

Features

- Non-contact switching.
- For direct PC board or dual-in-line socket mounting.
- Fast switching speed.

Application

- Scanner
- Printer
- FAX machine
- Counter

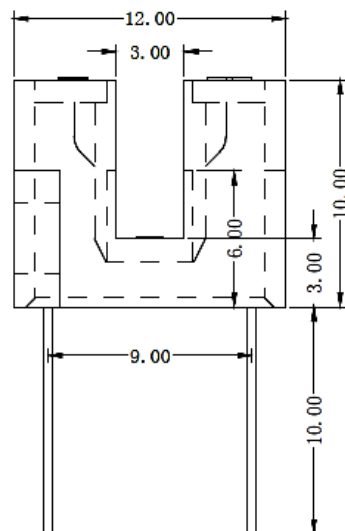
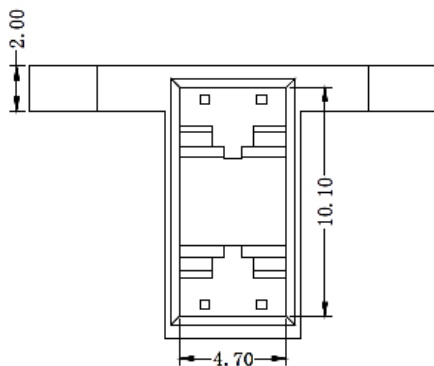
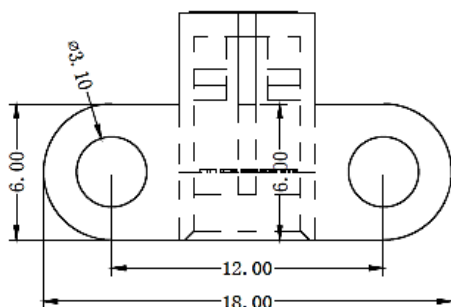
Description

The TP805/TP806 series consist of Gallium Arsenide infrared emitting diode and a NPN silicon phototransistor mounted in a black plastic housing. Phototransistor switching takes place whenever an opaque object passes through the slot. These series are designed for direct soldering into PC board or mounting in standard dual-in-line socket.

TP805

Technical drawing of a rectangular block. The block has a total width of 100 and a total height of 9. The front face is divided into four vertical sections. From left to right: a section with a width of 10 containing the text 'SIVAGO' (rotated 90 degrees counter-clockwise); a section with a width of 10 containing the text 'TP805' (rotated 90 degrees counter-clockwise); a section with a width of 10 containing a cross symbol; and a section with a width of 10 containing a cross symbol. The top face is divided into four equal sections, each with a width of 25. The bottom face is divided into four equal sections, each with a width of 25. The left face is divided into four equal sections, each with a height of 2.25. The right face is divided into four equal sections, each with a height of 2.25.

