

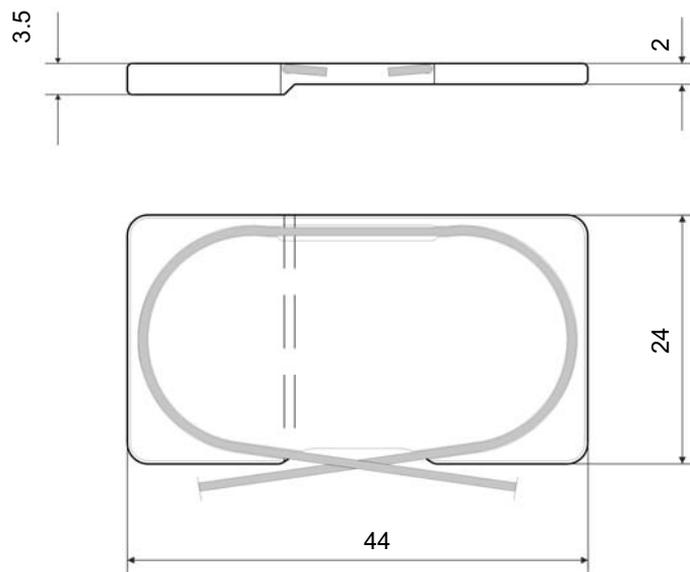
OptiMet-PKF-OTC 1&2

Coated strain measuring fiber with temperature compensation

Special features (Compensator)

- Optical temperature compensation sensor based on fiber Bragg grating
- Fitting for the OptiMet-PKF measuring chain
- Selectable one or two grating positions of the OptiMet-PKF
- Insensitive to electromagnetic interference
- Application in Ex-areas possible

Dimensions (in mm; 1 mm = 0.03937 inches)



Specifications OptiMet-PKF-OTC 1&2 (Compensator)

Construction		OptiMet-PKF fiber with Bragg grating glued on an aluminum base body
Outer diameter of OptiMet-PKF fiber	µm	700
Dimensions		
Length	mm	44±0.1
Width	mm	24±0.1
Height	mm	3.5±0.5
Connection (plug)		FC/APC
Available Bragg wavelengths	nm	on request ¹⁾
Bragg wavelength tolerance ²⁾	nm	±0.5
Operating temperature range	°C	-40...+140
Storage temperature range	°C	-40...+140
Temperature response ³⁾	µm/m/°C	29.4
Tolerance of temperature response	µm/m/°C	±1
Temperature compensation error ⁴⁾	%	<5
Time constant τ (exponential) ⁵⁾	s	<2
Strain input from measurement object onto Bragg grating	%	<0.5
Minimum radius of curvature of the optical fiber	mm	10
Applicable bonding materials		included adhesive foil ⁶⁾

1) Sensor is integrated in the OptiMet-PKF chain at the required Bragg grating position.

2) Based on the output Bragg wavelength in the OptiMet-PKF chain.

3) $\Delta\lambda/(\lambda_0 \cdot k)$ per °C using the gage factor $k=0.79$ for OptiMet-PKF.

4) At temperature gradients <3K/min during steady changes in measurement object temperature, and when the exact linear coefficient of thermal expansion is known for the measurement object.

5) Determined by free fall in a water bath.

6) Alternatives: Z70, X60, X120, X280

Subject to modifications.

All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability.

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