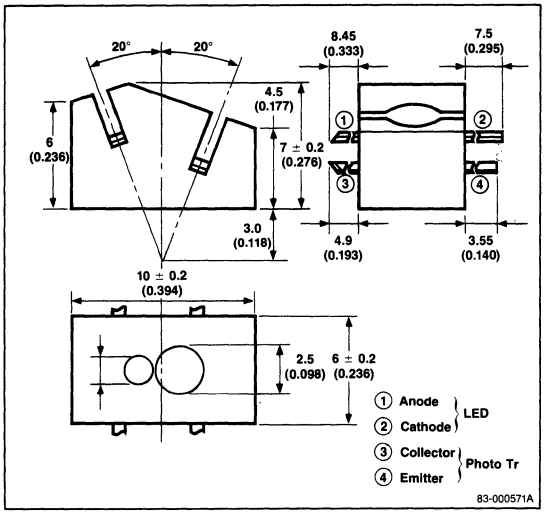
PS6001A
PHOTO REFLECTIVE SENSOR
NEPOC SERIES

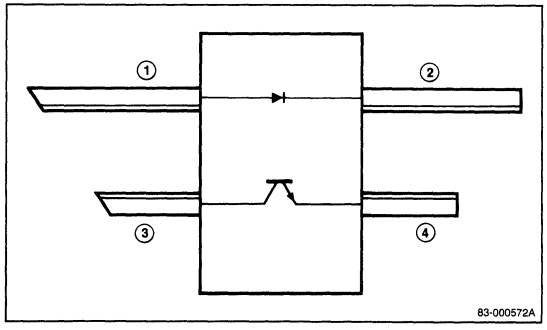
Description

The PS6001A is a photo reflective sensor containing a GaAs light emitting diode and an NPN silicon photo transistor.

Package Dimensions



Pin Connection



Absolute Maximum Ratings

T_A = +25°C

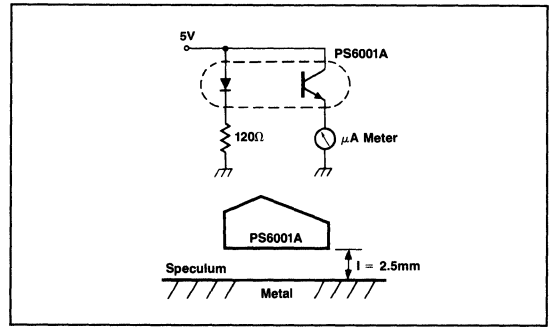
Diode	
Reverse Voltage, V_R	3V
Forward Current, I_F	50mA
Power Dissipation, P_D	75mW
Transistor	
Collector to Emitter Voltage, V_{CEO}	30V
Collector Current, I_C	40mA
Power Dissipation, P_D	100mW
Junction Temperature, T_J	80°C
Storage Temperature, T_{STG}	−30°C to +80°C

Electrical Characteristics

T_A = +25°C

Parameters	Symbol	Limits Min	Typ	Max	Unit	Test Conditions
Forward Voltage	V_F		1.2	1.4	V	I_F = 30mA
Reverse Current	I_R			50	μA	V_R = 3V
Peak Emission Wavelength	λ_{PEAK}		940		nm	I_F = 30mA
Collector Saturation Voltage	$V_{CE(SAT)}$			0.3	V	I_C = 20μA
Output Leak Current	I_{LEAK}			1.0	μA	I_F = 30mA, V_{CE} = 5V, L = 0lx
Output Current	I_C	100	200		μA	Note 1

Note 1: Test circuit for switching time.



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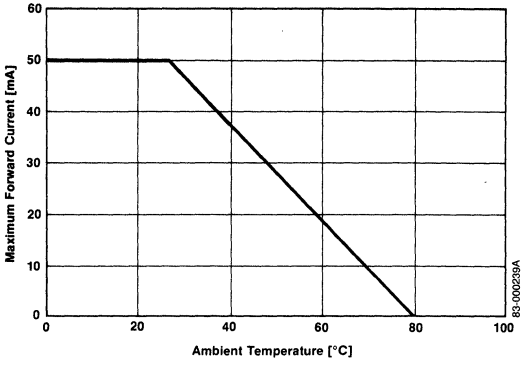
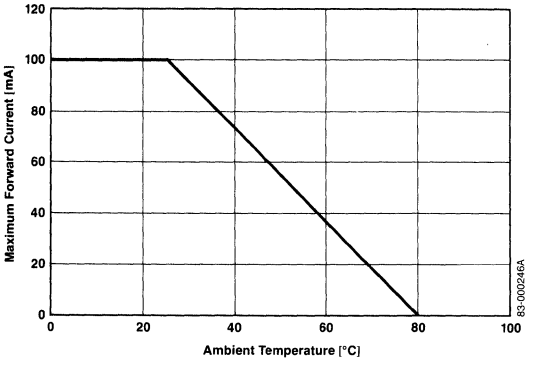
Typical Characteristics
T_A = +25°C

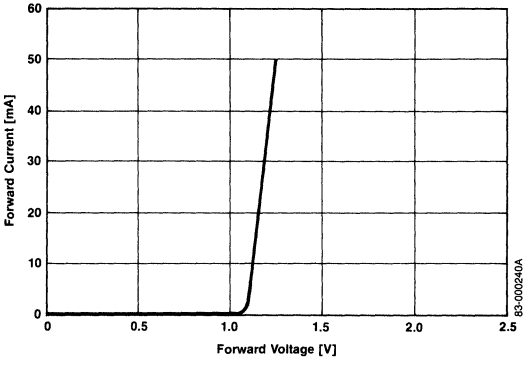
Maximum Forward Current vs Ambient Temperature



