

Photologic® Reflective Object Sensor

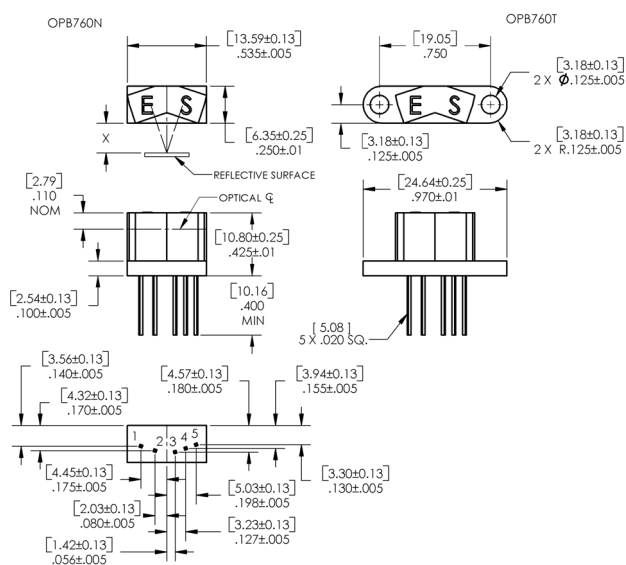


OPB760, OPB761, OPB762, OPB763 (Series N and T)

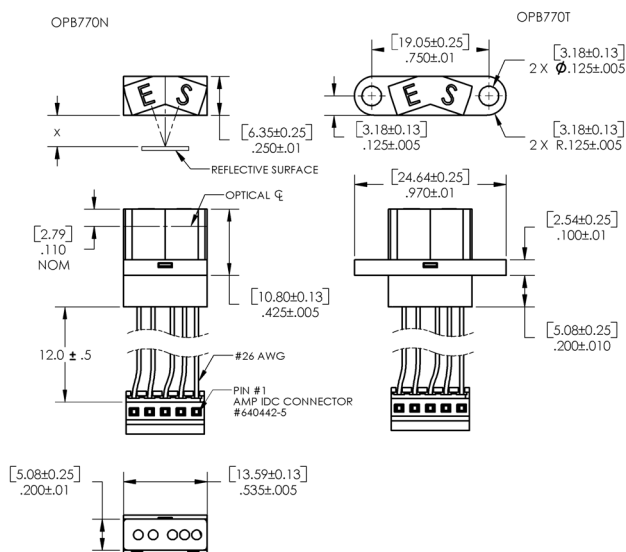
OPB770, OPB771, OPB772, OPB773 (Series NZ and TZ)

Electrical Specifications

OPB760 (N and T Series)



OPB770 (NZ and TZ Series)



X = 0.08" [2.0mm] to 0.22" [5.6mm]

DIMENSIONS ARE IN: [MILLIMETERS]
INCHES

Pin #	Description	Pin#	Description
1	Cathode	3	Ground
2	Anode	4	Output
		5	V _{CC}

Color/Pin#	Description	Color/Pin#	Description
Red-4	Anode	White-1	V _{CC}
Black-5	Cathode	Blue-2	Output
		Green-3	Ground

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.

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Electrical Specifications

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Supply Voltage, V_{CC} (not to exceed 3 seconds)	10 V
Storage Temperature Range	-40°C to $+85^{\circ}\text{C}$
Operating Temperature Range	-40°C to $+70^{\circ}\text{C}$
Lead Soldering Temperature (1/16" inch (1.6 mm) from case for 5 seconds with soldering iron) ⁽¹⁾	260° C
Input Diode Power Dissipation ⁽²⁾	100 mW
Output Photologic® Power Dissipation ⁽³⁾	200 mW
Total Device Power Dissipation ⁽⁴⁾	300 mW
Voltage at Output Lead (Open Collector Output)	35 V
Diode Forward DC Current	40 mA
Diode Reverse DC Voltage	3 V

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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
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Input Diode

V_F	Forward Voltage	-	-	1.8	V	$I_F = 40\text{ mA}$, $T_A = 25^{\circ}\text{C}$
I_R	Reverse Current	-	-	100	μA	$V_R = 2.0\text{ V}$, $T_A = 25^{\circ}\text{C}$

Output Photologic® Sensor

V_{CC}	Operating DC Supply Voltage	4.75	-	5.25	V	
I_{CCL}	Low Level Supply Current: Buffered Totem-Pole Output ⁽⁵⁾⁽⁶⁾ Buffered Open-Collector Output ⁽⁵⁾⁽⁶⁾	-	-	10	mA	$V_{CC} = 5.25\text{ V}$, $I_F = 0\text{ mA}$ (output open)
	Inverted Totem-Pole Output ⁽⁵⁾ Inverted Open-Collector Output ⁽⁵⁾	-	-	10	mA	
I_{CCH}	High Level Supply Current: Buffered Totem-Pole Output ⁽⁵⁾⁽⁶⁾ Buffered Open-Collector Output ⁽⁵⁾	-	-	10	mA	$V_{CC} = 5.25\text{ V}$, $I_F = 25\text{ mA}$ (output open)
	Inverted Totem-Pole Output ⁽⁵⁾⁽⁶⁾ Inverted Open-Collector Output ⁽⁵⁾⁽⁶⁾	-	-	10	mA	
I_{OH}	High Level Output Current: Buffered Open-Collector Output	-	-	100	μA	$V_{CC} = 4.5\text{ V}$, $I_F = 25\text{ mA}$, $V_{OH} = 30\text{ V}$, $T_A = 25^{\circ}\text{C}$
	Inverted Open-Collector Output	-	-	100	μA	

Notes:

- (1) RMA flux is recommended. Duration can be extended to 10 seconds maximum when flow soldering.
- (2) Derate linearly 2.22 mW/°C above 25° C.
- (3) Derate linearly 4.44 mW/°C above 25° C.
- (4) Derate linearly 6.66 mW/°C above 25° C. Normal application would be with light source blocked, simulated by $I_F = 0\text{ mA}$.
- (5) Tested at $d = 0.080"$ (mm) from a 90 % diffuse white test surface.
- (6) Normal application would be with light source blocked, simulated by $I_F = 0\text{ mA}$.
- (7) All parameters tested using pulse technique.

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