

Mountable strain sensor MS-01

Description

The mountable strain sensor MS-01 is a high strength coated FBG that can be glued directly on a structure for strain sensing without coating removal. The sensor is foreseen of a protective coating and connector for signal transmission

Features

The mountable strain sensor MS-01 can record strain effects with a resolution of

1 $\mu\epsilon$, accuracy of 10 $\mu\epsilon$ and a range up to 4%.

The sensor is also sensitive to temperature changes 1°C corresponds to 8 $\mu\epsilon$. In order to compensate for these influences a second FBG that will not be fixed on the structure can be used to compensate for these effects.

Features

Concrete Health monitoring, Strain monitoring in composite structures, strain monitoring on reinforcement steel bars, vibration monitoring,...

Standard specifications

Parameter	Unit	Value
Strain resolution	$\mu\epsilon$	1
Strain accuracy	$\mu\epsilon$	10
Temperature cross sensitivity	$\mu\epsilon/^\circ\text{C}$	8
Temperature range	$^\circ\text{C}$	-20 to 180
Core Diameter	μm	4
Bare fibre diameter	μm	125 +/- 1
Coated fibre diameter	μm	235
FBG-Central wavelength ¹	nm	1530 to 1560 in steps of 5nm
Attenuation (at 1550nm)	dB/km	12
Tensile Strength (at break)	N	>50
Coating Material		Ormocer
Optional pigtail		
Fibre optic Cable diameter	mm	$\phi 0,9$; $\phi 2$; $\phi 3$
Fibre Optic Cable Length	m	1-20
Connector	-	FC/PC, FC/APC

¹ Other wavelengths available on request

Technical drawing (in mm)