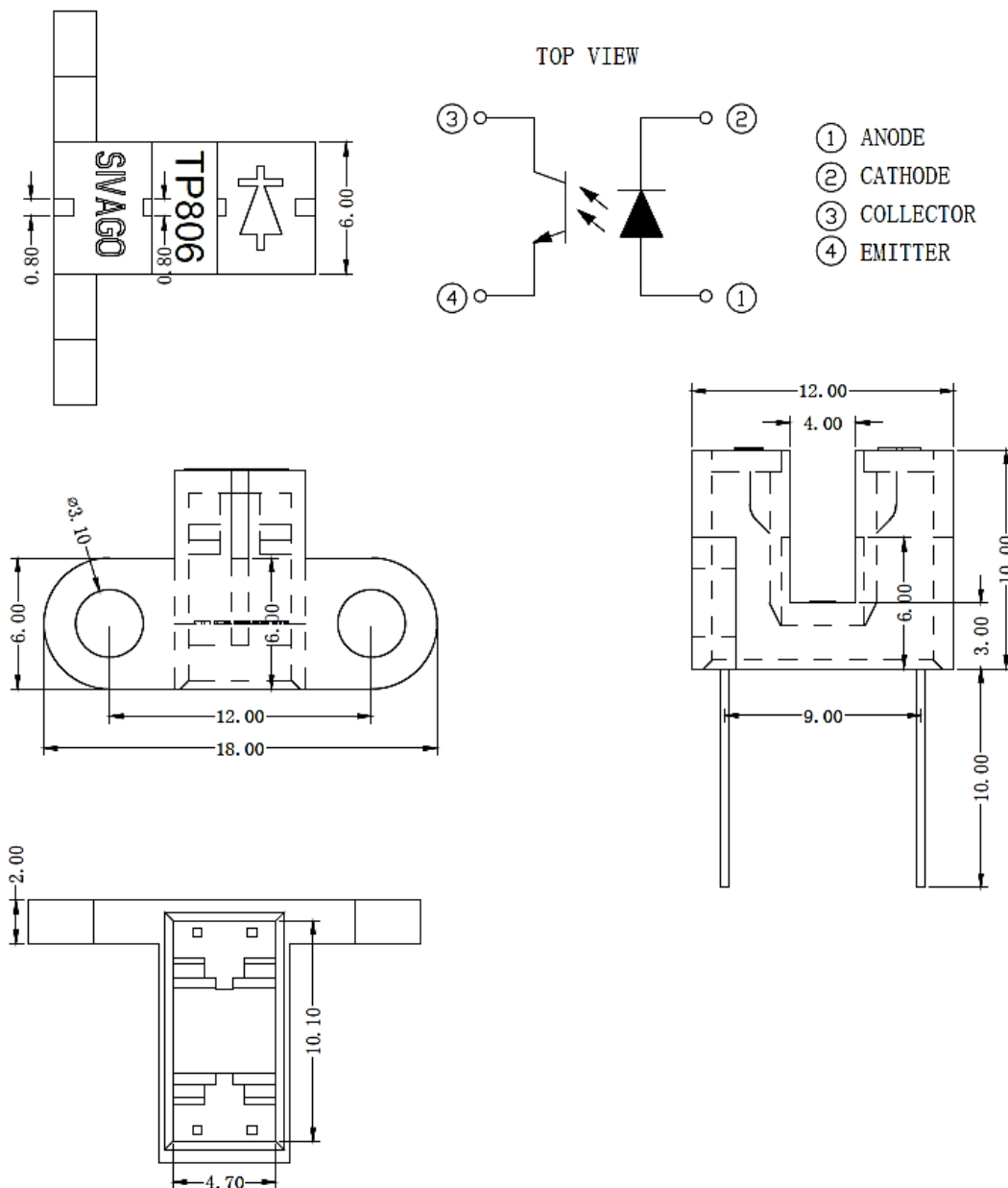
① ANODE
② CATHODE
③ COLLECTOR
④ EMITTER



Slotted PhotoInterrupters Sivago Sensors

TP806

