OptoSupply
Light It Up

Photo Interrupter

(Reflective)

OST8R8307

The OST8R8307 reflective sensor combines a GaAs IRED with a high-sensitivity phototransistor in a super-mini package, reducing installation space

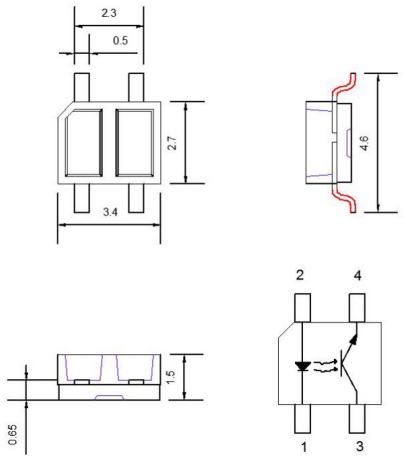
■Features

- Fast response time
- High sensitivity
- Cut-Off visible wavelength
- Thin & Compact
- The product itself will remain within RoHS compliant version.
- Black Lens Type
- PWB direct mount type
- The most suitable detection distance:0.8mm
- Low profile

■Applications

- Camera
- VCRs, Video camera
- Floppy disk drive
- Optoelectronic switch
- Mini printers
- Various microcomputer control equipment

■Outline Dimension



■Absolute Maximum Rating (Ta=25℃)

	Item	Symbol	Value	Unit
Input	Power dissipation	PD	75	mW
	Forward current	IF	50	mA
	Reverse voltage	VR	5	V
	Pulse forward current #	IFP	1000	mA
Output	Collector power dissipation	PC	100	mW
	Collector current	IC	50	mA
	Collector-Emitter voltage	VECO	30	V
	Emitter-Collector voltage	VECO	5	V
Operating Temperature		Topr	-25 ~ +85	℃
Storage Temperature		Tstg	-40 ~ +85	℃
Lead Soldering Temperature		Tsol	260℃/ 5sec	-

#Pulse width Max.10ms Duty ratio max 1/10

■Electrical -Optical Characteristics (Ta=25℃)

Item		Symbol	Condition	Min.	Typ.	Max.	Unit
Input	Forward voltage	VF	IF=20mA	-	1.2	1.6	V
	Reverse current	IR	VR=5V	-	-	10	uA
	Peak wavelength	λp	IF=20mA	-	940	-	nm
Output	Collector dark current	I_{CEO}	VCE=10V	-	-	100	nA
	C-E saturation voltage	$V_{CE(sat)}$	IC=0.25mA , IF=10mA	-	-	0.4	V
Light current		IL	VCE=5V , IF=10mA	180	-	300	uA
Speed	Rise time	tr	VCE=5V , IF=20mA	-	20	-	usec
	Fall time	tf	RL=1000Ω	-	20	-	usec

*1 Tolerance of Light Current is ±10% *2 Tolerance of forward voltage is ±0.1V

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TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

Fig.1 Power Dissipation vs. Ambient Temperature

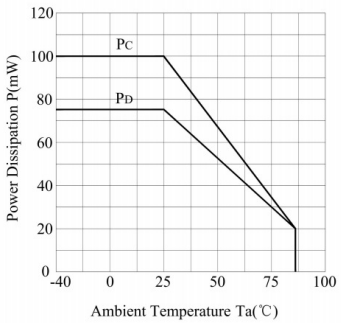


Fig.2 Forward Current vs. Forward Voltage

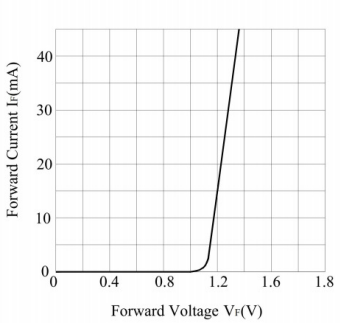


Fig.3 Collector Current vs. Collector-emitter Voltage

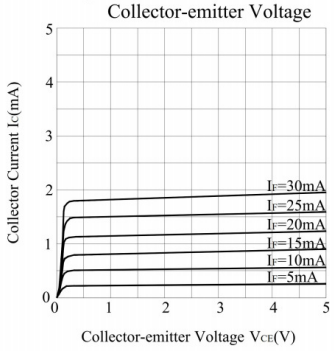


Fig.4 Collector Current vs. Ambient Temperature

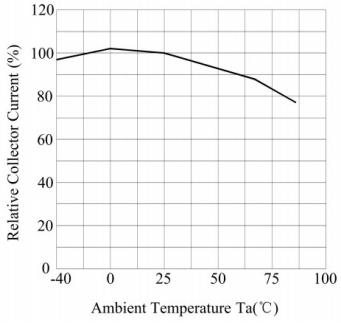


Fig.5 Collector-emitter Saturation Voltage vs. Ambient Temperature

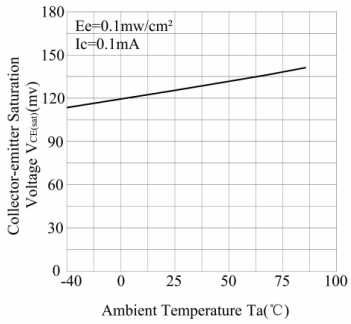


Fig.6 Response Time vs. Load Resistance

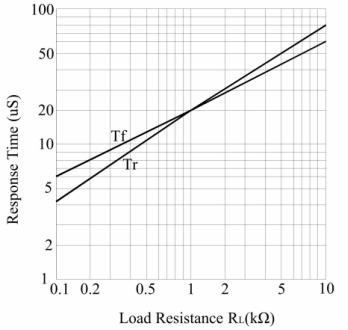


Fig.7 Sensing Position Characteristics (Typical)

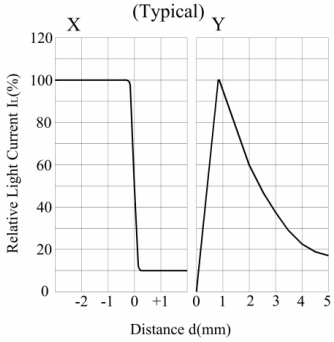
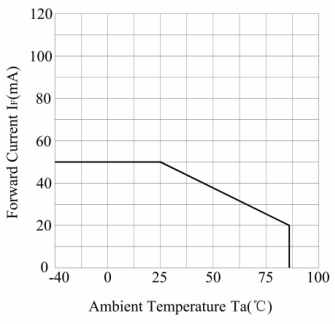


Fig.8 Forward Current Derating Curve vs. Ambient Temperature



Test Circuit for Response Time