



GENERAL DESCRIPTION

The DiTeSt SMARTape strain sensors are designed for distributed deformation (average strain) monitoring over long distances.

TECHNICAL DESCRIPTION

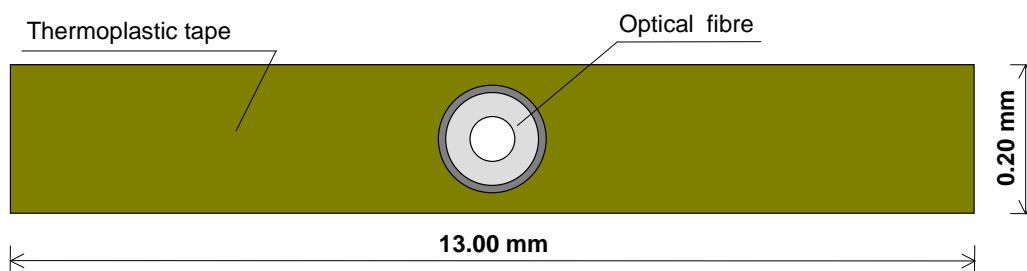
The DiTeSt SMARTape sensor consists of a single mode optical fibre embedded in a fibre-reinforced thermoplastic composite tape. The tape itself provides high mechanical, chemical and temperature resistance. The size of the tape makes the sensor easy to transport and install. The SMARTape sensor is designed for use in harsh environments often found in civil and Oil&Gas engineering applications. It is usually glued to the structures, but can also be clamped or embedded.

SMARTape sensors are fully compatible with DiTeSt system. They are delivered on spools and with all the necessary accessories such as the gland nuts (IP65), pigtails and connectors (E-2000, FC-PC or other).



FEATURES

- Distributed strain sensing
- Wide strain range
- Mechanically reinforced
- Extreme temperature environment
- Chemically resistant
- Easy and rapid installation
- Light weight & small dimensions



TECHNICAL CHARACTERISTIC AND PERFORMANCES

Strain monitoring fibers	1
Maximal length	~ 400m
Strain range	Max. -1% compression to +1% elongation (depending on installation manner)
Calibration	only during production
Temperature range	-55°C to +300°C operating in long term -5°C to +50°C installation and storage -40°C to +80°C pigtail and connectors
Temperature compensation	not compensated
Stability	> 20 years
Dimensions	~ 0.2 x ~ 13 mm
Sensor weight	~ 4.2 kg / km
Minimal bending radius	~ 100 mm operating in long-term ~ 50 mm installation and storage
Max tensile strain	1.5%
Max hydrostatic pressure	3x10 ⁷ Pa (300 bars)
Chemical resistance	good
Optical connectors	E2000 APC with protected pigtails (other on request)