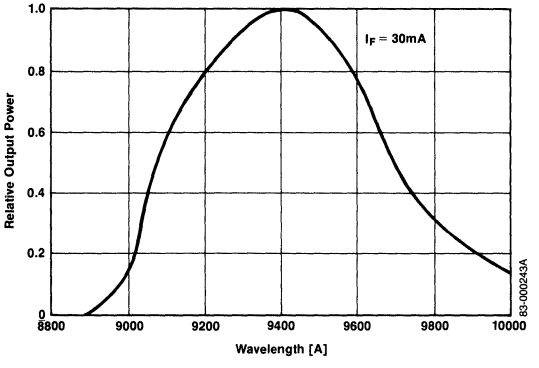
Maximum Forward Current vs Ambient Temperature



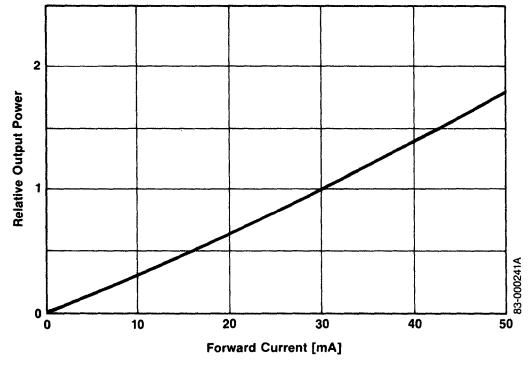
Forward Current vs Forward Voltage



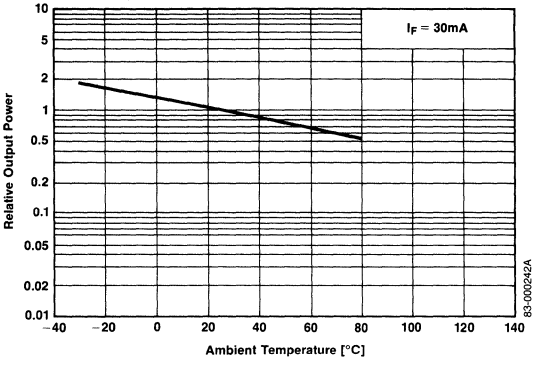
Spectral Distribution



Relative Output Power vs Forward Current



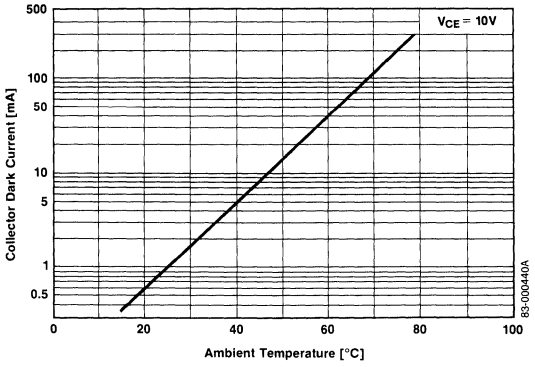
Relative Output Power vs Ambient Temperature



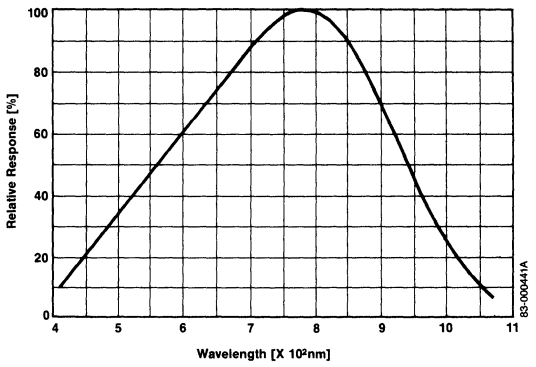
Typical Characteristics (cont)

T_A = +25°C

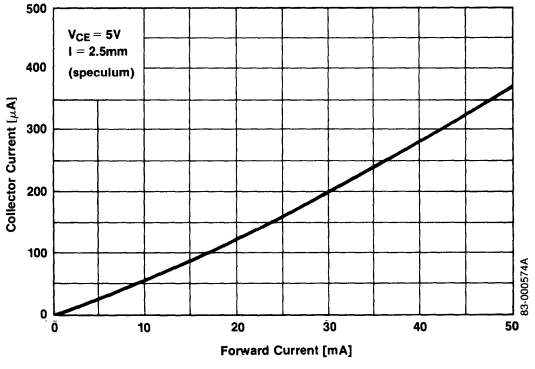
Collector Dark Current vs Ambient Temperature



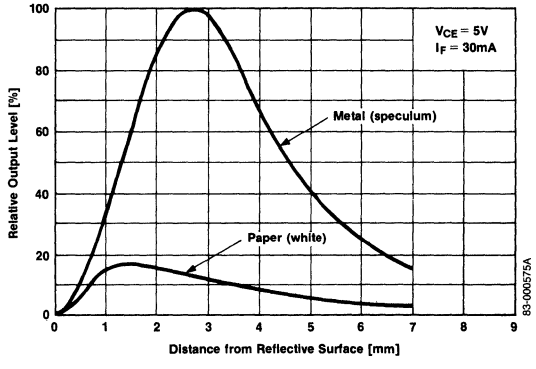
Spectral Response



Transfer Characteristics



Transfer Ratio vs Distance Between Reflection and Device



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