

# Reflective Object Sensor

OPB750N, OPB750T

OPB755NZ, OPB755TZ, OPB755TAZ



## Features:

- High contrast ratio (1,000 :1 minimum)
- Low cost plastic housing
- PCBoard mount (OPB750N, OPB750T)
- 12" (305 mm) 26 AWG wires (OPB755NZ, OPB755TZ)
- Available with no-mounting tabs "N" package
- Available with two mounting tabs "T" package

## 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<sup>®</sup> 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
- Door sensor

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



RoHS

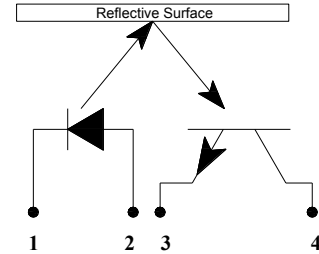
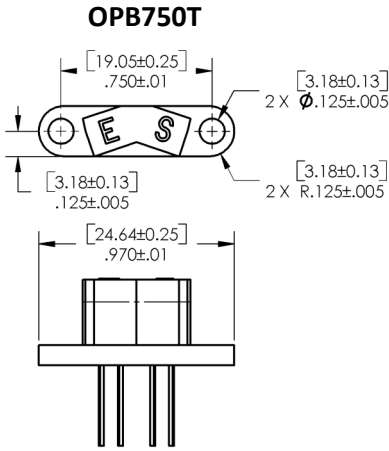
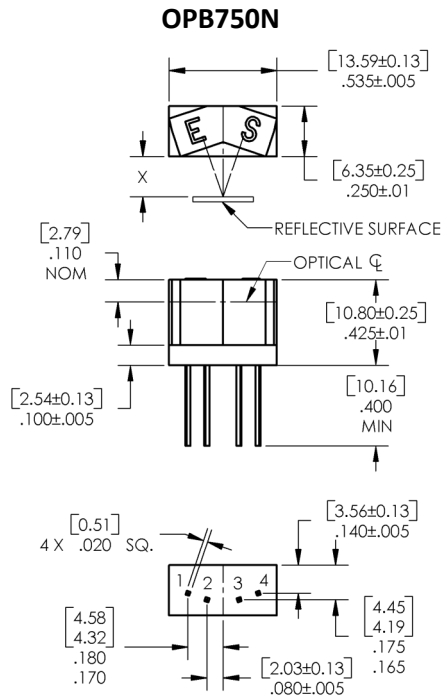
General Note  
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.  
1645 Wallace Drive, Carrollton, TX 75006  
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www.optekinc.com | www.ttelectronics.com

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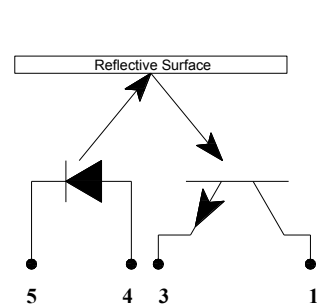
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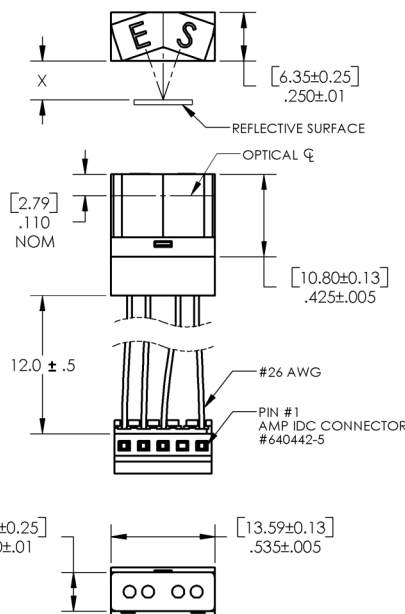


