

Optrand Extends Maximum Temperature Rating of Its Pressure Sensors to 450°C

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PLYMOUTH, MICHIGAN ---- Optrand pressure sensors are now rated for operation at temperatures up to 450°C (840°F) without cooling.

Benefitting from a metal coated optical fiber and ultra-high temperature glass seal, the sensor head (process connection) of Optrand's pressure sensor can be exposed for thousands of hours to temperatures as high as 450°C without cooling. Such capability is available even for sub-miniature devices 1.8mm in diameter. Furthermore, the 450°C-rated sensors can measure very small or very large pressures, ranging from 0-1 bar up to 0-3000 bar. Unlike alternative high temperature piezoelectric or piezo-resistive pressure sensors which can be exposed to maximum temperatures only at their front surfaces, the entire sensor head and even a part of the cable of the Optrand sensor can be exposed to 450°C.

These sensors can continuously measure dynamic pressure or both static and dynamic pressure components intermittently. The ultra-high temperature capability is not associated with an increased signal noise observed in the alternative pressure sensors. Finally, Optrand's 450°C-rated sensors cost a fraction of the competing piezoelectric dynamic or piezoresistive static-dynamic transducers.

“The new enhanced capability to measure pressure without cooling at temperatures up to 450°C for thousands of hours enables a wide range of applications previously not available to our sensors” says Dr. Marek T. Wlodarczyk, Optrand's President & CEO. “A few examples include pressure measurement of plastic melts requiring sub-miniature sensors, monitoring and control of stationary and aviation turbines, measurement of engine exhaust pressure, and tuning of Formula One and other racing engines”.

About Optrand

Optrand, Inc. is a Plymouth, Michigan based developer, manufacturer, and licensor of high temperature fiber optic pressure sensors for engine and industrial applications.