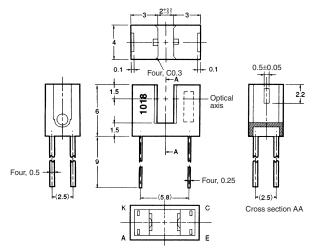
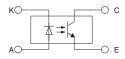
Photomicrosensor (Transmissive)

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

- Compact model with a 2-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 85°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
 - 3. Complete soldering within 10 seconds.

■ Ordering Information

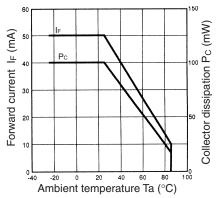
Description	Model	
Photomicrosensor (transmissive)	EE-SX1018	

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

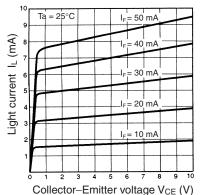
	Item	Symbol	Value	Condition
Emitter	Forward voltage	V _F	1.2 V typ., 1.5 V max.	I _F = 30 mA
	Reverse current	I _R	0.01 μA typ., 10 μA max.	V _R = 4 V
	Peak emission wavelength	λ_{P}	940 nm typ.	I _F = 20 mA
Detector	Light current	IL	0.5 mA min., 14 mA max.	I _F = 20 mA, V _{CE} = 10 V
	Dark current	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

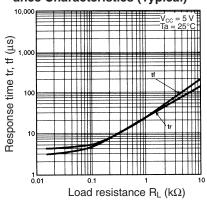
Forward Current vs. Collector **Dissipation Temperature Rating**



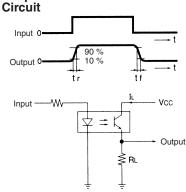
Light Current vs. Collector-Emitter **Voltage Characteristics (Typical)**



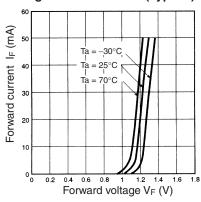
Response Time vs. Load Resistance Characteristics (Typical)



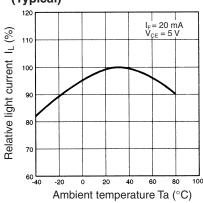
Response Time Measurement



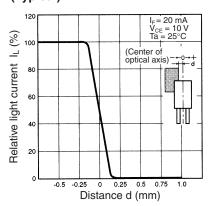
Forward Current vs. Forward Voltage Characteristics (Typical)



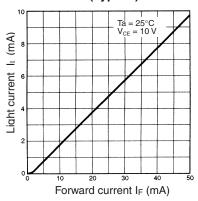
Relative Light Current vs. Ambient Temperature Characteristics (Typical)



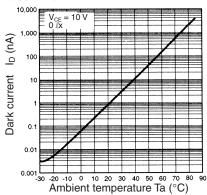
Sensing Position Characteristics (Typical)



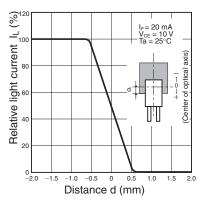
Light Current vs. Forward Current Characteristics (Typical)



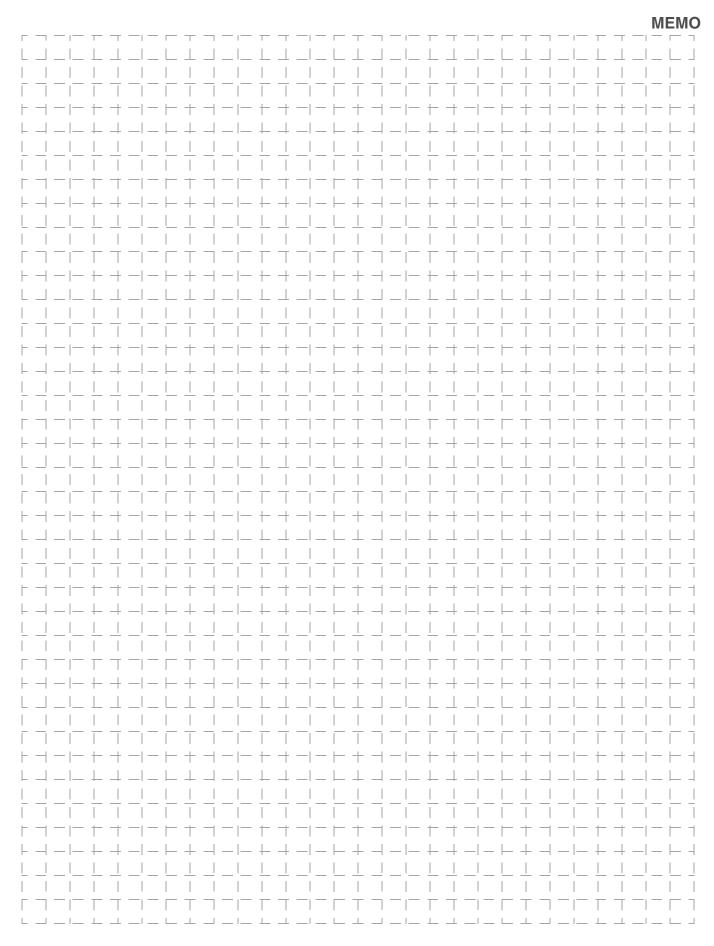
Dark Current vs. Ambient **Temperature Characteristics** (Typical)



Sensing Position Characteristics (Typical)









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Photomicrosensor (Transmissive) **EE-SX1018**