OPB750	
Pin #	Description
1	Cathode
2	Anode
4	Collector
3	Emitter

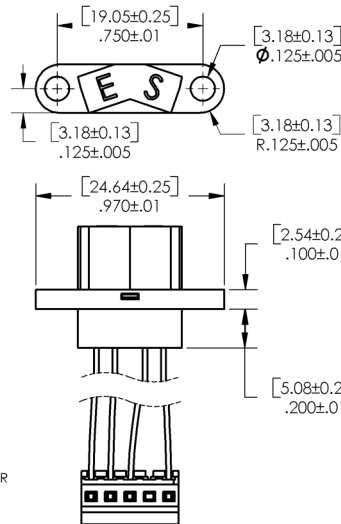
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INCHES



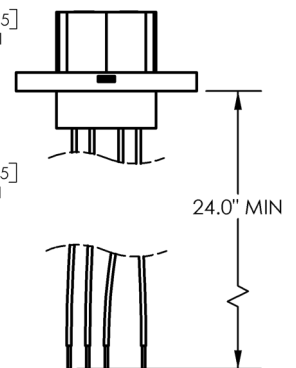
**OPB755NZ**



**OPB755TZ**



**OPB755TAZ**



OPB755	
Color	Description
Black-5	Cathode
Red-4	Anode
White-1	Collector
Green-3	Emitter

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## Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ 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 <sup>(1)</sup>	260° C

## Input Diode

Forward DC Current	50 mA
Peak Forward Current (1 $\mu$ pulse width, 300 pps)	1 A
Reverse DC Voltage	2 V
Power Dissipation	100 mW

## Output Phototransistor

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

## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
<b>Input Diode</b> (See OP240 for additional information)						
$V_F$	Forward Voltage	-	-	1.8	V	$I_F = 40\text{ mA}$
$I_R$	Reverse Current	-	-	100	$\mu\text{A}$	$V_R = 2\text{ V}$
<b>Output Phototransistor</b> (see OP550 for additional information)						
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	24	-	-	V	$I_C = 100\ \mu\text{A}$
$I_{CEO}$	Collector Dark Current	-	-	100	nA	$V_{CE} = 10\text{ V}, I_F = 0, H = 0$
<b>Coupled</b>						
$V_{CE(SAT)}$	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 <sup>(5)</sup>	-	-	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 <sup>(4)</sup>	500 375 250	- - -	- - -	$\mu\text{A}$	$I_F = 30\text{ mA}, V_{CE} = 5\text{ V}, d = 0.08''$ $I_F = 30\text{ mA}, V_{CE} = 5\text{ V}, d = 0.15''$ $I_F = 30\text{ mA}, V_{CE} = 5\text{ V}, d = 0.22''$

### 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.
- (5)  $I_{C(OFF)}$  is the photocurrent measured with current to the input diode and a 5% reflecting surface.
- (6) All parameters tested using pulse techniques.

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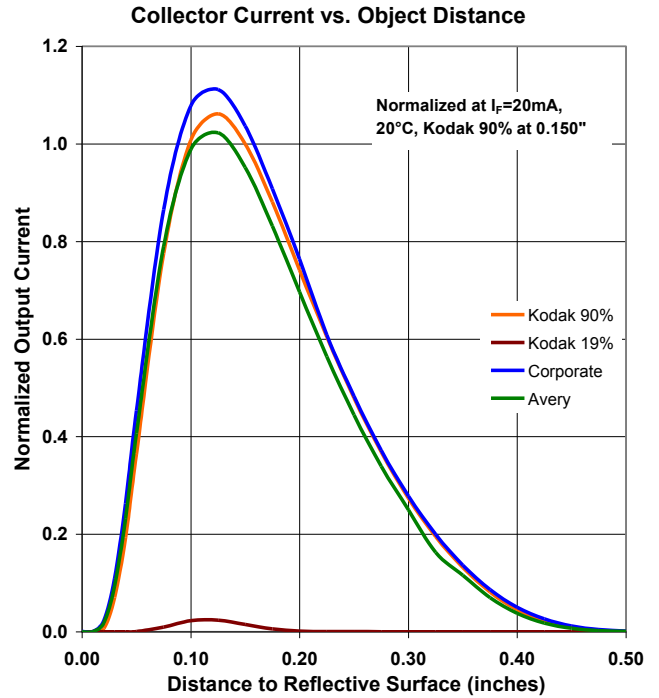
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## Performance



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Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
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- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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