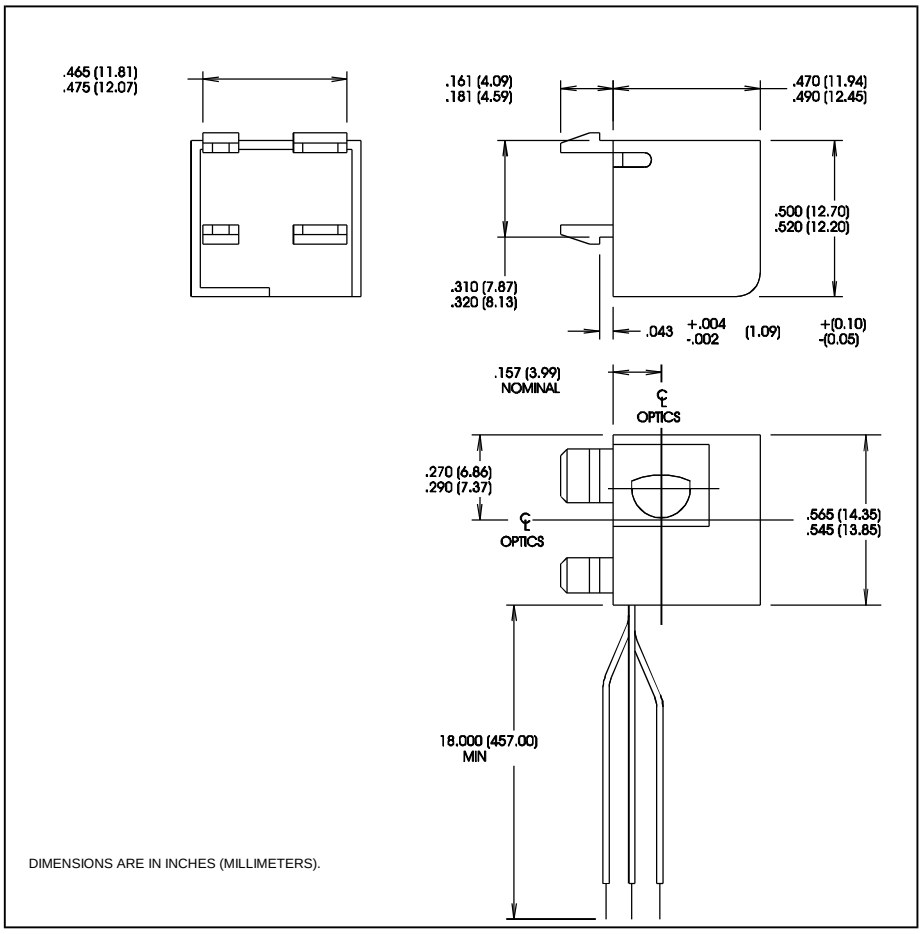
Photologic® Reflective Object Sensor
Types OPB715, OPB716, OPB717, OPB718



Features

- Focused for maximum sensitivity
- 0.5" (12.7mm) sensing distance
- Panel mount
- Choice of output configurations
- 18" minimum wire length

Description

The OPB715 series reflective assembly consists of a GaAlAs LED and a Photologic® sensor enclosed in an IR transmissive housing. The sensor is characterized to detect paper at 0.5" (12.7 mm). However, the OPB715 has a wide operating distance range and is capable of detecting reflective objects at longer distances. Even low reflectance materials can be detected at shorter distances.

The sensor's panel-mount plastic housing shields stray light and is terminated with 18" wire leads. The output can be specified as either TTL totem-pole or TLL open-collector in buffer or inverter polarity. The LED is current limited internally for design convenience.

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Supply Voltage, V_{CC} (not to exceed 2 sec.)	10 V
Storage Temperature Range	-40° C to +85° C
Operating Temperature Range	-40° C to +85° C
Power Dissipation	300 mW(1)
Output Voltage (Open-Collector only)	35 V

Notes:
(1) Derate linearly at 5.00 mW/°C above 25° C.
(2) Terminating wire is 7 strand, 26 AWG, UL 1429.
(3) Tested at d = 0.5 "(12.7 mm) from a 90% diffuse, white test surface.
Reference: Eastman Kodak Catalog #1257795.
(4) No reflective surface.

