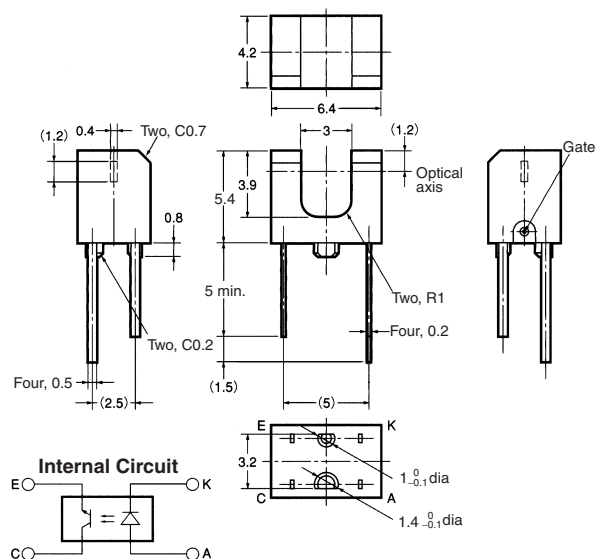


# Photomicrosensor (Transmissive) EE-SX1106

## ■ Dimensions

Note: All units are in millimeters unless otherwise indicated.



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

Unless otherwise specified, the tolerances are ±0.2 mm.

## ■ Features

- Ultra-compact with a slot width of 3 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 <sub>F</sub> 50 mA (see note 1)
	Pulse forward current	I <sub>FP</sub> ---
	Reverse voltage	V <sub>R</sub> 5 V
Detector	Collector–Emitter voltage	V <sub>CEO</sub> 30 V
	Emitter–Collector voltage	V <sub>ECO</sub> 4.5 V
	Collector current	I <sub>C</sub> 30 mA
	Collector dissipation	P <sub>C</sub> 80 mW (see note 1)
Ambient temperature	Operating	T <sub>opr</sub> -25°C to 85°C
	Storage	T <sub>stg</sub> -30°C to 85°C
Soldering temperature	T <sub>sol</sub>	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

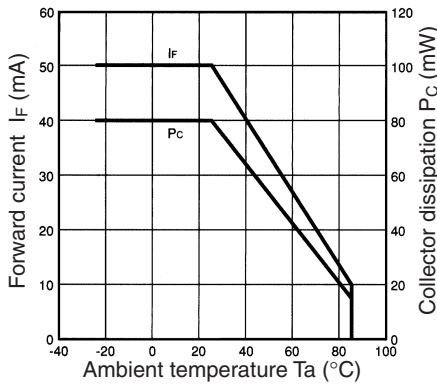
Description	Model
Photomicrosensor (transmissive)	EE-SX1106

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

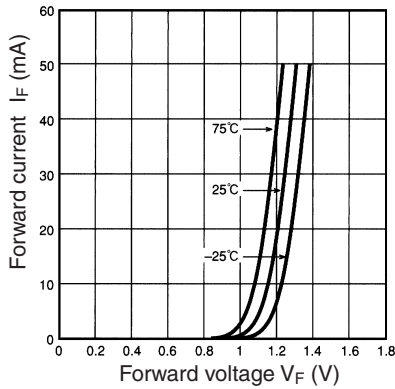
Item	Symbol	Value	Condition
Emitter	Forward voltage	V <sub>F</sub> 1.3 V typ., 1.6 V max.	I <sub>F</sub> = 50 mA
	Reverse current	I <sub>R</sub> 10 μA max.	V <sub>R</sub> = 5 V
	Peak emission wavelength	λ <sub>P</sub> 950 nm typ.	I <sub>F</sub> = 50 mA
Detector	Light current	I <sub>L</sub> 0.2 mA min.	I <sub>F</sub> = 20 mA, V <sub>CE</sub> = 5 V
	Dark current	I <sub>D</sub> 500 nA max.	V <sub>CE</sub> = 10 V, 0 lx
	Leakage current	I <sub>LEAK</sub> ---	---
	Collector–Emitter saturated voltage	V <sub>CE(sat)</sub> 0.4 V max.	I <sub>F</sub> = 20 mA, I <sub>L</sub> = 0.1 mA
	Peak spectral sensitivity wavelength	λ <sub>P</sub> 800 nm typ.	V <sub>CE</sub> = 5 V
	Rising time	t <sub>r</sub> 10 μs typ.	V <sub>CC</sub> = 5 V, R <sub>L</sub> = 100 Ω, I <sub>F</sub> = 20 mA
Falling time	t <sub>f</sub> 10 μs typ.	V <sub>CC</sub> = 5 V, R <sub>L</sub> = 100 Ω, I <sub>F</sub> = 20 mA	

