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Reflective sensor combines small footprint with lensed optics for enhanced sensing range in space-constrained applications...

OPTEK'S MINIATURE REFLECTIVE OBJECT SENSOR EMPLOYED IN INFUSION AND TRANSFUSION PUMPS, MEDICINE DISPENSING EQUIPMENT

CARROLLTON, TX (January 19, 2010) — Providing medical electronics design engineers with a reflective device capable of an enhanced sensing range in space-constrained applications, TT electronics OPTEK Technology's OPB733TR reflective object sensor is being deployed in a wide range of medical equipment. The reflective sensor measures just 0.300" x 0.160" with a PC board-mounted profile of just 0.114" and incorporates a lensed IR LED and phototransistor elements to collimate the light beam for enhanced resolution at a detection range from 0.4" (10mm) to 1.0" (25.4mm).

“With the enhanced sensing range and miniature size, the reflective object sensor is being used in tube-in-place and tube proximity hospital infusion pumps; with encoders for volumetric measurement in transfusion pumps; and as carousel/bin sensors for medicine dispensing equipment,” said Roland Chapa, vice president of optoelectronic integrated solutions for OPTEK Technology.

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The OPB733TR sensor consists of an IR LED with typical peak emission wavelength of 890nm, mounted alongside a NPN silicon phototransistor, which responds to light reflected by the object being sensed. The phototransistor output on-state collector current is 0.1mA (100µm) at

1/2" [12.7mm] distance from the target and a 20mA forward current and V_{CE} of 5V. Rise and fall time for the phototransistor signal is typically 15 μ S. The surface mount package is reflow solder compatible to 260°C. The sensors are available in 16mm tape on 7" diameter reels, 500 pieces per reel.

Typical Lead time, if stock is not available, is from 6 to 8 weeks. Contact NAC for pricing.

OPTEK is a leading manufacturing and solutions provider for sensing and illumination covering the infrared, visible and ultraviolet spectrum; with standard as well as application specific products for a variety of markets, including, but not limited to office machines, industrial equipment, encoders, automotive electronics, military and high-reliability applications, medical diagnostic equipment and solid-state lighting. Headquartered in Carrollton, TX, the company is ISO/TS16949:2002 and BS EN ISO 9001:2000 certified, as well as ITAR registered. OPTEK Technology was acquired by TT electronics in December 2003.

TT electronics plc is a global electronics company manufacturing a broad range of advanced electronic components, assemblies and sensor modules for the automotive, industrial, telecommunication, computer and aerospace markets.