



Fabric Sensor Evaluation Kit

SEKDGE19201

Technical Datasheet

Product overview

The fabric sensor evaluation kit contains:

- 5 x fabric sensors
- 1 x sensing board
(choice of cable or Bluetooth transmission)
- Software
(choice of PC software or mobile app)



Sensor Evaluation Kit

Sensor overview

The Microfiber Strain Sensor is a conductive rubber string with force sensing capabilities. It is ultra-thin, soft, flexible, stretchable, weavable and washable. To use the sensor, simply connect it to our sensing board and pair with the mobile APP to view and collect real-time tensile strain readings.

Compared to existing strain sensors, the Microfiber Strain Sensor is innovative in its superior mechanical elasticity and durability, as well as microscale form factor, and faster response. The Microfiber Strain Sensor can be easily woven into common fabrics to build smart textiles such as smart gloves, smart shirt, smart socks and smart bandages. These smart textile devices can be implemented in multiple industrial verticals such as consumer electronics, sports, human-machine interface, Internet of Things, and robotics.



Microfiber Sensor

Features

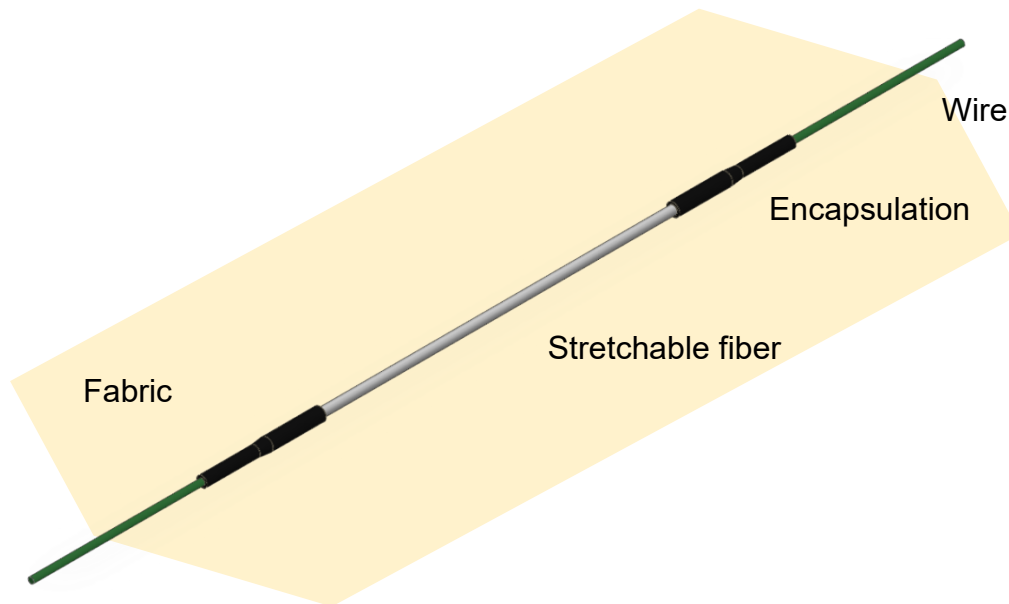
- Tiny footprint
- Soft, flexible and stretchable fiber
- Easy integration in textiles by sewing
- Allow for common laundering

Application

- Smart textiles
- Wearable devices
- Gaming and VR/AR
- Sports monitoring
- Healthcare
- Robotics

Physical Specifications

Schematics



Key values*

Fiber diameter (mm)	0.57 ± 0.05
Sensing length (mm)	10.0 ± 1.5
Young's modulus (MPa)	0.71 ± 0.05
Minimum bending radius (mm)	0.60 ± 0.05
Maximum strain	$200\% \pm 100\%$

* All parameters can be customized.

Sensing Specifications

Key values

Strain sensing range (recommended)	0 – 50%
Strain sensing upper limit	300%
Resolution	3%
Operating temperature	0 °C to 40 °C
Hysteresis	<1%
Drift	<1%
Response time	50 ms