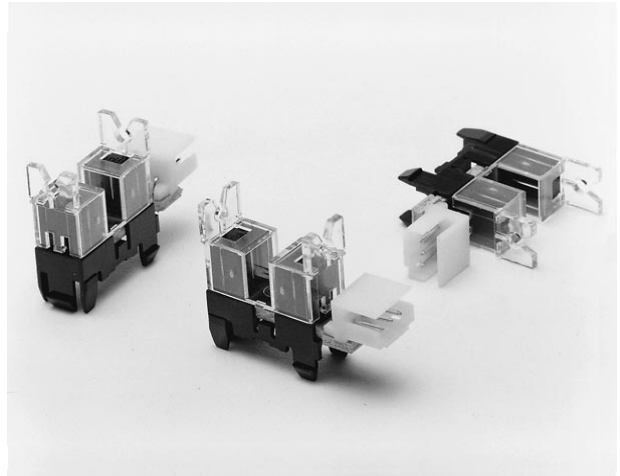
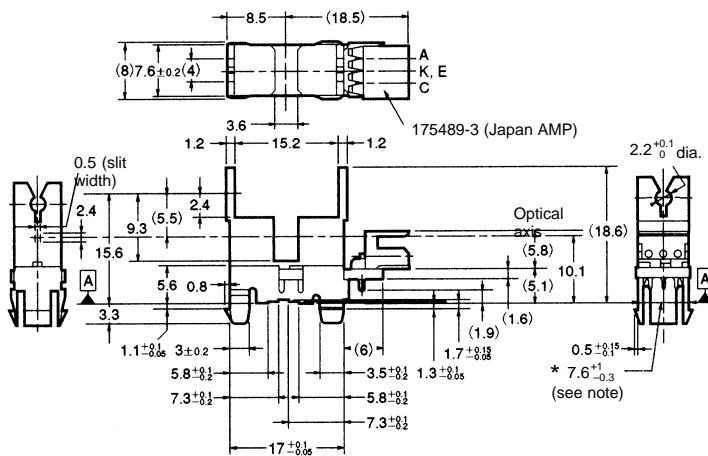


### Actuator Mounted

- Phototransistor output.
- Designed to incorporate external actuator.
- 3.6mm slot width.
- Snap-in mounting model.
- Mountable to 1.0-, 1.2- and 1.6-mm-thick boards.
- Connects to Japan AMP's CT-series connectors.

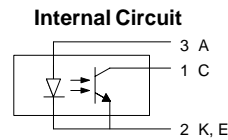


### Dimensions



**Note:** The asterisked dimension is specified by datum A only.

Recommended Connectors:  
 Japan AMP 173977-3 (insulation displacement-type connector)  
 175778-3 (crimp-type connector)  
 179228-3 (crimp-type connector)

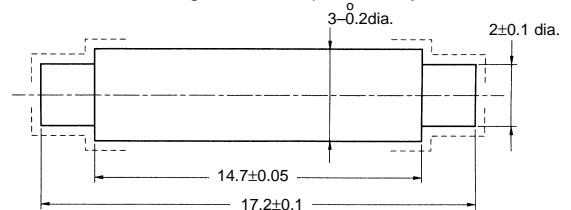


Terminal No.	Name
A	Anode
C	Collector
K, E	Cathode, Emitter

Unless otherwise specified, the tolerances are  $\pm 0.2\text{mm}$ .

#### Actuator Dimensions

- Note:**
1. Make sure that the portions marked with dotted lines have no burrs.
  2. The material of the actuator must be selected by considering the infrared permeability of the actuator.



For recommended mounting holes see EE-SX407-P2 on page 408

### Specifications

#### ■ Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	Rated value
Emitter	Forward current	$I_F$	50 mA (see note)
	Pulse forward current	$I_{FP}$	---
	Reverse voltage	$V_R$	4 V
Detector	Collector-Emitter voltage	$V_{CEO}$	30 V
	Emitter-Collector voltage	$V_{ECO}$	5 V
	Collector current	$I_C$	20 mA
	Collector dissipation	$P_C$	100 mW (see note 1)
Ambient temperature	Operating	$T_{opr}$	-25°C to 85°C
	Storage	$T_{stg}$	-40°C to 85°C
	Soldering	$T_{sol}$	---

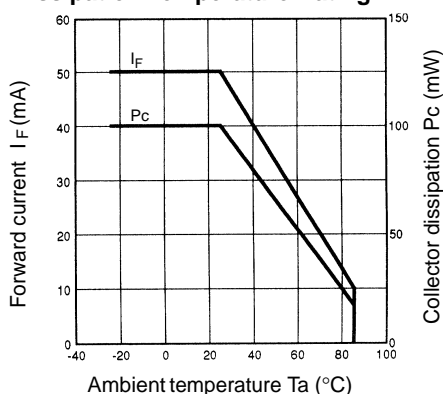
**Note:** Refer to the temperature rating chart if the ambient temperature exceeds 25°C.

