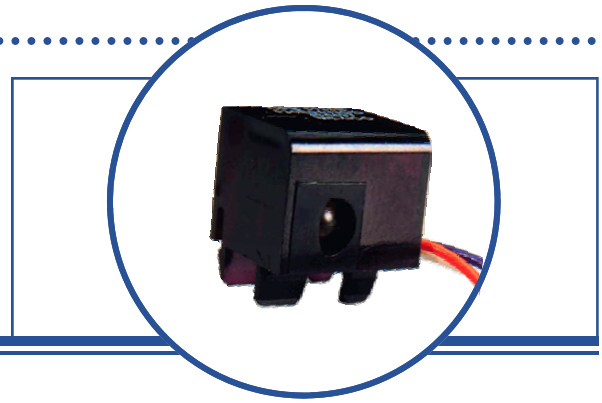
Photologic® Reflective Object Sensor
OPB715Z, OPB716Z, OPB717Z, OPB718Z

TT electronics
OPTEK Technology

Features:

- Focused for maximum sensitivity
- .5” (12.700 mm) sensing distance
- Panel mount
- Choice of output configurations
- 18” (457.200 mm) minimum wire length



Description:

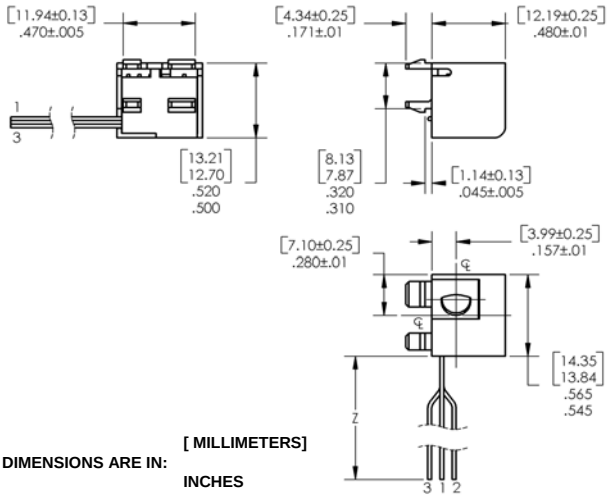
The **OPB715Z** series reflective assembly consists of a GaALAs LED and a Photologic® sensor enclosed in an IR transmissive housing. The sensor is characterized to detect paper at 0.5” (12.7 mm). The sensor has a wide operating distance range and is capable of detecting reflective objects at other distances. The reflective distance depends on the reflectance materials.

The sensor’s panel-mount plastic housing shields stray light and is terminated with 18” (457 mm) UL approved 26 AWG wire leads. The LED is current limited internally for design convenience. Its output can be specified as either TTL Totem-Pole or TLL Open-Collector. Inverted output options are available for either output configuration.

Applications:

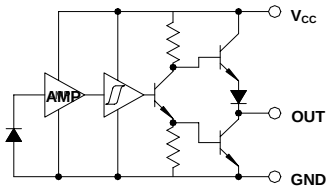
- Focused for maximum sensitivity
- 0.5” (12.700 mm) sensing distance
- Panel mount
- Choice of output configurations
- 18” (457.200 mm) minimum wire length

Part Number	LED Peak Wavelength	Sensor Photologic®	Reflection Distance Inch (mm)	Lead Length / Spacing
OPB715Z	890 nm	Totem-Pole	0.50"	18" / 26 AWG Wire
OPB716Z		Open-Collector		
OPB717Z		Inv-Totem-Pole		
OPB718Z		Inv-Open-Collector		

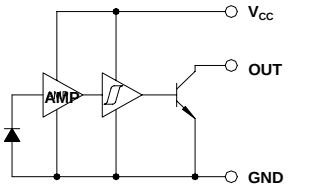


DIMENSIONS ARE IN: [MILLIMETERS]
INCHES

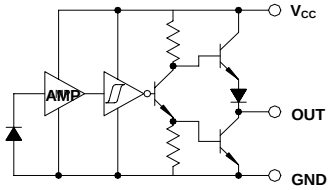
OPB715 Buffered Totem-Pole



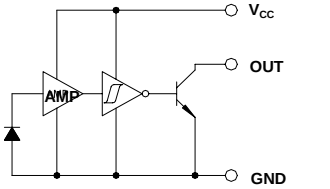
OPB716 Buffered Open Collector



OPB717 Inverted Totem-Pole



OPB718 Inverted Open-Collector



Color-Pin #	Description
Orange	V_{CC}
White	Output
Violet	Ground

Pb
RoHS

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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

