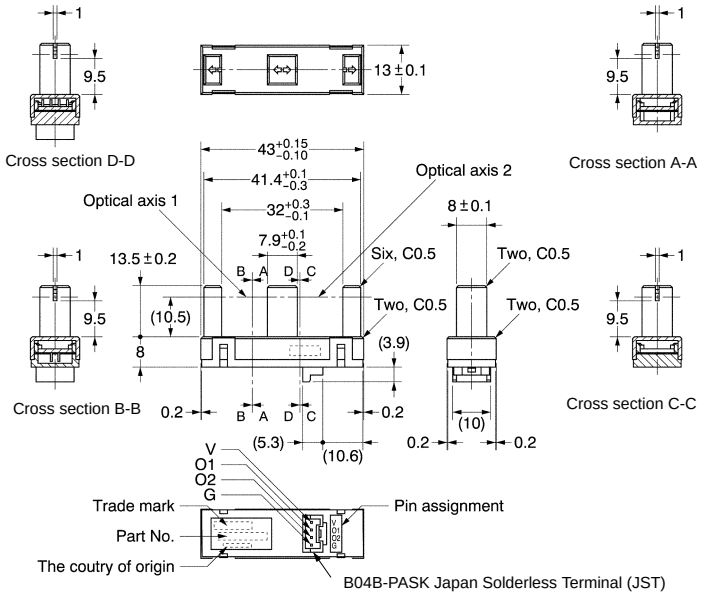
OMRON

EE-SPX415-P2

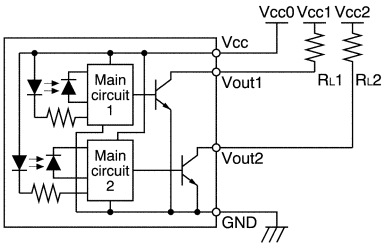
Light Modulation Photomicrosensor (Transmissive) with Built-in Amplifier

■ Dimensions

Note: All units are in millimeters unless otherwise indicated.



Internal Circuit



Terminal No.	Name
V	Power supply (Vcc)
O1	Vout1 (Optical axis 1)
O2	Vout2 (Optical axis 2)
G	Ground (GND)

Recommended Mating Connectors
JST (Japan Solderless Terminal)
PAP-04V-S

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
30 < mm ≤ 50	±0.8

■ Features

- Separate LED/Photo IC combinations with 12-mm slot.
- Uses light modulation via built-in amplifier IC.
- Applicable to the PA connector series from JST (Japan Solderless Terminal).

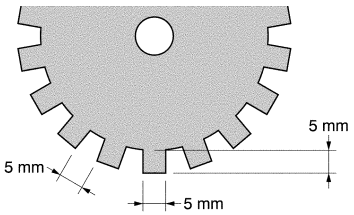
■ Absolute Maximum Ratings (Ta = 25°C)

Item	Symbol	Rated value
Supply voltage	Vcc	16 VDC
Output voltage	Vout	16 V
Output current	Iout	50 mA
Operating temperature	Topr	–10°C to 60°C
Storage temperature	Tstg	–40°C to 80°C

■ Electrical and Optical Characteristics (Ta = 25°C, Vcc = 12 V±10%)

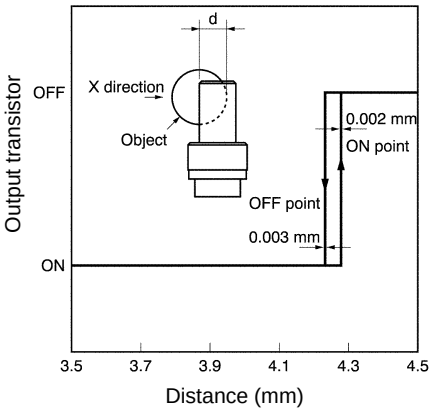
Item	Symbol	Limits			Unit	Testing conditions
		MIN.	TYP.	MAX.		
Current consumption	Icc	---	---	35	mA	With/without object
Low level output voltage	V_{OL}	0.01	0.2	0.4	V	Iout = 20 mA without object
High level output current	I_{OH}	0	---	40	mA	Vout = 12 V with object
Ambient illumination	---	0	---	3,000	ℓx	Sunlight and fluorescent light
Response frequency	f	500	---	---	Hz	Vcc0 = Vcc1 = Vcc2 = 12 VDC RL = 1.2 kΩ (See note.)

Note: The value indicated is that measured by rotating the disk as shown below.



■ Engineering Data

Repetitive Sensing Position Characteristics for OUT1 (in horizontal direction, typical)



Repetitive Sensing Position Characteristics for OUT2 (in horizontal direction, typical)