$\mu$ A
Power Output	PO	I <sub>F</sub> =50mA	4.50	7.50	–	mW
Half Intensity Beam Angle	$\theta$	–	–	$\pm 60^\circ$	–	deg.
Peak Wavelength	$\lambda_p$	I <sub>F</sub> =50mA	–	880	–	nm
Spectral Line Half Width	$\Delta\lambda$	I <sub>F</sub> =50mA	–	40	–	nm
Temp Coefficient of PO	P/T	I <sub>F</sub> =10mA	–	–0.05	–	%/°C
Temp Coefficient of V <sub>F</sub>	V/T	I <sub>F</sub> =10mA	–	–1.60	–	mV/°C
Junction Capacitance	C <sub>j</sub>	1MHz, V=0V	–	65	–	pF
Cut-Off Frequency	f <sub>c</sub>	I <sub>FP</sub> =50mA + 20mA <sub>p-p</sub>	--	6	–	MHz

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## MTPS9087D Graphs