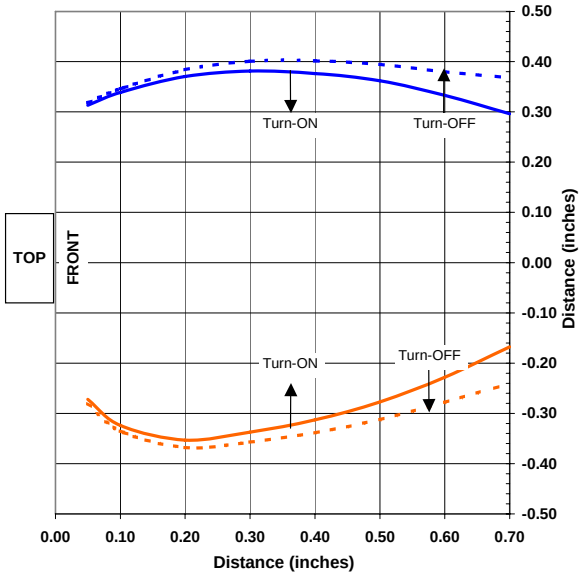
Storage & Operating Temperature Range	-40° C to +85° C
Supply Voltage, V_{CC} (not to exceed 2 seconds)	10 V
Power Dissipation(1)	300 mW
Output Voltage (Open-Collector only)	35 V

Electrical Characteristics (T_A = 25°C unless otherwise noted)

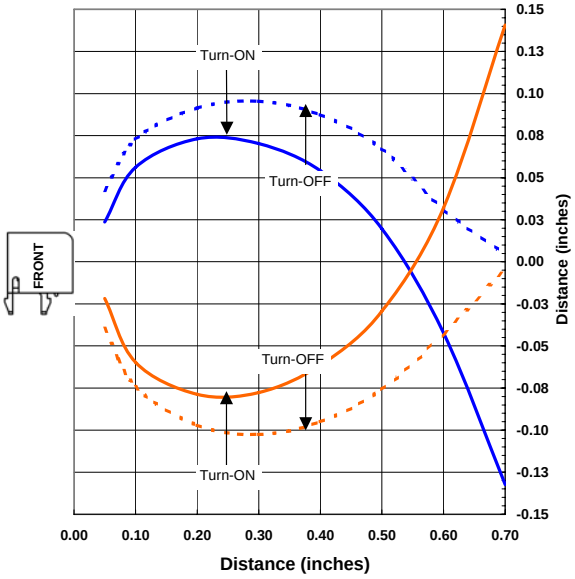
SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
V_{CC}	Operating Supply Voltage	4.75	-	5.25	V	-
I_{CCL}	Low-Level Supply Current:	-	-	30	mA	V_{CC} = 5.0 V, output open
I_{CCH}	High-Level Supply Current	-	-	50	mA	V_{CC} = 5.0 V, output open
I_{OH}	High-Level Output Current OPB716 OPB718	 - -	 - -	 100 100	 µA µA	 V_{CC} = 4.5 V, V_{CH} = 5 V(3) V_{CC} = 4.5 V, V_{CH} = 5 V(4)
I_{OS}	Short Circuit Output Current OPB715 OPB717	 - -	 - -	 100 100	 µA µA	 V_{CC} = 5.0 V, V_{CH} = 5 V
V_{OL}	Low-Level Output Voltage OPB715 OPB716	 - -	 - -	 0.4 0.4	 V V	 V_{CC} = 5.0 V, I_{OL} = 12.8 mA(4)
	OPB717 OPB718	- -	- -	0.4 0.4	V	V_{CC} = 5.0 V, I_{OL} = 12.8 mA(3)

Notes:
(1) Derate linearly at 5.0 mW / °C above 25° C.
(2) Terminating wire is 7 strand, 26 AWG, UL 1429.
(3) Tested at d = 0.55" (12.7 mm) from a 90% diffuse, white test surface. Reference: Eastman Kodak Catalog #E 152 7795.
(4) No reflective surface.

Typical - Trigger Points vs Displacement From Both Sides



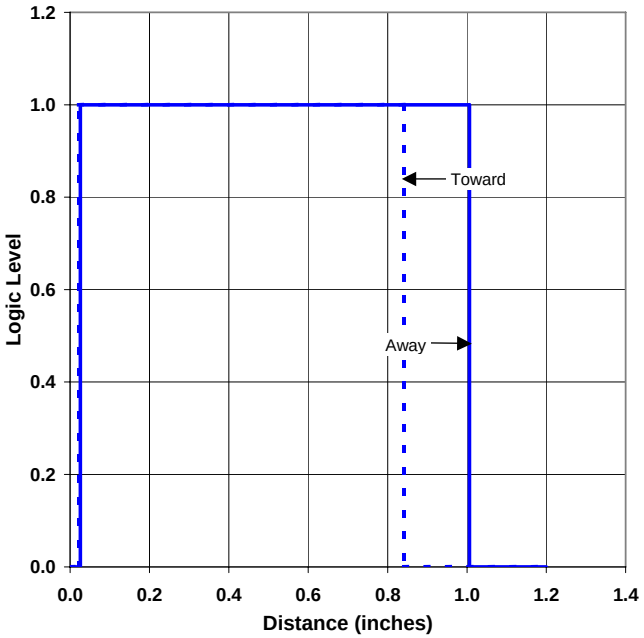
Typical - Trigger Points vs Displacement From Top & Bottom



