

os5500 | Optical Displacement Gage

Part # os5500-450-1521/1523-FC
 Serial # **Sample**
 Nominal WL, λ_1 (nm) @ 22°C - Retracted 1521.9
 Nominal WL, λ_2 (nm) @ 22°C - Retracted 1523.0
 Certified by: _____

Variable	Description	Value	Units
λ_1	Wavelength - FBG1	Interrogated	nm
λ_2	Wavelength - FBG2	Interrogated	nm
c3	Calibration Coef. 3	0.00716	-
c2	Calibration Coef. 2	-0.1985	-
c1	Calibration Coef. 1	51.690	-
c0	Calibration Coef. 0	-68.68	-
	Gage Temp. Sensitivity	.006%/°C FS	pm/°C

Operating Temperature Range (T, °C) -40 to 80°C

Displacement (millimeters) where $\Delta\lambda = (\lambda_2 - \lambda_1)$

$$D = c_3 * \Delta\lambda^3 + c_2 * \Delta\lambda^2 + c_1 * \Delta\lambda + c_0$$

Spectrum Width Requirements

The os5500 series displacement gage has been calibrated over the entire range at room temperature. The nominal wavelengths indicated above are with the gage fully retracted.

The spectrum width required for each gage can be determined by subtracting 6nm from the wavelength of FBG1 and adding 6nm to FBG2.

If operating over a limited temperature range or displacement range, one can reduce the spectrum width required. For a reduced temperature and displacement range refer to the details provided in the installation instructions.

Note: c_0 may be adjusted to zero position

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

Micron Optics Quality and Performance



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 qualification process.

Patent Certification



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 os5500 can be mounted using 8mm or 5/16 inch screws to anchor the gage in place. The wire rope can be attached to fit the installation needs however it should be aligned the best possible to minimize wear on the wire rope. For harsh environment installations, the gage should be installed with the wire rope exiting from the bottom of the gage.

The os5500 displacement gage is IP65 rated however over a long period of time the seal around the wire rope can experience wear and consideration should be given to prevent water or other liquids from being splashed on the cable entrance guide.

- Displacement ranges and overtravel
- 450mm Range: ~15mm overtravel
 - 300mm Range: ~165mm overtravel
 - 150mm Range: ~315mm overtravel

This Sensor Information Sheet is verification of conformance.