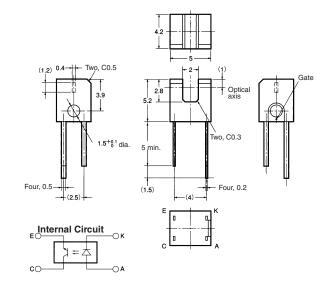
Photomicrosensor (Transmissive)

■ Dimensions

Note: All units are in millimeters unless otherwise indicated.



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

Unless otherwise specified, the tolerances are ± 0.2 mm.

■ Features

- Ultra-compact with a sensor width of 5 mm and a slot width of 2 mm.
- PCB mounting type.
- High resolution with a 0.4-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}	
	Reverse voltage	V_R	5 V
Detector	Collector–Emitter voltage	V _{CEO}	30 V
	Emitter–Collector voltage	V _{ECO}	4.5 V
	Collector current	I _C	30 mA
	Collector dissipation	P_{c}	80 mW (see note 1)
Ambient temperature	Operating	T _{opr}	–25°C to 85°C
	Storage	T _{stg}	-30°C to 100°C
Soldering temperature		T _{sol}	260°C (see note 2)

Note: 1. Refer to the temperature rating chart if the ambient temperature exceeds 25°C.

2. Complete soldering within 3 seconds.

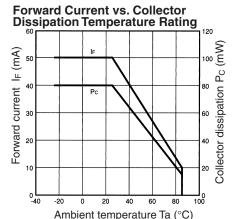
■ Ordering Information

Description	Model	
Photomicrosensor (transmissive)	EE-SX1103	

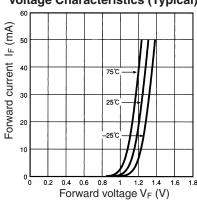
■ Electrical and Optical Characteristics (Ta = 25°C)

	Item	Symbol	Value	Condition
Emitter	Forward voltage	V _F	1.3 V typ., 1.6 V max.	I _F = 50 mA
	Reverse current	I _R	10 μA max.	V _R = 5 V
	Peak emission wavelength	λ_{P}	950 nm typ.	I _F = 50 mA
Detector	Light current	ار	0.5 mA min.	I _F = 20 mA, V _{CE} = 5 V
	Dark current	I _D	500 nA max.	V _{CE} = 10 V, 0 ℓx
	Leakage current	I _{LEAK}		
	Collector-Emitter saturated voltage	V _{CE (sat)}	0.4 V max.	I _F = 20 mA, I _L = 0.3 mA
	Peak spectral sensitivity wavelength	λ_{P}	800 nm typ.	V _{CE} = 5 V
Rising time	<u> </u>	tr	10 μs typ.	$V_{CC} = 5 \text{ V}, \text{ R}_{L} = 100 \Omega, \text{ I}_{F} = 20 \text{ mA}$
Falling time		tf	10 μs typ.	$V_{CC} = 5 \text{ V}, \text{ R}_{L} = 100 \Omega, \text{ I}_{F} = 20 \text{ mA}$

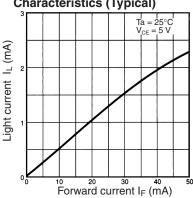
■ Engineering Data



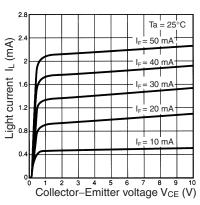
Forward Current vs. Forward Voltage Characteristics (Typical)



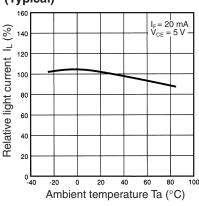
Light Current vs. Forward Current Characteristics (Typical)



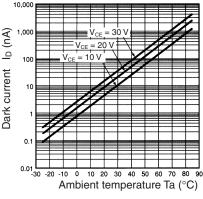
Light Current vs. Collector-Emitter **Voltage Characteristics (Typical)**



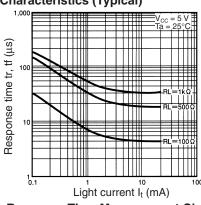
Relative Light Current vs. Ambient Temperature Characteristics (Typical)



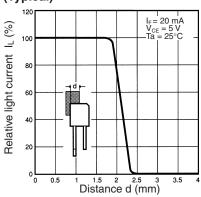
Dark Current vs. Ambient Temperature Characteristics (Typical)



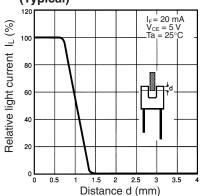
Response Time vs. Light Current Characteristics (Typical)



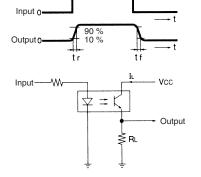
Sensing Position Characteristics (Typical)



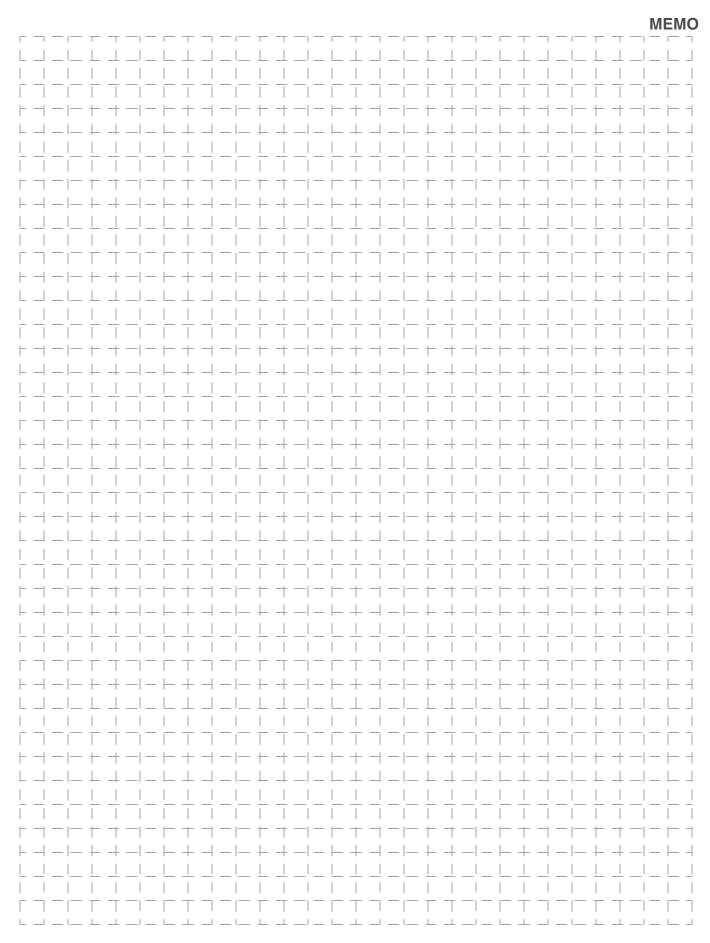
Sensing Position Characteristics (Typical)



Response Time Measurement Circuit









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