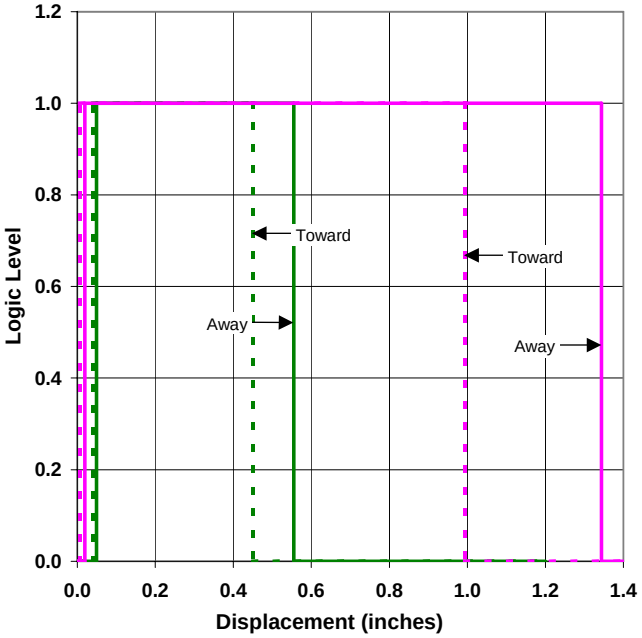
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Phone: (972) 323-2200 or (800) 341-4747 FAX: (972) 323-2396 sensors@optekinc.com www.optekinc.com

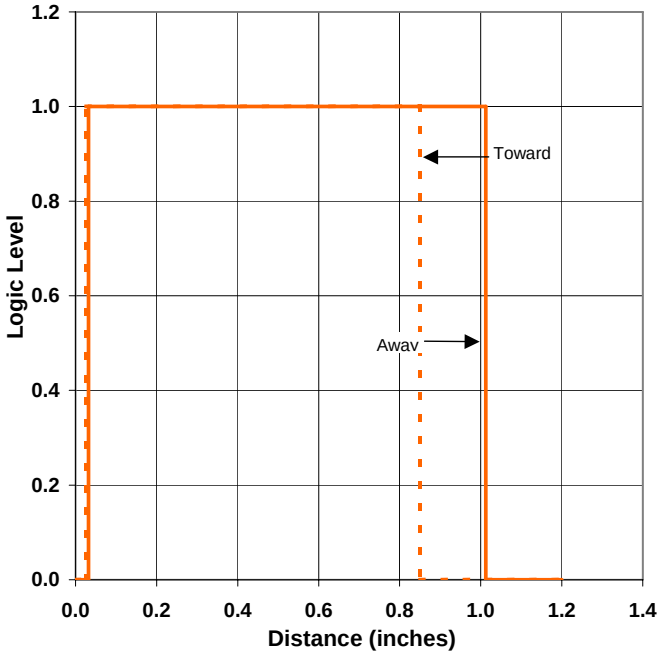
Typical - Voltage vs Displacement
Kodak 90%



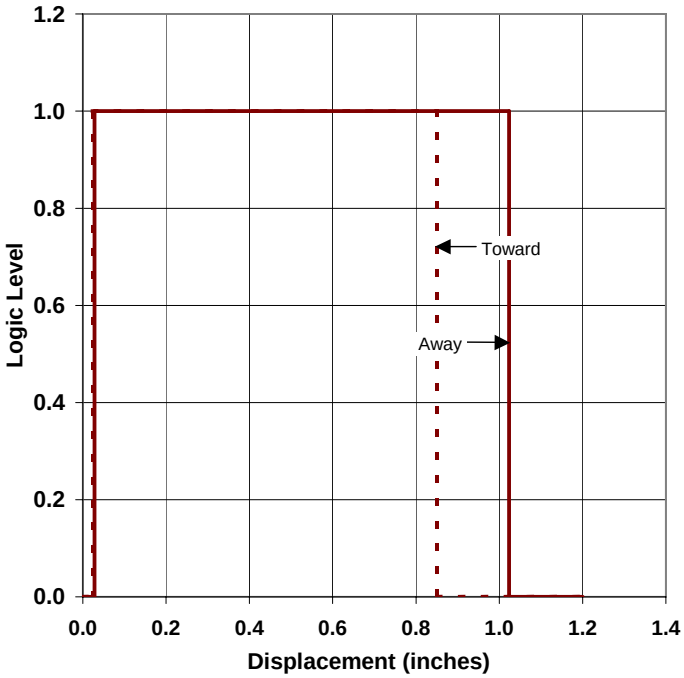
Typical - Voltage vs Displacement
Kodak 19% & Retroreflective



Typical - Voltage vs Displacement
Copy Paper



Typical - Voltage vs Displacement
Avery Label 5160



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