

Description:

Each sensor in the **OPB750** and **OPB755** series has a reflective assembly that features a Light Emitting Diode (LED) and phototransistor output designed to decrease low-level light, while not affecting the high-level light gain.

The **OPB750N** and **OPB750T** devices have are designed for PCBoard mounting with 0.40" (10 mm) length leads. **OPB755NZ**, **OPB755TZ** and **OPB755TAZ** assemblies are designed for remote mounting. The **OPB755NZ** and **OPB755TZ** have 12" (305 mm) UL rated wire, 26 AWG wire leads that terminate into an AMP # 3-640442-5 connector. The **OPB755TAZ** has 24" (610 mm) UL rated wire, 26 AWG leads. The **OPB750T**, **OPB755TZ** and **OPB755TAZ** have two mounting tabs while the **OPB750N** and **OPB755NZ** have no mounting tabs.

Photologic® output versions are available with the **OPB760** and **OPB770** series.

Custom electrical, wire and cabling and connectors are available. Contact your local representative or OPTEK for more information.

Applications:

- Non-contact reflective object sensor
- Assembly line automation
- Machine automation
- Machine safety
- End of travel sensor

Ordering Information								
Part Number	LED Peak Wavelength	Sensor	Reflection Distance Inch					
		Transistor & Rbe	0.080" (2.03 mm)		No tabs			
OPB750N			0.150" (3.81 mm)					
	• 890 nm		0.220" (5.59 mm)	0.40"				
			0.080" (2.03 mm)	0.40	2 Tabs			
OPB750T			0.150" (3.81 mm)					
			0.220" (5.59 mm)					
	B755TZ 890 nm Transis & Rb	Transistor & Rbe	0.080" (2.03 mm)		No tabs			
OPB755NZ			0.150" (3.81 mm)	12" / 26				
			0.220" (5.59 mm)	AWG Wire				
			0.080" (2.03 mm)	with				
OPB755TZ			0.150" (3.81 mm)	connector				
			0.220" (5.59 mm)		2 Tabs			
			0.080" (2.03 mm)	24" / 26	ZTADS			
OPB755TAZ			0.150" (3.81 mm)	AWG Wire NO				
			0.220" (5.59 mm)	connector				

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

Reflective Object Sensor OPB750N, OPB750T OPB755NZ, OPB755TZ, OPB755TAZ





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

Operating and Storage Temperature Range OPB750N, OPB750T OPB755NZ, OPB755TZ, OPB755TAZ	-40° C to + 85° C -40° C to + 80° C
Lead Soldering Temperature ⁽¹⁾	260° C

Input Diode

Forward DC Current	50 mA			
Peak Forward Current (1 μ pulse width, 300 pps)	1 A			
Reverse DC Voltage	2 V			
Power Dissipation	100 mW			
Dutput Phototransistor				

Collector-Emitter Voltage	24 V
Collector DC Current	30 V
Power Dissipation ⁽³⁾	100 mW

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

SYMBOL	PARAMETER	MIN	ТҮР	МАХ	UNITS	TEST CONDITIONS
Input Diode (See OP240 for additional information)						

V_{F}	Forward Voltage	-	-	1.8	V	I _F = 40 mA
I _R	Reverse Current	-	-	100	μΑ	V _R = 2 V

Output Phototransistor (see OP550 for additional information)

V ₍	(BR)CEO	Collector-Emitter Breakdown Voltage	24	-	-	V	I _C = 100 μA
	I _{CEO}	Collector Dark Current	-	-	100	nA	$V_{CE} = 10 \text{ V}, I_F = 0, H = 0$

Coupled

V _{CE(SAT)}	Saturation Voltage	-	-	.40	V	$I_{C} = 150 \ \mu\text{A}, I_{F} = 30 \ \text{mA}, d = 0.22$ "
I _{C(OFF)}	Off-State Collector Current ⁽⁵⁾	-	-	250	nA	$ I_{F} = 30 \text{ mA}, V_{CE} = 5 \text{ V} \\ d = 0.08", 0.15", 0.22" $
I _{C(ON)}	On-State Collector Current ⁽⁴⁾	500 375 250	-	- - -	μA	$ \begin{array}{l} I_{F} = 30 \text{ mA}, V_{CE} = 5 \text{V}, d = 0.08" \\ I_{F} = 30 \text{mA}, V_{CE} = 5 \text{V}, d = 0.15" \\ I_{F} = 30 \text{mA}, V_{CE} = 5 \text{V}, d = 0.22" \end{array} $

Notes:

(1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.

(2) Derate linearly 1.67 mW/° C above 25° C.

(3) Methanol or isopropanol are recommended as cleaning agents. Plastic housing is soluble in chlorinated hydrocarbons and ketones.

(4) Photocurrent is measured using an Eastman Kodak neutral white test card having 90% diffuse reflectance as a reflecting surface. Reference: Eastman Kodak, Catalog #E 152 7795.

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