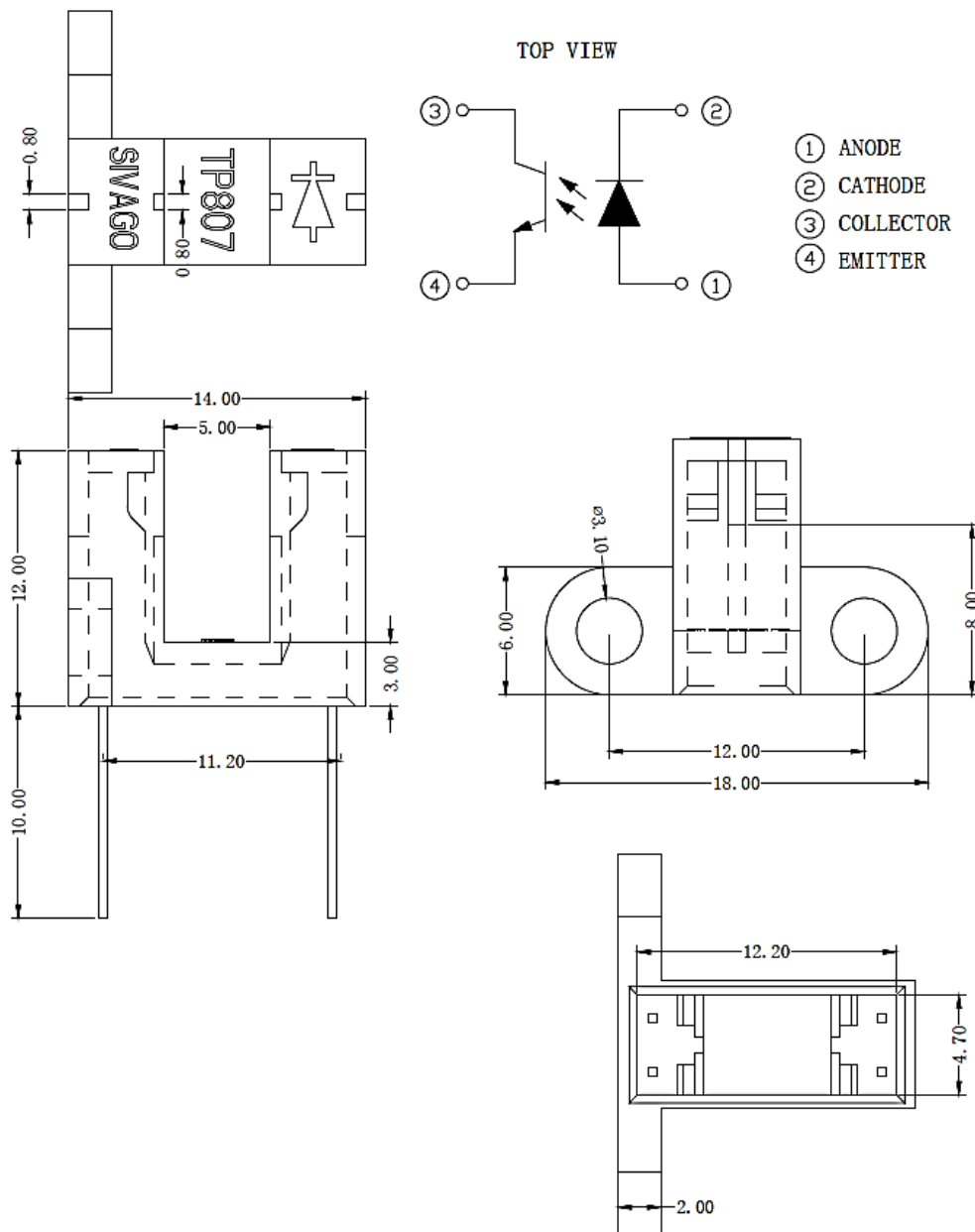
Package Dimensions



Slotted PhotoInterrupters Sivago Sensors

TP807

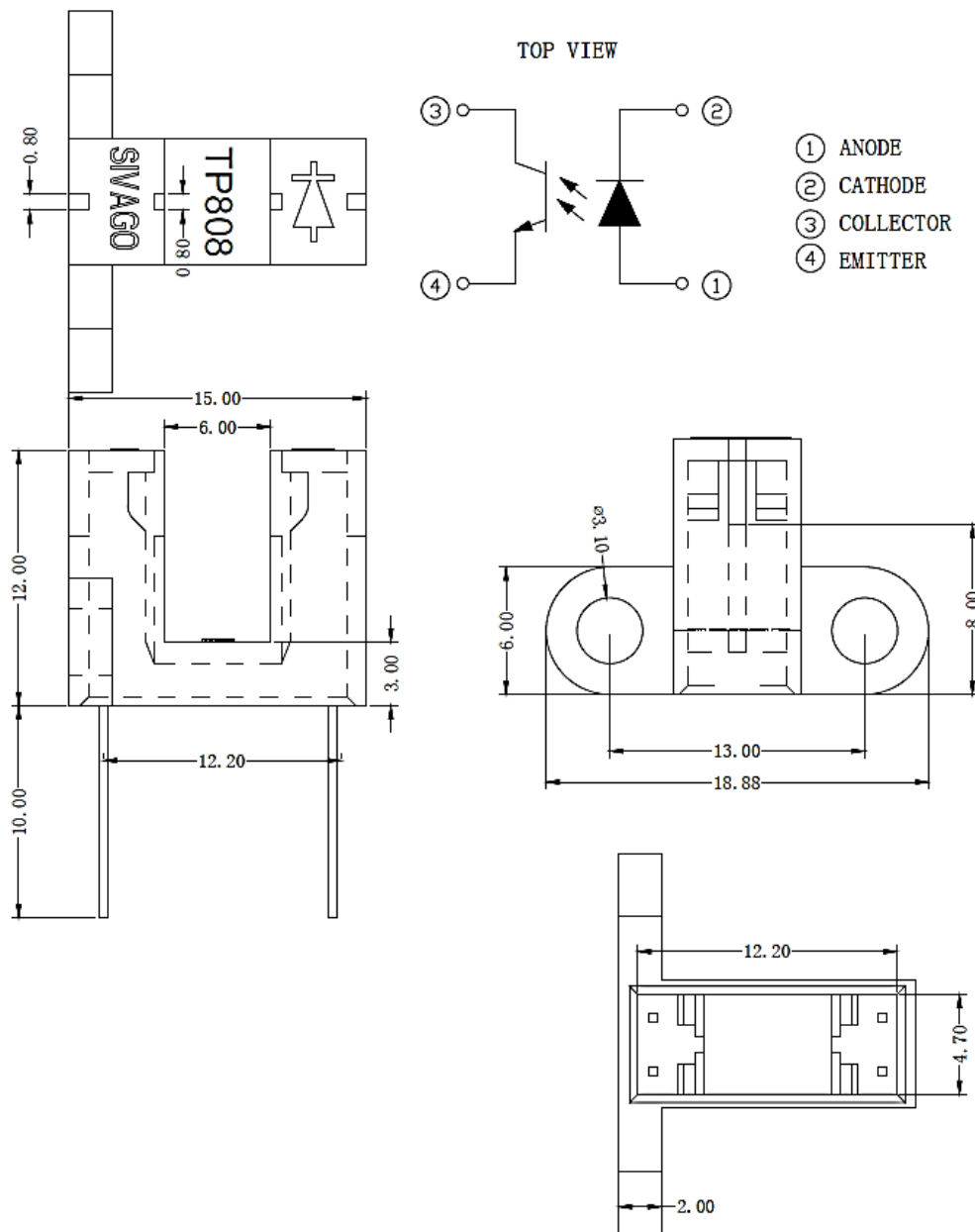
Package Dimensions



