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Omron EE-SJ8-B

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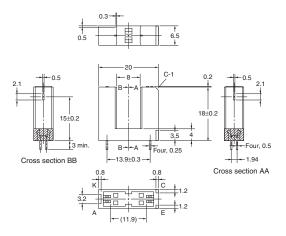


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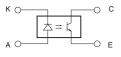
Photomicrosensor (Transmissive) **EE-SJ8-B**

■ 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

- 18-mm-tall model with a deep 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	Topr	–25°C to 85°C
temperature	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 μs maximum with a frequency of 100 Hz.
 - 3. Complete soldering within 10 seconds.

■ Ordering Information

Description	Model
Photomicrosensor (transmissive)	EE-SJ8-B

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

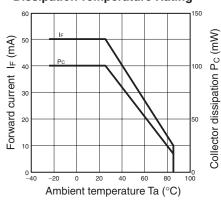
	Item	Symbol	Value	Condition
Emitter	Forward voltage	V_{F}	1.2 V typ., 1.5 V max.	I _F = 30 mA
	Reverse current	I _R	0.01 μA typ., 10 μA max.	V _R = 4 V
	Peak emission wavelength	λ_{P}	940 nm typ.	I _F = 20 mA
Detector	Light current	I _L	0.05 mA min., 5 mA max.	I _F = 20 mA, V _{CE} = 10 V
	Dark current	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)		
	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.	$V_{CC} = 5 \text{ V}, R_L = 100 \Omega, I_L = 5 \text{ mA}$



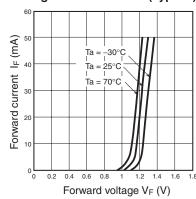
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■ Engineering Data

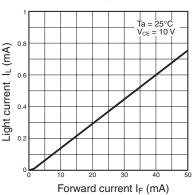
Forward Current vs. Collector Dissipation Temperature Rating



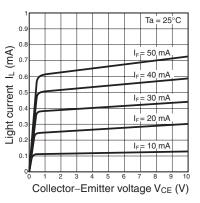
Forward Current vs. Forward Voltage Characteristics (Typical)



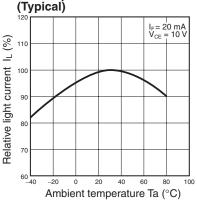
Light Current vs. Forward Current Characteristics (Typical)



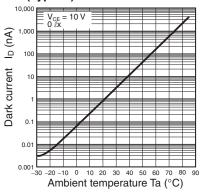
Light Current vs. Collector–Emitter Voltage Characteristics (Typical)



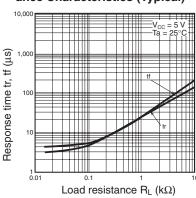
Relative Light Current vs. Ambient Temperature Characteristics



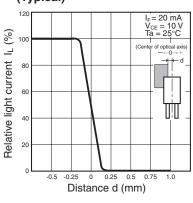
Dark Current vs. Ambient Temperature Characteristics (Typical)



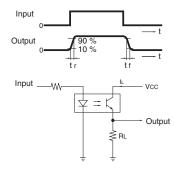
Response Time vs. Load Resistance Characteristics (Typical)



Sensing Position Characteristics (Typical)



Response Time Measurement Circuit





Distributor of Omron: Excellent Integrated System Limited Datasheet of EE-SJ8-B - SENSOR OPTO SLOT 8MM TRANS THRU

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- connection therewith.

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- - aid by Buver:
- paid by Buyer;

 4. Delivery and shipping dates are estimates only.

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 Claims. Any claim by Buyer against Seller for shortage or damage to the Products occurring before delivery to the carrier must be presented in writing to Seller within 30 days of receipt of shipment and include the original transportation bill signed by the carrier noting that the carrier received the Products from Seller in the condition claimed.

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 (ii) Energy control systems, combustion systems, airlipoad systems, aviation

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