## ■ Electrical and Optical Characteristics (Ta = 25°C)

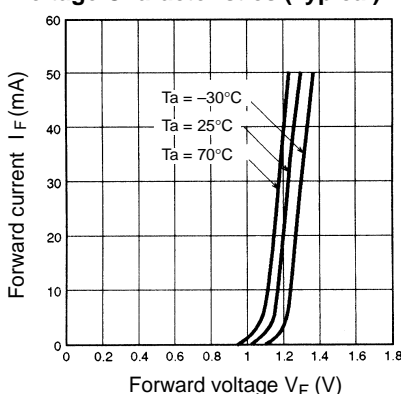
Item		Symbol	Value	Condition
Emitter	Forward voltage	$V_F$	1.2 V typ., 1.5 V max.	$I_F = 30$ mA
	Reverse current	$I_R$	0.01 $\mu$ A typ., 10 $\mu$ A max.	$V_R = 4$ V
	Peak emission wavelength	$\lambda_P$	940 nm typ.	$I_F = 30$ mA
Detector	Light current	$I_L$	0.5 mA min., 14 mA max.	$I_F = 20$ mA, $V_{CE} = 5$ V
	Dark current	$I_D$	200 nA max.	$V_{CE} = 10$ V, 0 lx
	Leakage current	$I_{LEAK}$	---	---
	Collector–Emitter saturated voltage	$V_{CE}(\text{sat})$	0.1 V typ., 0.4 V max.	$I_F = 20$ mA, $I_L = 0.3$ mA
	Peak spectral sensitivity wavelength	$\lambda_P$	850 nm typ.	$V_{CE} = 5$ V
Rising time		$t_r$	8 $\mu$ s typ.	$V_{CC} = 5$ V, $R_L = 100 \Omega$ , $I_L = 1$ mA
Falling time		$t_f$	8 $\mu$ s typ.	$V_{CC} = 5$ V, $R_L = 100 \Omega$ , $I_L = 1$ mA

## Engineering Data

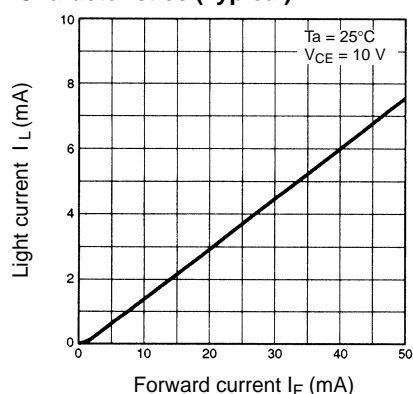
**Forward Current vs. Collector Dissipation Temperature Rating**



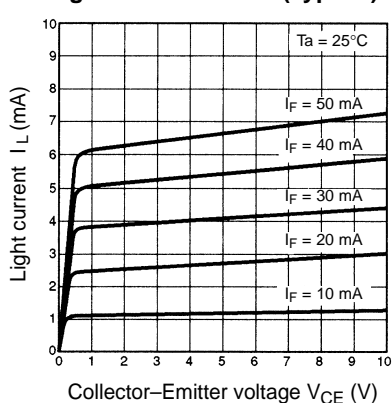
**Forward Current vs. Forward Voltage Characteristics (Typical)**



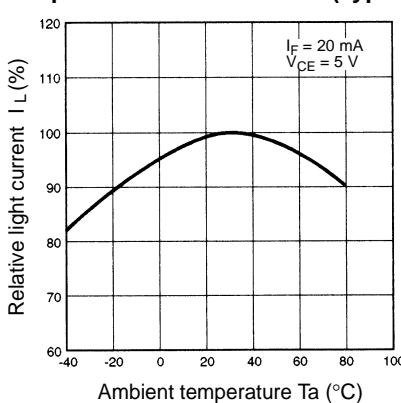
**Light Current vs. Forward Current Characteristics (Typical)**



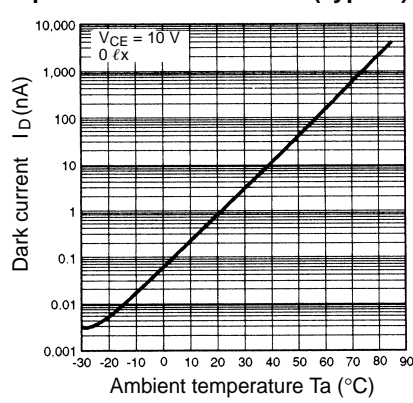
**Light Current vs. Collector–Emitter Voltage Characteristics (Typical)**



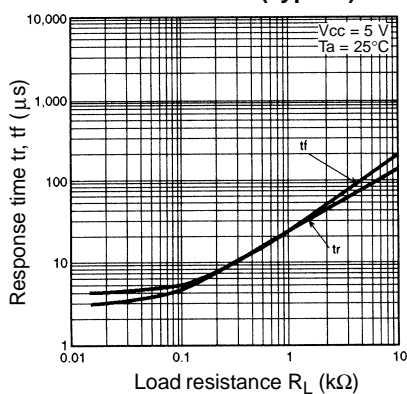
**Relative Light Current vs. Ambient Temperature Characteristics (Typical)**



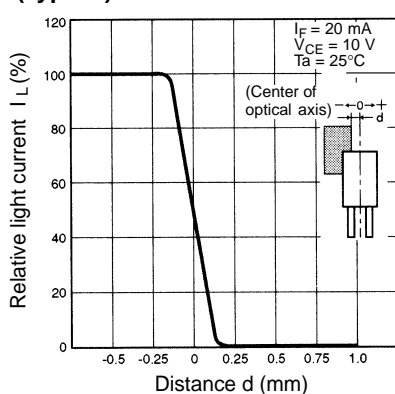
**Dark Current vs. Ambient Temperature Characteristics (Typical)**



**Response Time vs. Load Resistance Characteristics (Typical)**



**Sensing Position Characteristics (Typical)**



**Response Time Measurement Circuit**

