

## OPB9001

### Reflective Object Sensor

#### Features:

- Wide operating supply voltage range up to 3.3 V - 30 V
- Ability to drive the output up to 30V
- Integrated drive circuitry
- Increased ESD up to 8kV
- EMI immunity capability to EMC Directive 2014/30-EU
- UL & CE approved
- Detecting distance 2.5 mm to 50 mm
- Ambient light rejection 25k+ lux
- Programmable output configuration and sensitivity level
- Integrated 4-pin connector for plug and play capability
- -40°C to +85°C operating temperature range
- Small footprint dimensions L 18 mm X W 12 mm X H 5 mm



#### Description:

The OPB9001 PCB module takes the versatile and programmable OPB9000 reflective sensor and enhances its capabilities by integrating multiple features into a robust, small form factor for ease of use. The OPB9001 accepts a wide range of supply voltages from 3.3V to 30V and comes with built-in voltage protection for maximum flexibility and protection. An integrated, industry standard 4-pin Molex connector provides ease of connection while the onboard LED indicators provide overall status during power-on, output and calibration.

Factory calibrated for a 12 mm distance and a white reflective surface the OPB9001 can be re-calibrated in a matter of milliseconds with a single command for specific application requirements. An interface cable can be purchased separately to calibrate the OPB9001 Series using the OPB9000-KIT.

The product has been assessed to meet high safety, health, and environmental protection requirements as determined by CE and EMC directives, providing for increased ESD and EMI immunity.

#### Applications:

- Non-contact position presence applications
- Industrial printing and high-speed paper detection
- Manufacturing and automation
- Automated sewing machines
- Automated banking machines
- Portable medical equipment
- Automatic dispensing
- Factory automation
- Medical diagnostic equipment
- Material handling and asset tracking

#### Additional Features:

- 6ms response time
- Wide operating supply voltage range
  - 4.5 V to 30 V (OPB9001A/AC)
  - 4.5 V to 24 V (OPB9001B)
  - 3.3 V to 5.5 V (OPB9001C)
- Reverse voltage protection
- Single-command calibration with on-chip EPROM
- Temperature-compensated LED drive
- Eliminate the need for external drive circuitry

#### 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.

TT Electronics | OPTEK Technology, Inc.  
1645 Wallace Drive, Carrollton, TX 75006 | Ph: +1 972 323 2200  
sensors@ttelelectronics.com | www.ttelelectronics.com