Slotted PhotoInterrupters Sivago Sensors

TP808

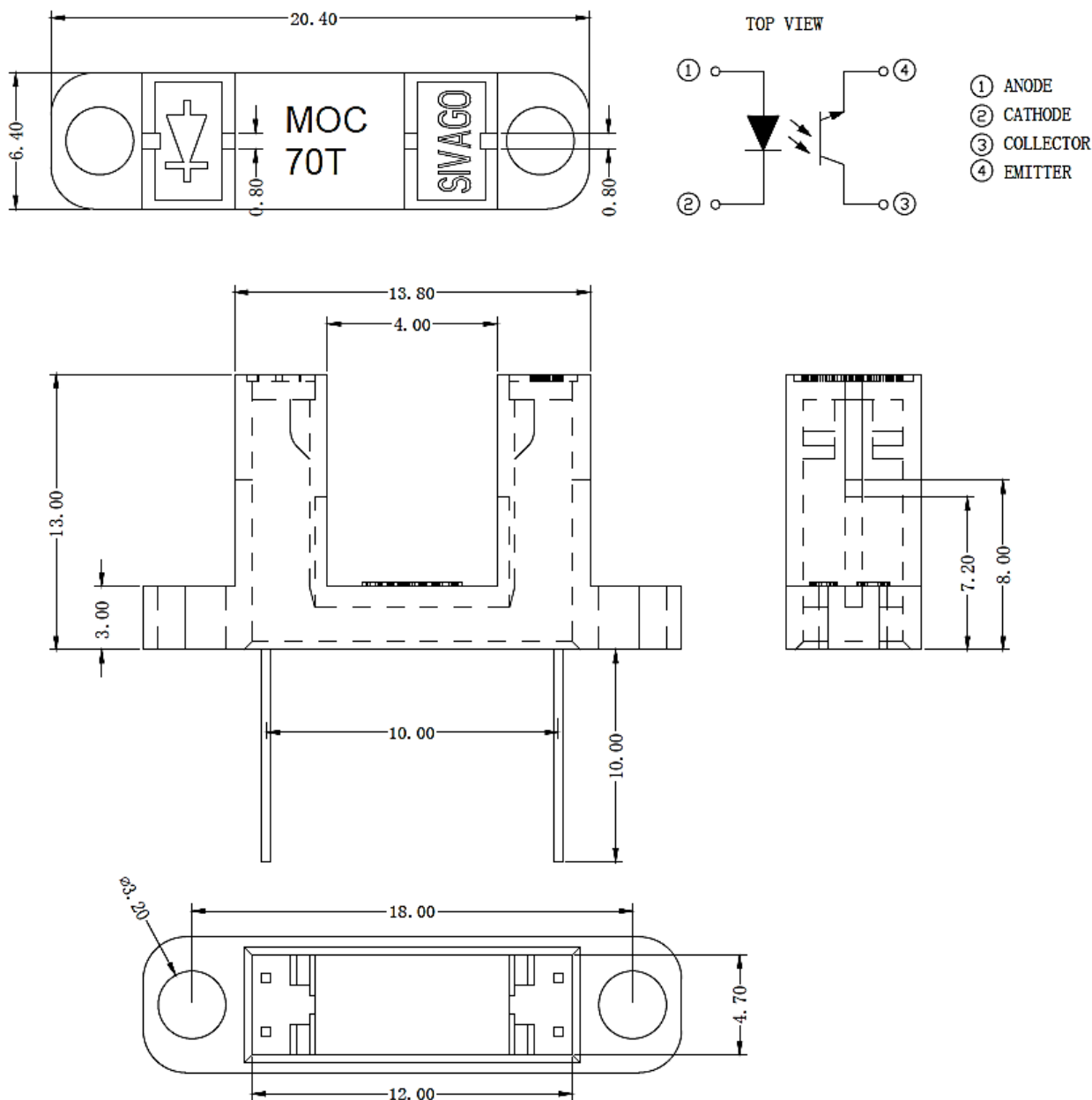
Package Dimensions



Slotted PhotoInterrupters Sivago Sensors

