MICRON OPTICS

Sensor Information Sheet

os4200 | Temperature Probe

Part # os42aa- wwww-1xx-y-zz

Serial #

Nominal Wavelength, λ_0 (nm) @ 00.0°C 0000.000

Certified by: _____

Variable	Description	Value	Units
λ	Wavelength	Interrogated	nm
C_4	Calibration Coeff. 4		nm
C_3	Calibration Coeff. 3		-
C_2	Calibration Coeff. 2		-
C_1	Calibration Coeff. 1		-
C_0	Calibration Coeff. 0		-
S_T	Temp. Sensitivity	~10 (@22°C)	pm/°C

Calibration Method (Standard or Premium) Premium

Calibrated Temperature Range (T, °C) -70 to 120°C

Temperature (T, °C):

$$T = C_4\lambda^4 + C_3\lambda^3 + C_2\lambda^2 + C_1\lambda + C_0$$

(Note: Two sets of coefficients are required to cover the entire operating range.)

Temperature Calibration

The os4200 series temperature sensors provide absolute temperature measurements over the calibrated range. The extended range calibration method provides optimal accuracy performance over the entire range of -70°C to 275°C. To achieve this accuracy of <0.3°C, two sets of calibration coefficients are provided: The first set covers the range of -70 to 120°C and the second set covers the range of 20 to 275°C. Somewhere in the range of 20 to 120°C (wherever convenient), the coefficients should be switched from one range to the other. When using ENLIGHT, it will prompt you for the temperature crossover point to use. Therefore two Sensor Information Sheets are provided for each sensor calibrated over the extended range.

For additional information about temperature sensors and calibration methods, see*:*

http://www.micronoptics.com/support_downloads/Sensors/

Micron Optics Quality and Performance

TUNED

Products displaying the "Micron Optics Tuned" logo include Micron Optics tunable technologies thus ensuring high quality and performance. Certified sensors have been tested and qualified for use with Micron Optics Sensing Instruments.

Qualification Statement

This sensor has been manufactured using procedures and materials documented under Micron Optics, Inc's ISO 9001:2008 quality management system.

Patent Certification


MICRON OPTICS, INC.
INTERNATIONAL CERTIFICATION FOR FIBER OPTIC SENSING

Micron Optics sensors and sensor interrogation instruments are covered under a US and International Patent Licensing Agreement between Micron Optics, Inc. and United Technologies Corporation. This license transfers to the users of Micron Optics sensor products and ensures that Micron Optics products are authorized for use in sensing applications. Certificates are available upon request.

Installation Information

The os4200 temperature probes may be used in a variety of applications. While a sealed sensor, the probe tip is not designed to be submerged. The probe should not be exposed to temperatures greater than 275°C. The other end of the probe whether terminated with a connector or a fusion splice should not exceed 80°C. The cable should be secured to prevent any sharp bends or pulling on the sensor. Sensors may be mounted as follows:

- os4210 – May be mounted by clamping or bonding. Care should be taken to not bend or distort the probe housing.
- os4230 – In addition to clamping or bonding, a 3/16 inch compression fitting may be used to mount the sensor making a liquid tight seal, especially for tank applications.
- os4280 – In addition to clamping or bonding, a 1/4 inch compression fitting may be used to mount the sensor making a liquid tight seal, especially for tank applications.

For additional information about the os4200 series temperature probe, see*:*
http://www.micronoptics.com/support_downloads/Sensors/

This Sensor Information Sheet is verification of conformance.