

# Photologic® Sensor

OPL530, OPL531, OPL535, OPL536, OPL550, OPL551, OPL560, OPL561, OPL562, OPL563



**Features:**

- Choice of four output options in low-cost side-looking package
- Choice of two sensitivity options (OPL560/561/562/563)
- High noise immunity
- Direct TTL/LSTTL CMOS interface
- Data rates to 250 kBaud for all except OPL560 series (200 kBaud)
- Low power consumption

**Description:** All components in this series include a photodiode, amplifier, voltage regulator, Schmitt trigger and NPN output transistor on a single silicon chip. **OPL560** chips also include a voltage regulator on the chip. All devices in the series have a Photologic® chip that is encapsulated in a molded plastic side-looking package with an integral lens (recessed integral lens for OPL535 and OPL536). This packaging provides enhanced optical coupling, combined with mechanical protection. The hysteresis characteristics of the Schmitt trigger on each device offers high immunity to noise on input and  $V_{CC}$ .

**OPL530, OPL531, OPL535 and OPL536** include a 10 K  $\Omega$  pull-up resistor ( $R_L$ ) from output to  $V_{CC}$ . These components exhibit very stable performance over supply voltages ranging from 4.5 V to 16 V and a wide range of irradiance levels. **OPL550 and OPL551** devices feature TTL/LSTTL compatible logic level output which can drive up to 8 TTL loads without additional circuitry and medium-speed data rates to 250 kBaud, with typical rise and fall times of 25 nanoseconds. **OPL560, OPL561, OPL562 and OPL563** devices feature TTL/LSTTL compatible logic level output which can drive up to 10 TTL loads over supply voltages ranging from 4.5 V to 16 V.

**OPL530, OPL531, OPL550, OPL551, OPL560, OPL561, OPL562 and OPL563** are mechanically and spectrally matched to OP140 and OP240 LEDs. **OPL535 and OPL536** are mechanically and spectrally matched to OP145 and OP245 series LEDs.

**Applications:** Non-contact reflective object sensor, Assembly line automation, Machine automation, Machine safety, End of travel sensor, Door sensor

Base Part Number	Package	Output Type - with Light	Input Power Range (mW/cm <sup>2</sup> ) [Min/Max]		
			-	A	B
OPL530, OPL530-OC	External Lens	Internal 10K - High	0.08/0.40	0.08/0.25	0.20/0.40
OPL531A, OPL531-OCA		Internal 10K - Low			
OPL535A, OPL535B	Recessed Lens	Internal 10K - High			
OPL536A, OPL536-OC, OPL536-OCA		Internal 10K - Low			
OPL550, OPL550A, OPL550-OC, OPL550-OCA	External Lens	Totem Pole - High	0.25/2.4	0.25/1.4	N/A
OPL551A, OPL551-OC, OPL551-OCA		Totem Pole - Low	0.25/2.5	0.25/1.5	
OPL560, OPL560A, OPL560-OCA		Totem Pole - High	0.09/0.55	0.09/0.36	N/A
OPL561, OPL561-OC, OPL561-OCA		Totem Pole - Low			
OPL562, OPL562A, OPL562-OC, OPL562-OCA		Totem Pole - High	0.025/0.23	0.025/0.14	N/A
OPL563, OPL563-OC, OPL563-OCA		Totem Pole - Low			

**OC = Open Collector Output**

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.

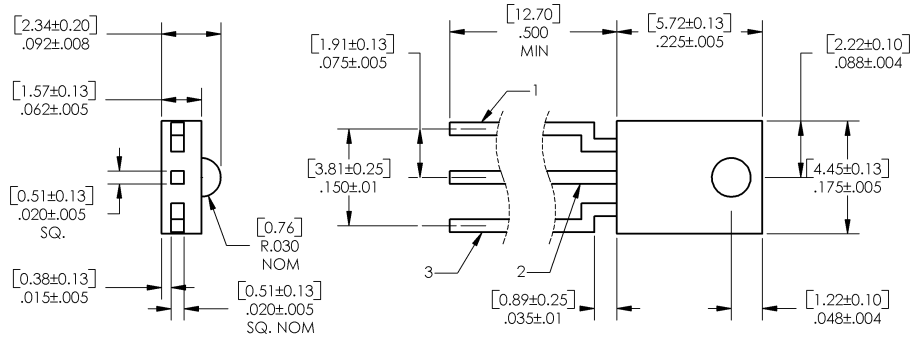
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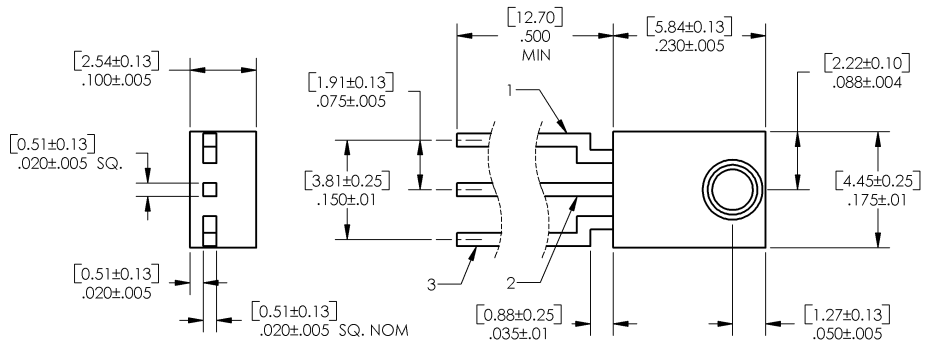
## OPL530, OPL550, OPL560 Series



DIMENSIONS ARE IN: [MILLIMETERS]  
INCHES

Pin #	Sensor
1	Ground
2	Output
3	V <sub>CC</sub>

## OPL535, OPL536 Series



DIMENSIONS ARE IN: [MILLIMETERS]  
INCHES

Pin #	Sensor
1	Ground
2	Output
3	V <sub>CC</sub>

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