MOC70T

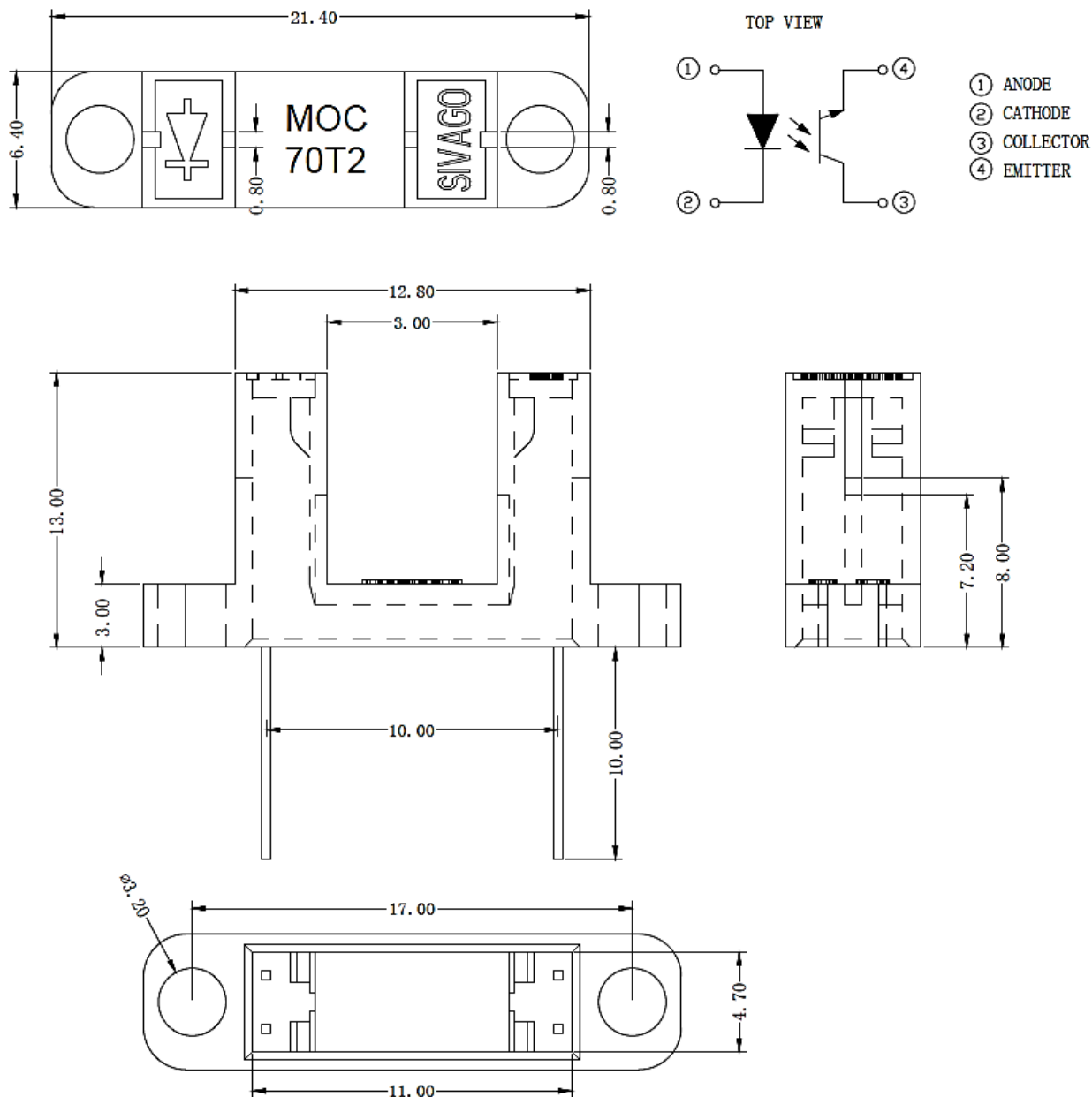
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Slotted PhotoInterrupters Sivago Sensors

