

Actuator Photointerrupters

LTH-306-03W1/LTH-306-06W1/LTH-306-07W1

LTH-301-25W1/LTH-301-25W2/LTH-301-26W1

Features

- Snap mounting.
- Mechanical switch replacement.
- Wire or connector for electrical connection.
- Customized lever arm can be designed for specific application.
- Guaranteed actuator life 10^6 times .

Application

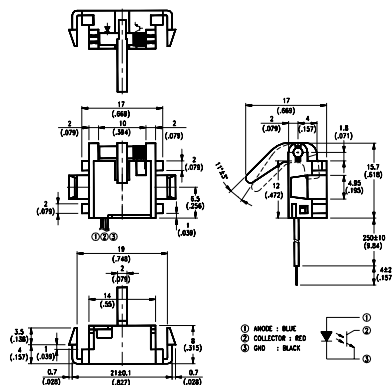
- FAX machine
- Copy Machine
- Printer

Description

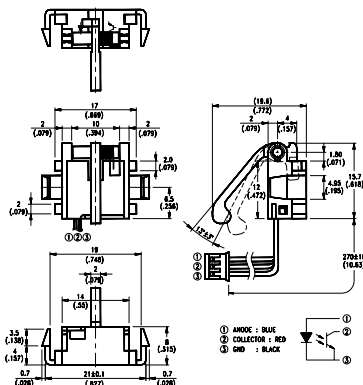
The LTH-301/LTH-306 series consist of Gallium Arsenide infrared emitting diode and a NPN silicon phototransistor mounted in a black plastic housing. Phototransistor switching takes place whenever the object passes through the level arm. They are designed for wire or connector to PC boards.

Package Dimensions

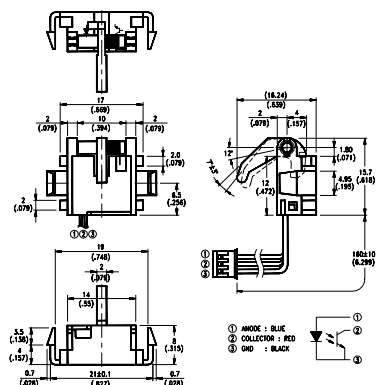
LTH-306-03W1



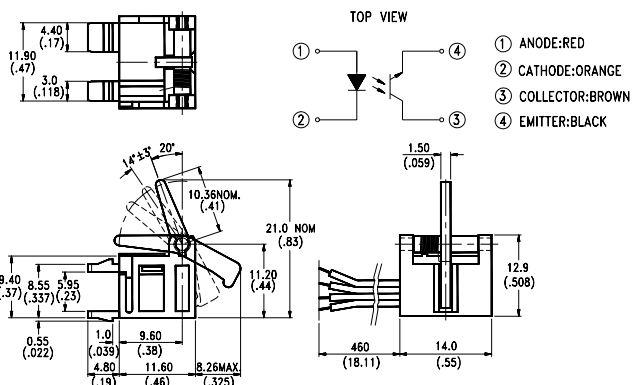
LTH-306-06W1



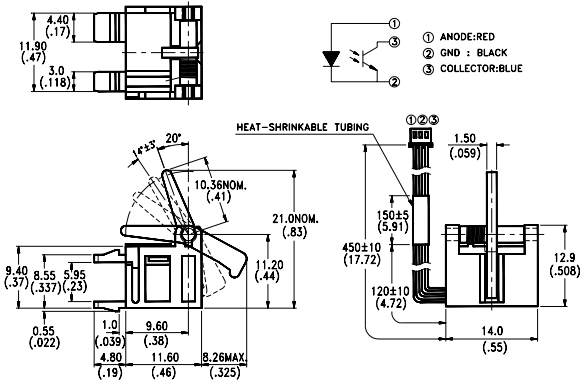
LTH-306-07W1



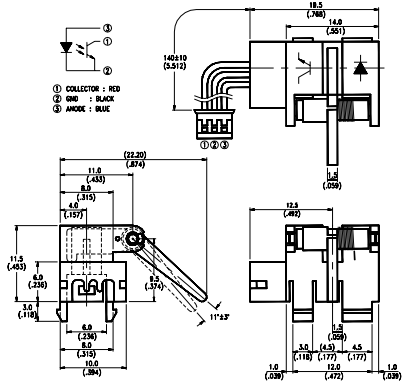
LTH-301-25W1



LTH-301-25W2



LTH-301-26W1



Notes:

- 1.All dimensions are in millimeters (inches).
- 2.Tolerance is ± 0.25 mm (.010").
- 3.Specifications are subject to change without notice.

