

Slotted Opto Switches — Continued

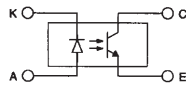
Side Fixing Flanges

3.4mm Slots, Photo-Transistor & Photo-Logic Outputs

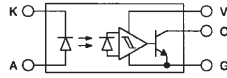


H = 11.4, W = 25, D = 6

Internal Circuit



Internal Circuit



- Standard type slotted sensor with 3.4mm slot
- Photo-Transistor (E-SX1088-W1) or Photo-Logic (EE-SX4088-W1)
- Both types pre-wired with 610mm wires

EE-SX1088-W1:  $I_c = 20\text{mA}$  @  $I_f = 50\text{mA}$ ,  $t_r$  &  $t_f = 4\mu\text{s}$  typ.  $V_{CE}(\text{sat}) = 0.4\text{V}$  max.  
 EE-SX4088-W1:  $I_{CC} = 10\text{mA}$  max.  $V_{CC} = 4.5\text{V} - 16\text{V}$ ,  $t_{PLH} = 3\mu\text{s}$  typ.  $t_{PHL} = 20\mu\text{s}$  typ.  $f = 3\text{kHz}$  min.

OPT683

Mfrs. List No.	Order Code	1+	10+	25+	50+	100+
EE-SX1088-W1	316-8657					
EE-SX4088-W1	316-8669					

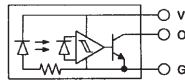
Screw Mounting

5mm Slot, Photo-Logic Outputs



H = 21, W = 44.5 (inc. connector), D = 11

Internal Circuit



- Photo-Logic output
- 5mm slot
- Easy screw mounting (no cut-out)
- Connection uses OMRON connector EE-1005 complete with 1 metre of cable (available separately)

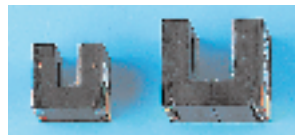
EE-SX4009-P1:  $I_{CC} = 30\text{mA}$  max.  $V_{CC} = 5\text{V}$  ( $V_{CC}$  max. = 10V),  $V_{OL} = 0.3\text{V}$  max.  $V_{OH} = (V_{CC} 0.9)\text{V}$  min.  $f = 3\text{kHz}$  min.

OPT685

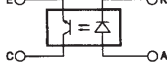
Mfrs. List No.	Order Code	1+	10+	25+	50+	100+
EE-SX4009-P1	316-8700					
EE-1005	316-8712					

Surface Mount

1mm, 2mm & 3mm Photo-Transistor Outputs



Internal Circuit



- All devices in this range provide phototransistor outputs for the optimum combination of speed of response and current handling capability
- Ultra compact devices
- High resolution sensing devices
- EE-SX1107-H = 3mm, W = 3.4, D = 3.0, slot width = 1mm
- EE-SX1108-H = 4mm, W = 5.0, D = 4.0, slot width = 2mm
- EE-SX1109-H = 5mm, W = 6.0, D = 4.0, slot width = 3mm

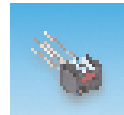
EE-SX1107:  $I_c = 20\text{mA}$  @  $I_f = 25\text{mA}$ ,  $t_r$  &  $t_f = 10\mu\text{s}$  typ.  $V_{CE}(\text{sat}) = 0.4\text{V}$  max.  
 EE-SX1108:  $I_c = 20\text{mA}$  @  $I_f = 25\text{mA}$ ,  $t_r$  &  $t_f = 10\mu\text{s}$  typ.  $V_{CE}(\text{sat}) = 0.4\text{V}$  max.  
 EE-SX1109:  $I_c = 20\text{mA}$  @  $I_f = 25\text{mA}$ ,  $t_r$  &  $t_f = 10\mu\text{s}$  typ.  $V_{CE}(\text{sat}) = 0.4\text{V}$  max.