MOC70T2

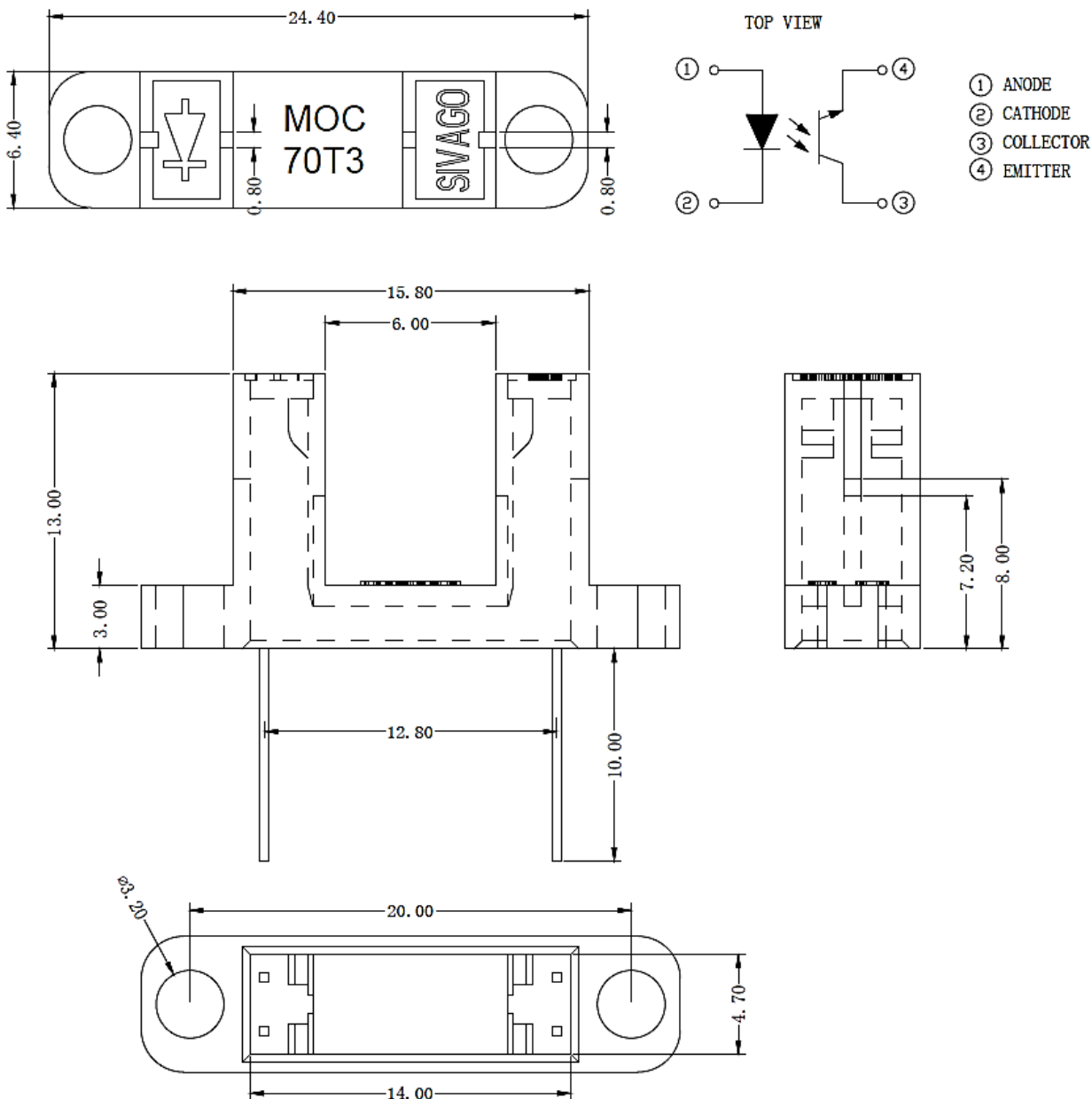
Package Dimensions



Slotted PhotoInterrupters Sivago Sensors

MOC70T3

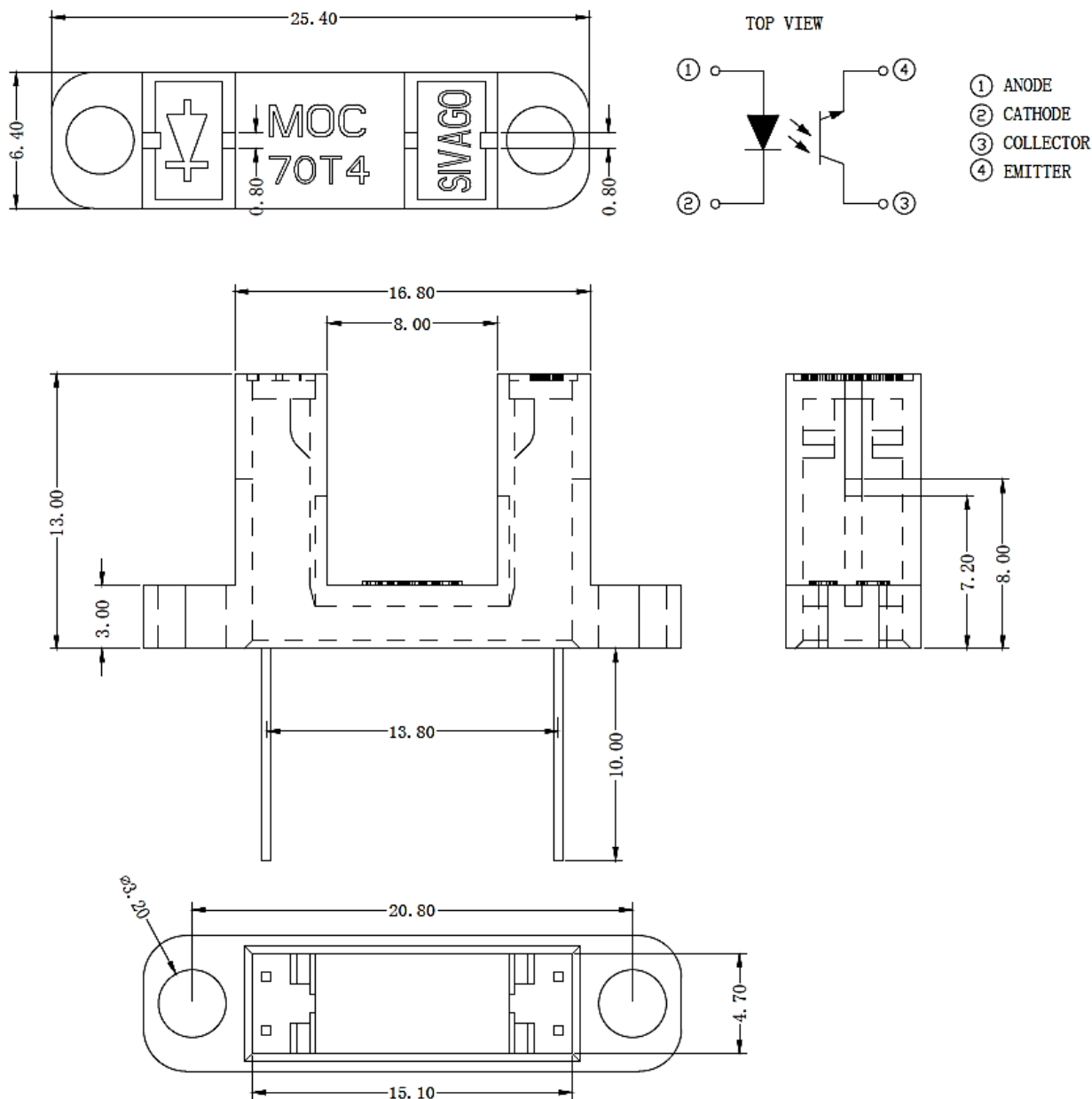
Package Dimensions



Slotted PhotoInterrupters Sivago Sensors

MOC70T4

Package Dimensions



Absolute Maximum Ratings at Ta=25 °C

Parameter		Symbol	Maximum Rating	Unit
Input LED	Continuous Forward Current	I _F	60	mA
	Reverse Voltage	V _R	5	V
	Peak Forward Current (Pulse Wide=10 μ S, 300PPS)	I _{CP}	1	A
	Power Dissipation	P _D	75	mW
Output phototransistor	Collector Current	I _C	20	mA
	Power Dissipation	P _C	100	mW
	Collector-emitter Voltage	V _{CEO}	30	V
	Emitter-collector Voltage	V _{ECO}	5	V
Operating Temperature Range		T _{opr}	-25°C to + 85 °C	
Storage Temperature Range		T _{stg}	-40°C to + 100°C	
Lead Soldering Temperature [1.6mm(.063 in.)from body]		T _s	260 °C for 5 Seconds	

Electrical Optical Characteristics at Ta=25 °C

Parameter		Symbol	Part No.	Min.	Typ.	Max.	Unit	Test Condition
Input LED								
