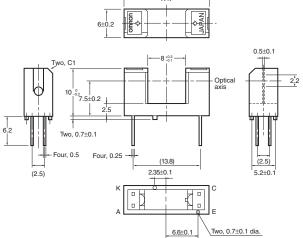
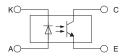
Photomicrosensor (Transmissive)

■ Dimensions

Note: All units are in millimeters unless otherwise indicated.



Internal Circuit



Terminal No.	Name
Α	Anode
K	Cathode
С	Collector
E	Emitter

Unless otherwise specified, the tolerances are as shown below.

Dimensions	Tolerance
3 mm max.	±0.3
3 < mm ≤ 6	±0.375
6 < mm ≤ 10	±0.45
10 < mm ≤ 18	±0.55
18 < mm ≤ 30	±0.65

■ Features

- Wide model with a 8-mm-wide slot.
- PCB mounting type.
- High resolution with a 0.5-mm-wide aperture.
- RoHS Compliant.

■ Absolute Maximum Ratings (Ta = 25°C)

	Item	Symbol	Rated value
Emitter	Forward current	I _F	50 mA (see note 1)
	Pulse forward current	I _{FP}	1 A (see note 2)
	Reverse voltage	V_R	4 V
Detector	Collector-Emitter voltage	V _{CEO}	30 V
	Emitter-Collector voltage	V _{ECO}	
	Collector current	I _C	20 mA
	Collector dissipation	P_{C}	100 mW (see note 1)
Ambient	Operating	T _{opr}	–25°C to 95°C
temperature	Storage	T _{stg}	-30°C to 100°C
Soldering temperature		T _{sol}	260°C (see note 3)

- Note: 1. Refer to the temperature rating chart if the ambient temperature exceeds 25°C.
 - 2. The pulse width is 10 μs maximum with a frequency of 100 Hz.
 - 3. Complete soldering within 10 seconds.

■ Ordering Information

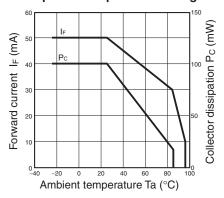
Description	Model	
Photomicrosensor (transmissive)	EE-SX1070	

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

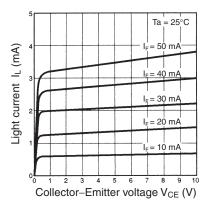
	Item	Symbol	Value	Condition
Emitter	Forward voltage	V _F	1.2 V typ., 1.5 V max.	I _F = 30 mA
	Reverse current	I _R	0.01 μA typ., 10 μA max.	V _R = 4 V
	Peak emission wavelength	λ_{P}	940 nm typ.	I _F = 20 mA
Detector	Light current	IL	0.5 mA min., 14 mA max.	I _F = 20 mA, V _{CE} = 10 V
	Dark current	I _D	2 nA typ., 200 nA max.	V _{CE} = 10 V, 0 ℓx
	Leakage current	I _{LEAK}		
	Collector-Emitter saturated voltage	V _{CE (sat)}	0.1 V typ., 0.4 V max.	I _F = 20 mA, I _L = 0.1 mA
	Peak spectral sensitivity wavelength	λ_{P}	850 nm typ.	V _{CE} = 10 V
Rising time		tr	4 μs typ.	$V_{CC} = 5 \text{ V}, R_L = 100 \Omega, I_L = 5 \text{ mA}$
Falling time		tf	4 μs typ.	$V_{CC} = 5 \text{ V}, R_L = 100 \Omega, I_L = 5 \text{ mA}$

■ Engineering Data

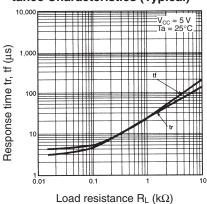
Forward Current vs. Collector **Dissipation Temperature Rating**



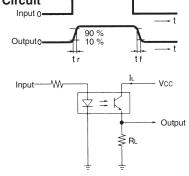
Light Current vs. Collector–Emitter Voltage Characteristics (Typical)



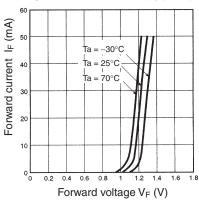
Response Time vs. Load Resistance Characteristics (Typical)



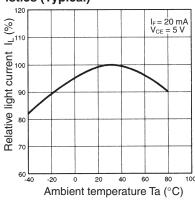
Response Time Measurement Circuit



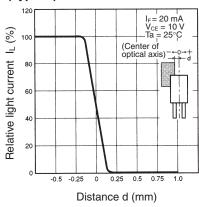
Forward Current vs. Forward **Voltage Characteristics (Typical)**



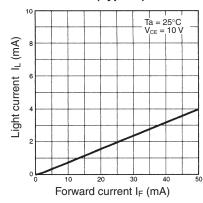
Relative Light Current vs. Ambient Temperature Characteristics (Typical)



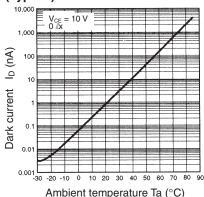
Sensing Position Characteristics (Typical)



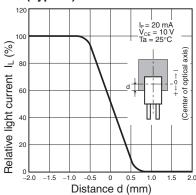
Light Current vs. Forward Current Characteristics (Typical)



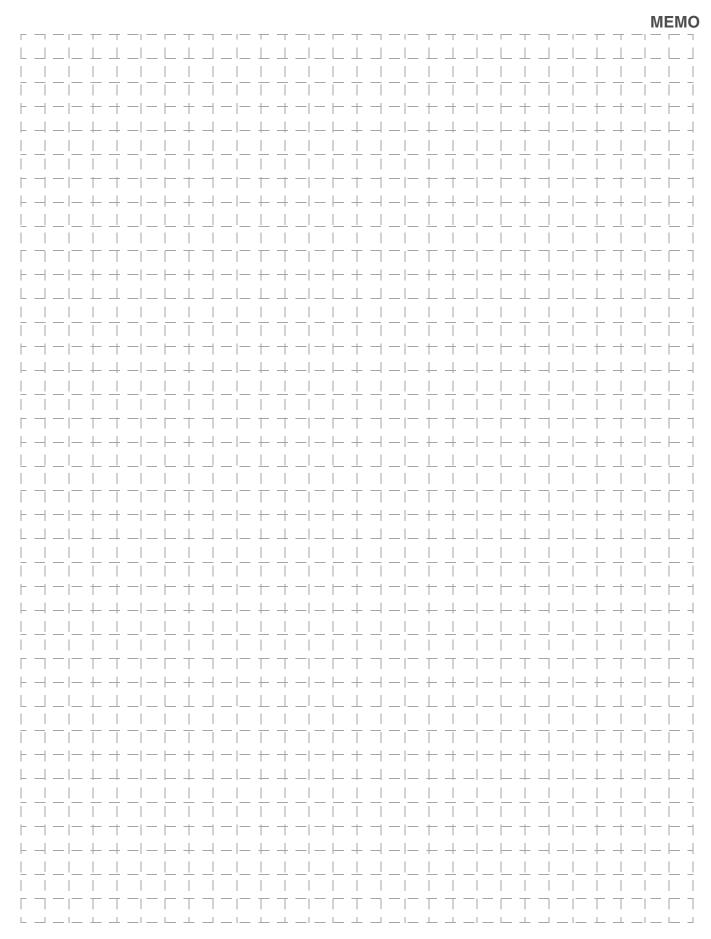
Dark Current vs. Ambient Temperature Characteristics (Typical)



Sensing Position Characteristics (Typical)









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