OPT684

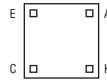
Mfrs. List No.	Order Code	1+	10+	25+	50+	100+
EE-SX1107	316-8670					
EE-SX1108	316-8682					
EE-SX1109	316-8694					

Reflective Opto Switches

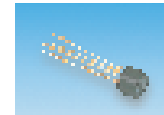
Miniature/Standard



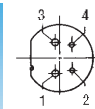
H = 6.22, W = 4.5, D = 4.65 (exc pins)



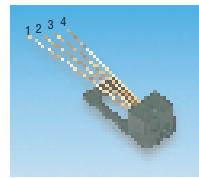
Bottom View  
Pin spacing 2.54 2.29  
Collector identification by dot



H = 3.0, Dia. = 4.0  
491-366

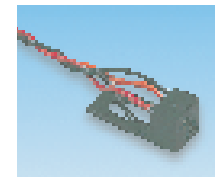


1. Cathode
2. Anode
3. Collector
4. Emitter



H = 6.35, W = 6.35, D = 15.88  
491-573, 491-585

1. Cathode
2. Anode
3. Collector
4. Emitter

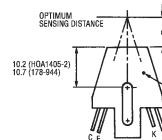


H = 6.35, W = 6.35, D = 15.88, Lead length = 305  
491-421

- Red Anode
- Black Cathode
- Orange Collector
- Black Emitter



H = 23, W = 17, D = 5  
Fixing slot = 8.5 3.1

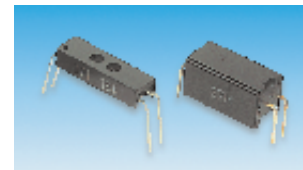


178-944, 327-244

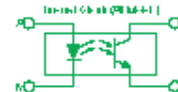


H = 24, W = 15.4, D = 2.79,  
Lead length = 610  
491-433

- Red Anode
- Black Cathode
- White Collector
- Green Emitter

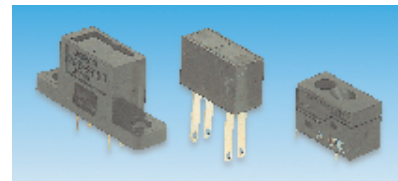


567-700 H = 8.5, W = 15 (overall), D = 4.2  
567-711 H = 8.4, W = 15.2 (overall), D = 6.2

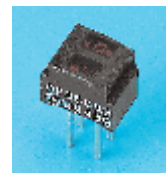


- A Anode
- K Cathode
- C Collector
- E Emitter

567-670 and 567-693 have PCB terminals.  
567-668 and 567-681 have soldering terminals



567-670 H = 15.9, W = 25.4, D = 6.35  
567-668 H = 18, W = 25.4, D = 6.35  
567-681 H = 17.7, W = 13, D = 5.7 (overall)  
567-693 H = 15.6, W = 13, D = 5.7 (overall)  
567-735 H = 11, W = 14.1 (overall), D = 6



139-830  
H = 4.5, W = 6.1 D = 4.40

- 1 Collector
  - 2 Emitter
  - 3 Anode
  - 4 Cathode
- Pin 1 identified by falt on body

OPT137

Reflective object sensors in miniature and standard packages, all with transistor outputs.

$I_c$	@ $I_f$	Output $V_{CE}(\text{max})$	Transistor $P_D(\text{max})$	Optimum sensing distance	Mfr.	Mfrs. List No.	Order Code
<b>Miniature</b>							
1.0mA (min)							
4.0mA (max)	@ 20mA	30V	100mW	2.79	Optek	OPB608B*	139-830
0.7mA	20mA	30V	100mW	1.2	HWL	HOA1397-2	327-232
0.1mA	4mA	30V	75mW	1.0	Kodenshi	SG2BC	491-366
0.16mA	30mA	30V	75mW	5.08	HWL	HOA2498-2	491-573
2mA	30mA	15V	75mW	5.08	HWL	HOA2498-3	491-585
0.16mA	30mA	30V	75mW	5.08	HWL	HOA1180-2	491-421
20mA	50mA	30V	100mW	3.5	Omron	EE-SY171	567-700
20mA	50mA	30V	100mW	4.4	Omron	EE-SY113	567-711
<b>Standard</b>							
0.2mA	40mA	30V	60mW	3.81	Optek	OPB704	178-944
0.8mA	30mA	30V	60mW	5.0	HWL	HOA1405-2	327-244
0.025mA	40mA	30V	75mW	5.08	HWL	HOA1406-1	491-433
20mA	30V	30V	100mW	5.0	Omron	EE-SB5	567-668
20mA	50mA	30V	100mW	5.0	Omron	EE-SB5-B	567-670
20mA	50mA	30V	100mW	5.0	Omron	EE-SF5	567-681
20mA	50mA	30V	100mW	5.0	Omron	EE-SF5-B	567-693
20mA	50mA	30V	100mW	4.0	Omron	EE-SY169A	567-735

\*The OPB608B has enhanced low current roll off to improve the contrast ratio and immunity to background irradiance