Forward Voltage		V _F			1.2	1.6	V	I _F =20mA
Reverse Current		I _R				100	μ A	V _R =5V
Output phototransistor								
Collector Dark Current		I _{CEO}				100	nA	V _{CE} =10V
Coupler								
Collector-Emitter Saturation Voltage	V _{CE(sat)}	TP805				0.4	V	I _C =0.25mA, I _F =20mA
		TP806				0.4		I _C =0.25mA, I _F =20mA
		TP807				0.4		I _C =0.25mA, I _F =20mA
		TP808				0.4		I _C =0.75mA, I _F =20mA
		MOC70T				0.4		I _C =0.2mA, I _F =20mA
		MOC70T2				0.4		I _C =0.2mA, I _F =20mA
		MOC70T3				0.4		I _C =2.5mA, I _F =20mA
		MOC70T4				0.4		I _C =0.25mA, I _F =20mA
On State Collector Current	I _{C(ON)}	TP805		0.5			mA	V _{CE} =5V, I _F =20mA
		TP806		0.5				
		TP807		0.4				
		TP808		1.5				
		MOC70T		0.4				
		MOC70T2		0.4				
		MOC70T3		5.0				
		MOC70T4		0.5				
Response Time	Rise Time	t _r			3	15	μ S	V _{CE} =5V, I _C =2mA R _L =100 Ω
	Fall Time	t _f			4	20		

Typical Electrical/Optical Characteristic Curves (25°C Ambient Temperature Unless Otherwise Noted)