■ Engineering Data

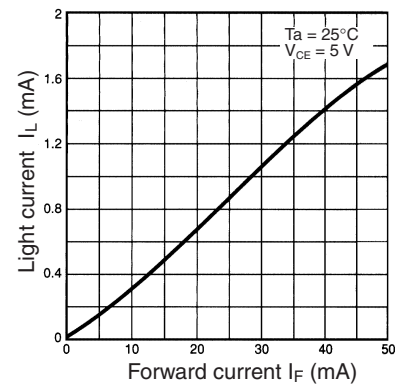
**Forward Current vs. Collector Dissipation Temperature Rating**



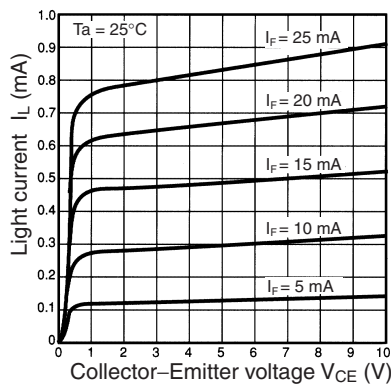
**Forward Current vs. Forward Voltage Characteristics (Typical)**



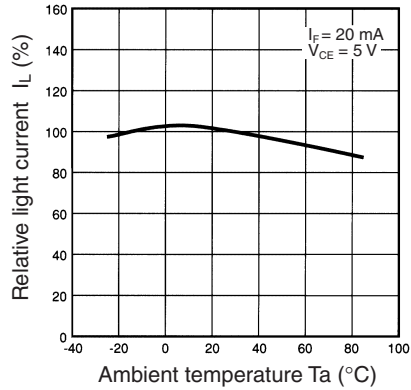
**Light Current vs. Forward Current Characteristics (Typical)**



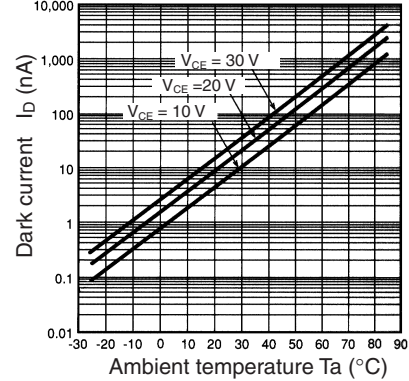
**Light Current vs. Collector-Emitter Voltage Characteristics (Typical)**



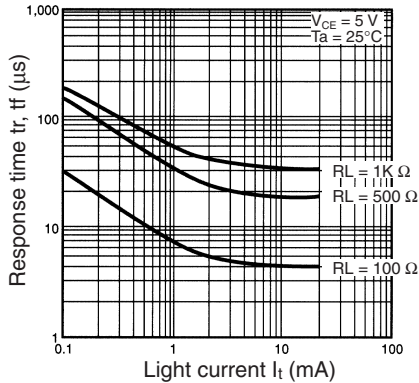
**Relative Light Current vs. Ambient Temperature Characteristics (Typical)**



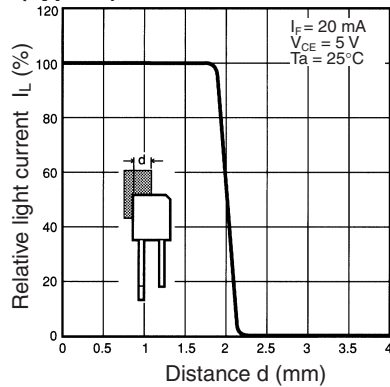
**Dark Current vs. Ambient Temperature Characteristics (Typical)**



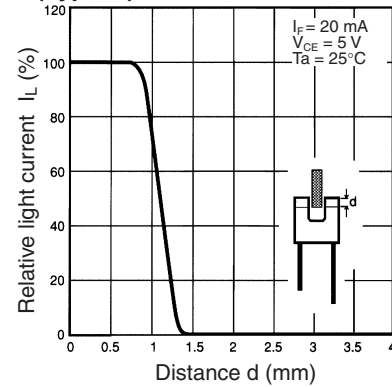
**Response Time vs. Light Current Characteristics (Typical)**



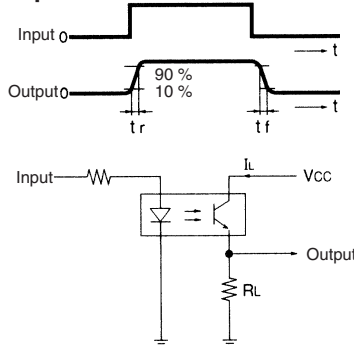
**Sensing Position Characteristics (Typical)**



**Sensing Position Characteristics (Typical)**



**Response Time Measurement Circuit**



A large grid of 20 columns and 30 rows of small squares, used for taking notes or drawing diagrams. The grid is composed of thin gray lines forming a uniform pattern across the page.

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To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

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