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}	-20°C to + 75°C	
Storage Temperature Range		T _{stg}	-40°C to + 85°C	

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	μA	V _R =5V
Output phototransistor							
Collector Dark Current	I _{CEO}				100	nA	V _{CE} =10V
Coupler							
Collector-Emitter Saturation Voltage	V _{CE(sat)}	LTH-306-03W1			0.4	V	I _C =0.25mA, I _F =20mA
		LTH-306-06W1			0.4		I _C =0.25mA, I _F =20mA
		LTH-306-07W1			0.4		I _C =0.25mA, I _F =20mA
		LTH-301-25W1			0.4		I _C =0.25mA, I _F =20mA
		LTH-301-25W2			0.4		I _C =0.25mA, I _F =20mA
		LTH-301-26W1			0.4		I _C =1.0mA, I _F =20mA
On State Collector Current	I _{C(ON)}	LTH-306-03W1	0.5	2.0		mA	V _{CE} =5V, I _F =20mA
		LTH-306-06W1	0.5	2.0			
		LTH-306-07W1	0.5	2.0			
		LTH-301-25W1	0.5	2.0			
		LTH-301-25W2	0.5				
		LTH-301-26W1	2.0				

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

Fig.1 Power Dissipation vs.
Ambient Temperature

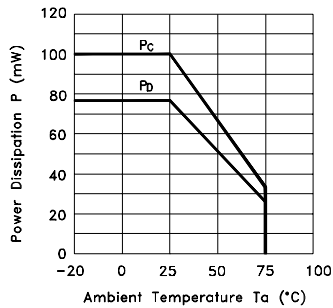


Fig.2 Forward Current vs.
Forward Voltage

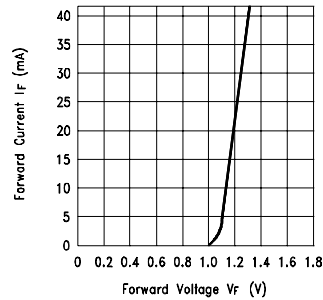


Fig.3 Collector Current vs.
Collector-emitter Voltage

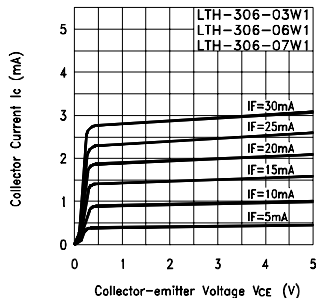
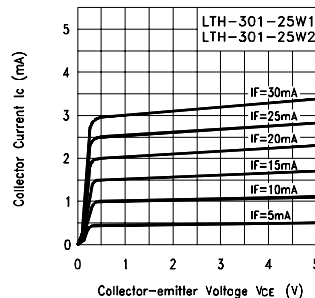


Fig.4 Collector Current vs.
Collector-emitter Voltage



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

Fig.5 Collector Current vs.
Collector-emitter Voltage

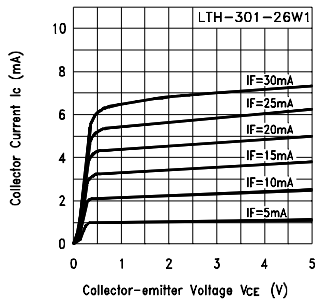


Fig.6 Collector Current vs.
Ambient Temperature

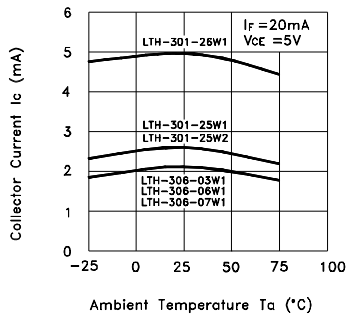


Fig.7 Collector-emitter Saturation
Voltage vs. Ambient Temperature