Fig.1 Power Dissipation vs. Ambient Temperature

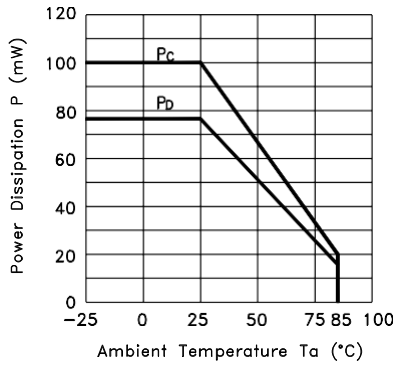


Fig.2 Forward Current vs. Forward Voltage

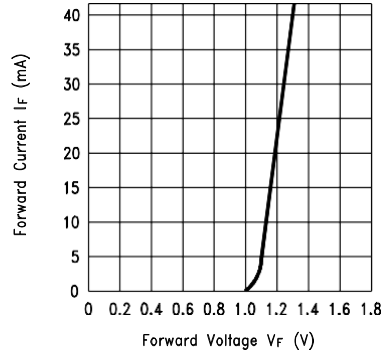


Fig.3 Collector Current vs. Collector-emitter Voltage

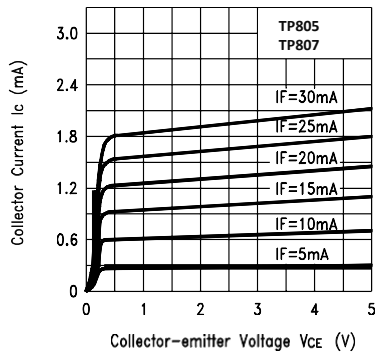


Fig.4 Collector Current vs. Collector-emitter Voltage

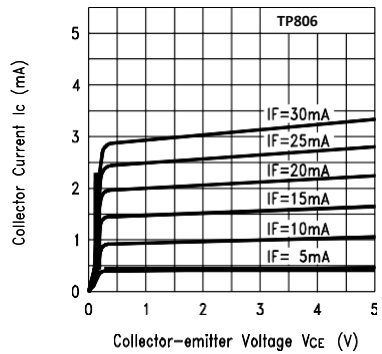


Fig.5 Collector Current vs. Collector-emitter Voltage

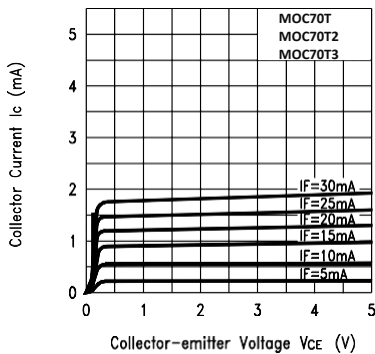
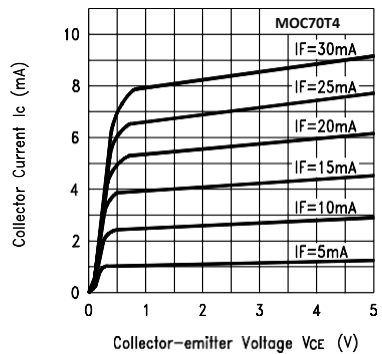


Fig.6 Collector Current vs. Collector-emitter Voltage



Typical Electrical/Optical Characteristic Curves (25°C Ambient Temperature Unless Otherwise Noted)

Fig.7 Collector Current vs.
Collector-emitter Voltage

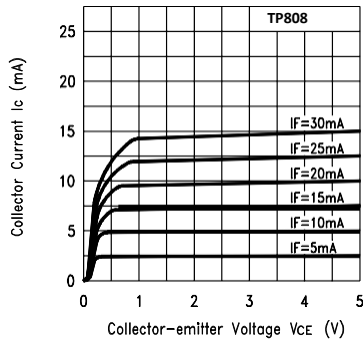


Fig.8 Collector Current vs.
Ambient Temperature

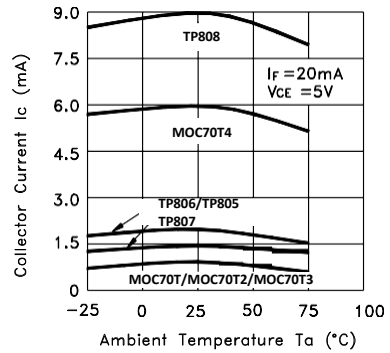


Fig.9 Collector-emitter Saturation
Voltage vs. Ambient Temperature

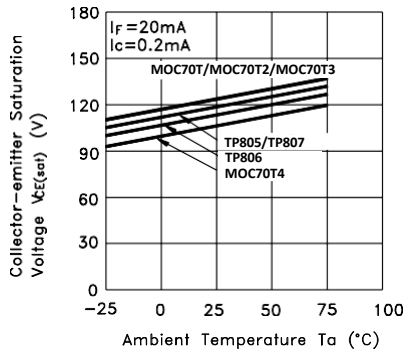
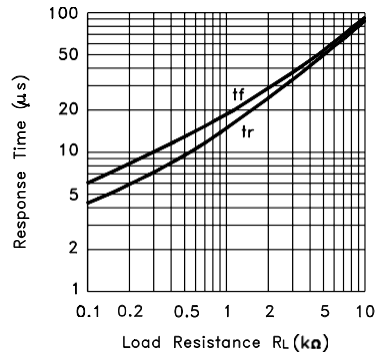


Fig.10 Response Time vs.
Load Resistance



Test Circuit for Response Time

