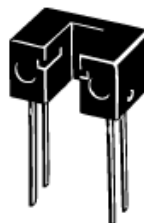


## Transmissive SX1 series

EE-SX1046 Photomicrosensor (Transmissive)

- With a horizontal sensing aperture.
- PCB mounting type.
- High resolution with a 0.5-mm-wide aperture.

RoHS



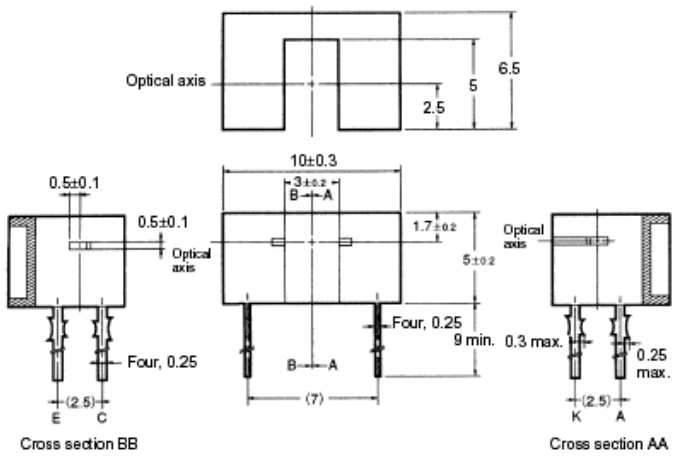
### Absolute Maximum Ratings (Ta = 25°C)

Item		Symbol	Rated value
Emitter	Forward current	IF	50 mA (see note 1)
	Pulse forward current	IFP	1 A (see note 2)
	Reverse voltage	VR	4 V
Detector	Collector-Emitter voltage	VCEO	30 V
	Emitter-Collector voltage	VECO	---
	Collector current	IC	20 mA
	Collector dissipation	Pc	100 mW (see note 1)
Ambient temperature	Operating	Topr	-25°C to 85°C
	Storage	Tstg	-30°C to 100°C
Soldering temperature		Tsol	260°C (see note 3)

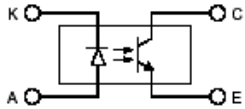
Note: 1. Refer to the temperature rating chart if the ambient temperature exceeds 25°C.  
 2. The pulse width is 10  $\mu$ s maximum with a frequency of 100 Hz.  
 3. Complete soldering within 10 seconds.

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

Item		Symbol	Value	Condition
Emitter	Forward voltage	V <sub>F</sub>	1.2 V typ., 1.5 V max.	I <sub>F</sub> = 30 mA
	Reverse current	I <sub>R</sub>	0.01 •A typ., 10 •A max.	V <sub>R</sub> = 4 V
	Peak emission wavelength	λ <sub>P</sub>	920 nm typ.	I <sub>F</sub> = 20 mA
Detector	Light current	I <sub>L</sub>	1.2 mA min., 14 mA max.	I <sub>F</sub> = 20 mA, V <sub>CE</sub> = 5 V
	Dark current	I <sub>D</sub>	2 nA typ., 200 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>	0.1 V typ., 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>	850 nm typ.	V <sub>CE</sub> = 10 V
Rising time		t <sub>r</sub>	4 •s typ.	V <sub>CC</sub> = 5 V, R <sub>L</sub> = 100 Ω, I <sub>L</sub> = 5 mA
Falling time		t <sub>f</sub>	4 •s typ.	V <sub>CC</sub> = 5 V, R <sub>L</sub> = 100 Ω, I <sub>L</sub> = 5 mA



### Internal Circuit



Terminal No.	Name
A	Anode
K	Cathode
C	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

Note: All units are in millimeters unless otherwise indicated.