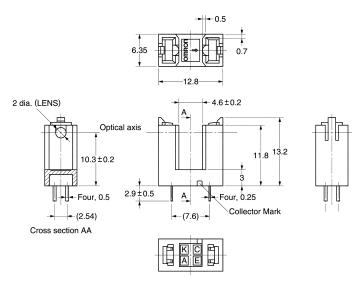
OMRON

EE-SX1061

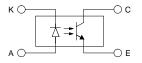
Photomicrosensor (Transmissive)

■ 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
$3 < mm \le 6$	±0.375
6 < mm ≤ 10	±0.45
10 < mm ≤ 18	±0.55
18 < mm ≤ 30	±0.65

■ Features

- General-purpose model with a 4.6-mm-wide slot.
- PCB mounting type.

■ 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	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 temperature	Operating	Topr	–40°C to 85°C
	Storage	Tstg	–40°C to 100°C
Soldering temperature		Tsol	260°C (see note 2)

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

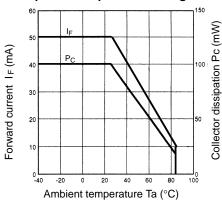
2. Complete soldering within 10 seconds.

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

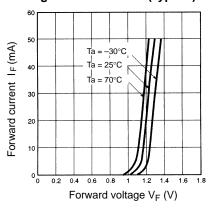
	Item	Symbol	Value	Condition
Emitter	Forward voltage	V _F	1.2 V typ., 1.5 V max.	I _F = 30 mA
	Reverse current	I _R	0.01 μA typ., 10 μA max.	V _R = 4 V
	Peak emission wavelength	λ _P	940 nm typ.	I _F = 20 mA
Detector	Light current	IL	1.3 mA min., 26 mA max.	$I_F = 20 \text{ mA}, V_{CE} = 12 \text{ V}$
	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)	0.8 V max.	I_F = 10 mA, Vcc = 12 V, R_L = 22k Ω
	Peak spectral sensitivity wavelength	λ _P	850 nm typ.	V _{CE} = 10 V
Rising tim	ne	tr	1,000 μA max.	$V_{CC} = 12 \text{ V}, R_L = 22 \text{k} \Omega, I_L = 10 \text{ mA}$
Falling tin	ne	tf	1,000 μA max.	$V_{CC} = 12 \text{ V}, R_L = 22 \text{k } \Omega, I_L = 10 \text{ mA}$

■ Engineering Data

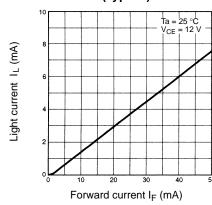
Forward Current vs. Collector Dissipation Temperature Rating



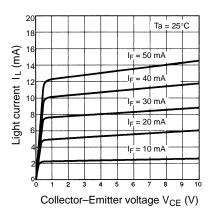
Forward Current vs. Forward Voltage Characteristics (Typical)



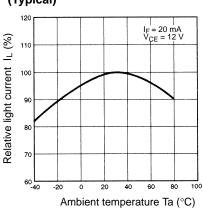
Light Current vs. Forward Current Characteristics (Typical)



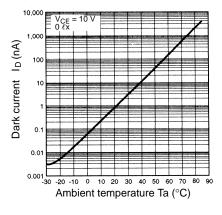
Light Current vs. Collector–Emitter Voltage Characteristics (Typical)



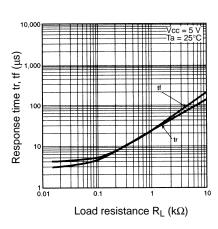
Relative Light Current vs. Ambient Temperature Characteristics (Typical)



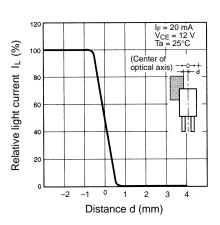
Dark Current vs. Ambient Temperature Characteristics (Typical)



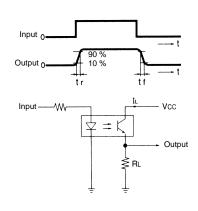
Response Time vs. Load Resistance Characteristics (Typical)



Sensing Position Characteristics (Typical)



Response Time Measurement Circuit



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