

# 11.1020 DITEST SMARTAPE STRAIN SENSOR



## GENERAL DESCRIPTION

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

## TECHNICAL DESCRIPTION

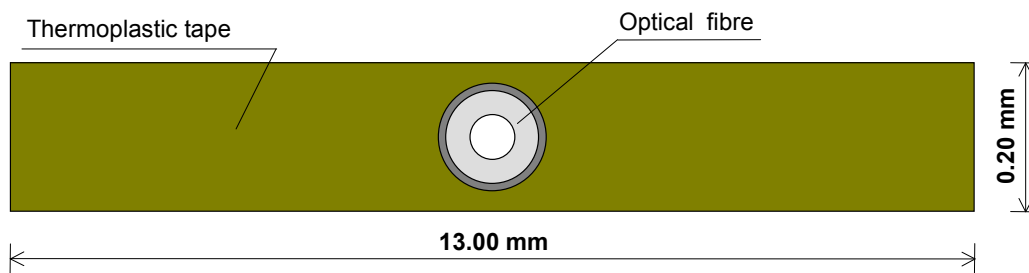
The DiTeSt SMARTape sensor consists of a single mode optical fibre embedded in a fibre-reinforced thermoplastic composite tape. The tape itself provides high mechanical, chemical and temperature resistance. The size of the tape makes the sensor easy to transport and install. The SMARTape sensor is designed 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

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