

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® 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) | | |



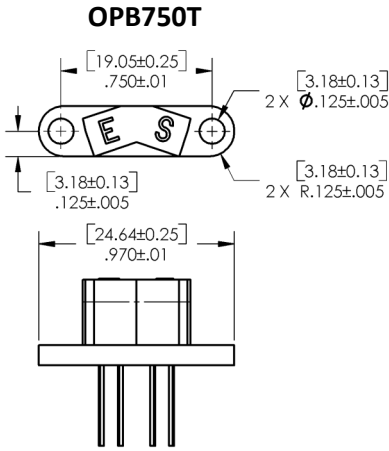
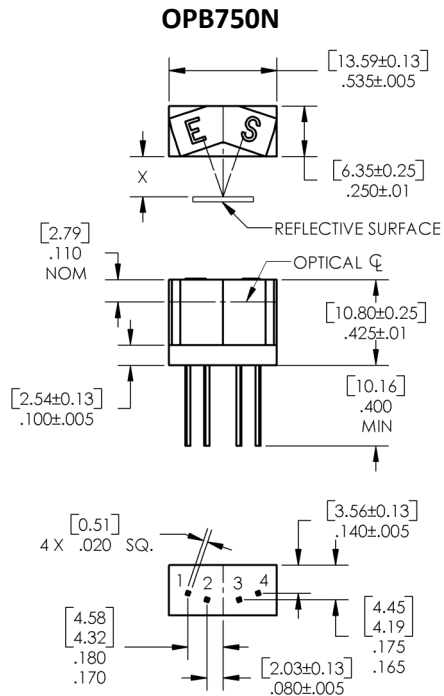
General Note
TT Electronics reserves the right to make changes in product specification without notice or liability. All information is subject to TT Electronics' own data and is considered accurate at time of going to print.

OPTEK Technology, Inc.
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200
www.optekinc.com | www.ttelectronics.com

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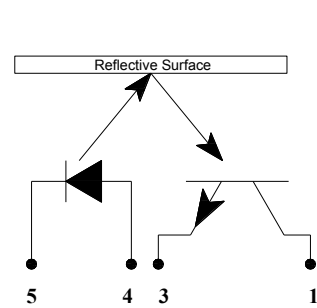
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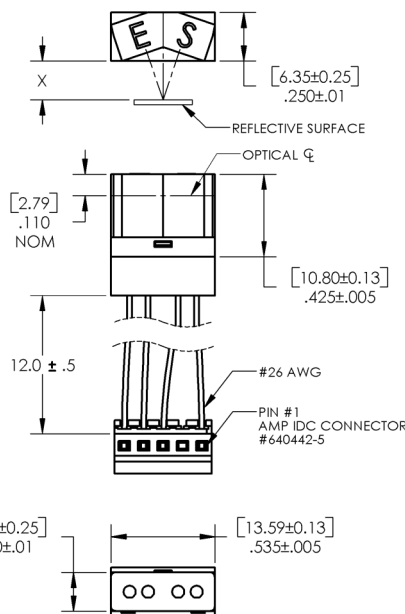


| OPB750 | |
|--------|-------------|
| Pin # | Description |
| 1 | Cathode |
| 2 | Anode |
| 4 | Collector |
| 3 | Emitter |

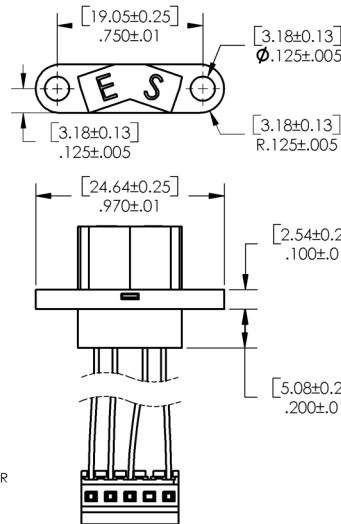
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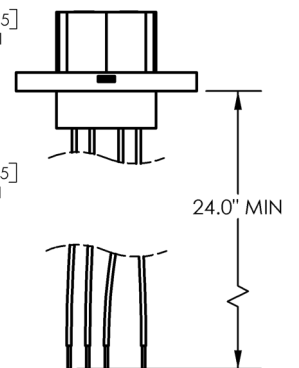
OPB755NZ



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 ⁽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 |

Output Phototransistor

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

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

| SYMBOL | PARAMETER | MIN | TYP | MAX | UNITS | TEST CONDITIONS |
|--|--|-------------------|-------------|-------------|---------------|---|
| Input Diode (See OP240 for additional information) | | | | | | |
| V_F | Forward Voltage | - | - | 1.8 | V | $I_F = 40\text{ mA}$ |
| I_R | Reverse Current | - | - | 100 | μA | $V_R = 2\text{ V}$ |
| Output Phototransistor (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 | $V_{CE} = 10\text{ V}, I_F = 0, H = 0$ |
| 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 | $I_F = 30\text{ mA}, V_{CE} = 5\text{ V}, d = 0.08''$ $I_F = 30\text{ mA}, V_{CE} = 5\text{ V}, d = 0.15''$ $I_F = 30\text{ mA}, V_{CE} = 5\text{ V}, d = 0.22''$ |

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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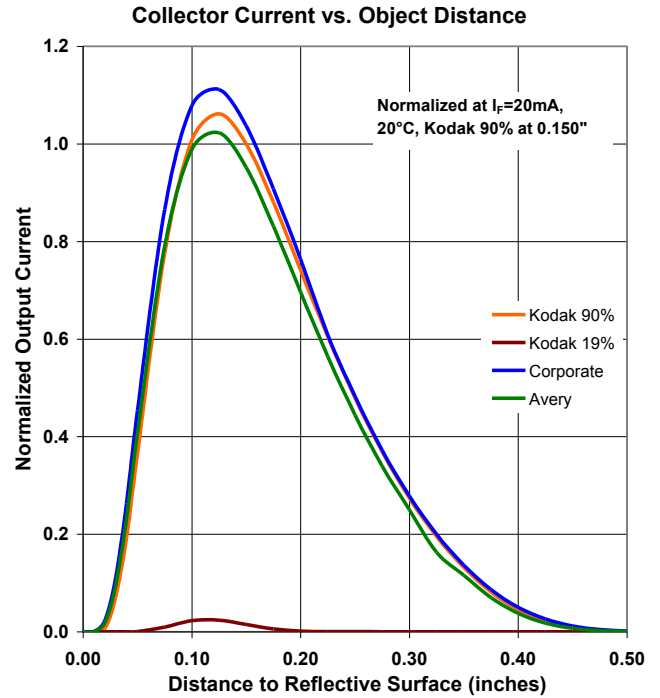
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Performance



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- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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