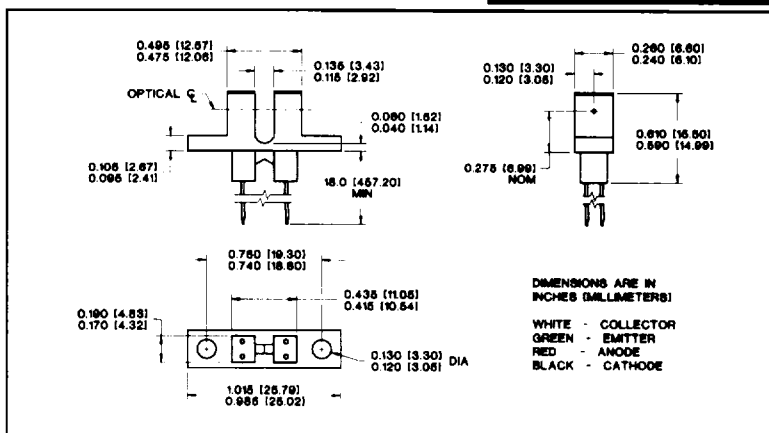
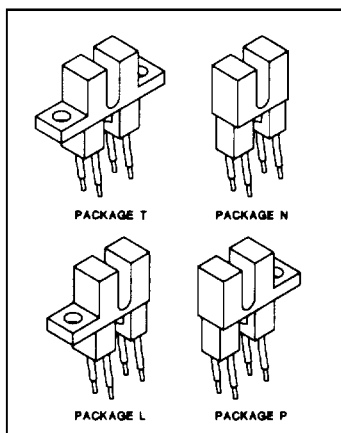


S-880/890 Series

Slotted Optical Switches

CLAROSTAT

SENSORS AND CONTROLS GROUP



Features

- aperture widths to 0.005" (0.13mm)
- five electrical selections
- wired complement to S860/870 series
- IR-transparent⁽¹⁾ or opaque housing
- four mounting options

Description

The S-880/890 series is the flexible wire lead complement to the pc board mount S-860/870 family of optical switches. The variety of options offers near-custom flexibility for the designer whose project may require optoelectronic sensors with above-average capability. Other wire lengths can be made available for unique requirements. See the S-960/970 and S-980/990 datasheets for similar devices with digital outputs or call OptoSwitch for applications assistance.

Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise stated.)

Storage and Operating Temperature -40°C to $+85^\circ\text{C}$

IR

Continuous Forward Current 50mA

Peak Forward Current (1 μs pulse width, 300pps) 3A

Reverse Voltage 3V

Power Dissipation 100mW⁽²⁾

Sensor

Collector-Emitter Voltage 30V

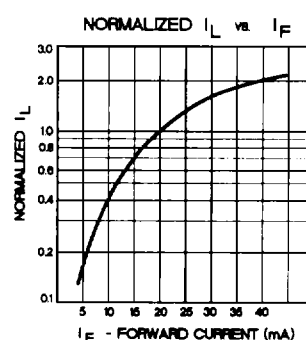
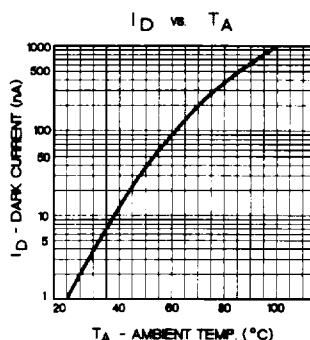
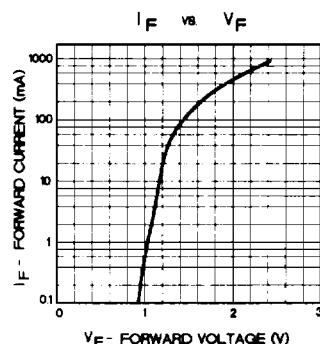
Emitter-Collector Voltage 5V

Power Dissipation 100mW⁽²⁾

Notes:

1. Housing is soluble in some common industrial solvents; recommended cleaning agents are isopropanol or methanol.
2. Derate linearly from 25°C at $-1.33 \text{ mW}/^\circ\text{C}$.

Fundamental Characteristics



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CLAROSTAT Sensors and Controls

S-880/890 Series

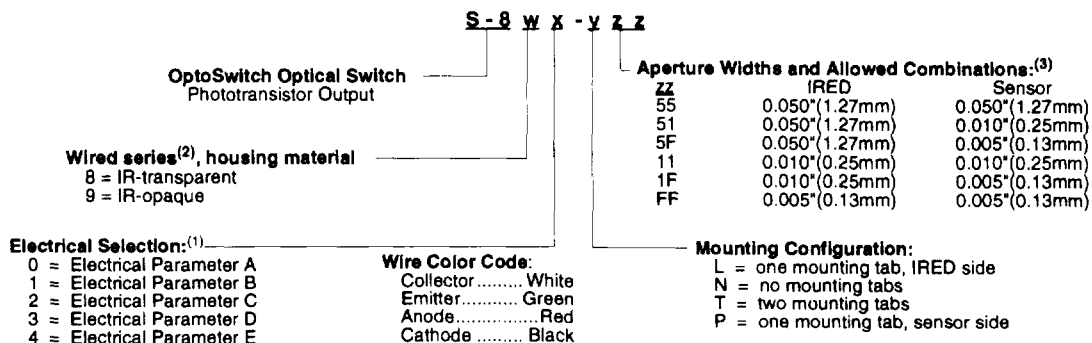
Slotted Optical Switches



Notes:

1. All electrical specifications for the S-880/890 series are identical to the complementary family, the S-860/870 series; see the electrical table for that family on page 37 of this data book. Refer to the part number guide and combinations table below to determine valid combinations of apertures and electrical specifications. For aperture combinations and/or electrical requirements not allowed in this specification, call OptoSwitch for additional information or applications assistance.
2. All wires are seven (7) strand, 26 AWG, with UL1429 insulation. Standard wire length is 18" (457mm) minimum; other wire lengths may be specified. Call OptoSwitch for more information.
3. Some combinations of apertures are not available with IR-transmissive housings and certain electrical specifications. See the combination table below for specific information on availability of devices in this family and the S-860/870 families. Specifically, apertures narrower than 0.010" (0.25mm) are not available in IR-transmissive plastics and the higher current-transfer-ratios (parameters B,C, and D) are not available with smaller apertures.
4. Base numbers apply to both S-860/870 (pages 36 and 37 of this data book) and the S-880/890 family of slotted optical switches; where a letter 'w' appears in the base number column, add the appropriate digit from the part number guide for the desired series.
5. Six combinations of apertures are allowed in these families. A bullet (•) implies that the aperture combination above is available with the base number on the same line. If an application requires a combination not shown here, please call OptoSwitch for information on its availability and allowed electrical specification.
6. The 'F' designation is available only with IR-opaque plastic to assure maximum optical performance, i.e., the second digit of the part number, designated 'w' below, must be either a '7' or a '9'.

Part Number Guide



COMBINATIONS TABLE

BASE NUMBER ⁽⁴⁾	ELECTRICAL SPECIFICATION	SUFFIX COMBINATIONS ⁽⁵⁾					
		-X55	-X51	-X5F ⁽⁶⁾	-X11	-X1F ⁽⁶⁾	-XFF ⁽⁶⁾
S-8w0 OR S-8w5	A	•	•	•	•		
S-8w1 OR S-8w6	B	•	•				
S-8w2 OR S-8w7	C	•					
S-8w3 OR S-8w8	D	•					
S-8w4 OR S-8w9	E	•	•	•	•	•	•