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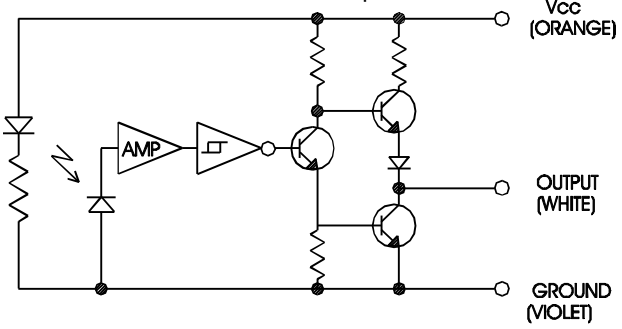
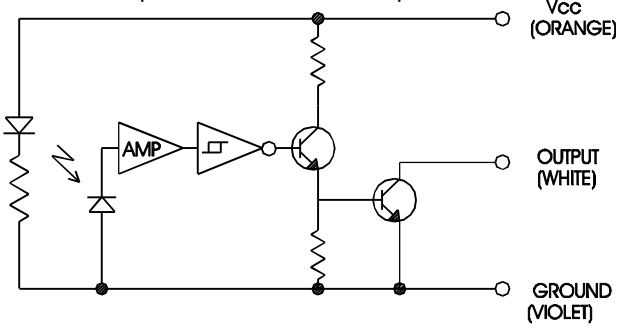
Electrical Characteristics (T_A = -40° C to +85° c unless otherwise specified)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
V_{CC}	**Operating D.C. Supply Voltage**	4.75		5.25	V	
I_{CCL}	**Low Level Supply Current:** OPB715: Buffered Totem-Pole Output OPB716: Buffered Open-Collector Output			50	mA	V_{CC} = 5.25 V, Output Open
	OPB717: Inverted Totem-Pole Output OBP718: Inverted Open-Collector Output			50	mA	V_{CC} = 5.25 V, Output Open
I_{CCH}	**High Level Supply Current:** OPB715: Buffered Totem-Pole Output OPB716: Buffered Open-Collector Output			50	mA	V_{CC} = 5.25 V, Output Open
	OPB717: Inverted Totem-Pole Output OPB718: Inverted Open-Collector Output			50	mA	V_{CC} = 5.25 V, Output Open
I_{OH}	**High Level Output Current:** OPB716: Buffered Open-Collector Output OPB718: Inverted Open-Collector Output			100 100	µA µA	V_{CC} = 5 V, V_{OH} = 5 V(3) V_{CC} = 5 V, V_{OH} = 5 V(4)
I_{OS}	**Short Circuit Output Current:** OPB715: Buffered Totem-Pole Output OPB717: Inverted Totem-Pole Output					
V_{OL}	**Low Level Output Voltage:** OPB715: Buffered Totem-Pole Output OPB716: Buffered Open-Collector Output			0.4	V	V_{CC} = 5 V, I_{OL} = 12.8 mA(4)
	OPB717: Inverted Totem-Pole Output OPB718: Inverted Open-Collector Output			0.4	V	V_{CC} = 5 V, I_{OL} = 12. 8 mA(3)

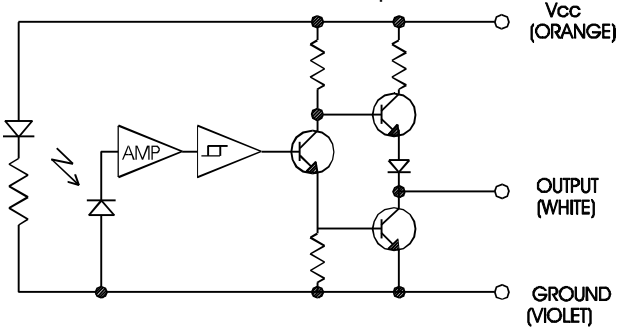
OPB715: Totem-Pole Buffer Output



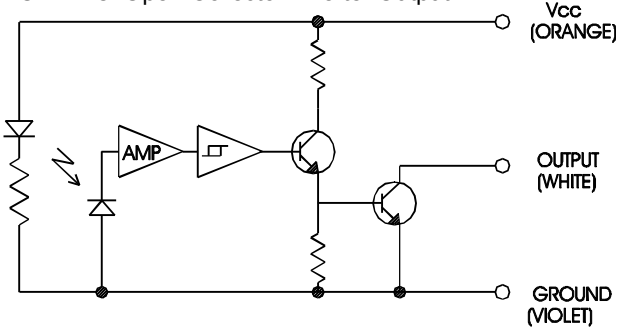
OPB716: Open-Collector Buffer Output



OPB717: Totem-Pole Inverter Output



OPB718: Open-Collector Inverter Output



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