

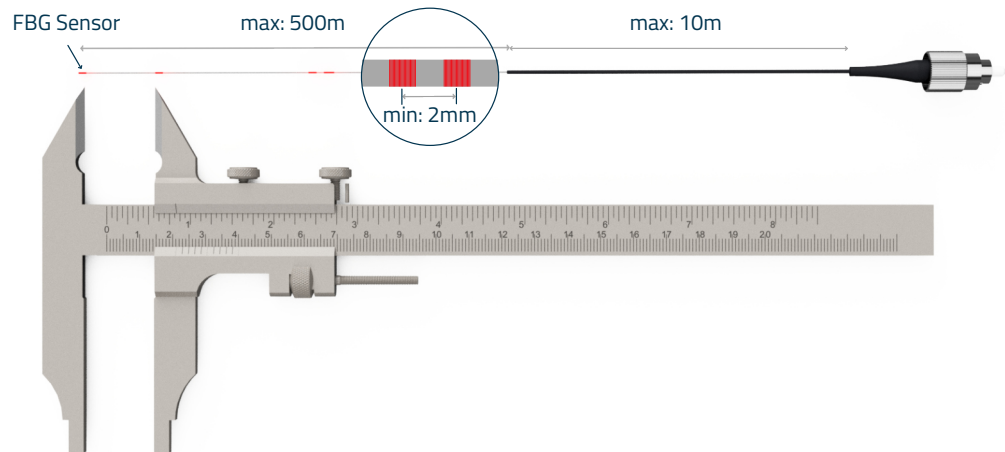


Fiberoptic Rapid Prototyping

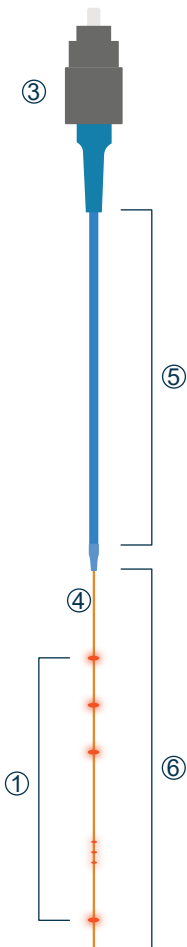
Customized 1550nm FBG Arrays

Up to 50 FBG at arbitrary Positions

Position Tolerance: 0,3%/m



A 1550nm FBG Order Part Number



② FBG Quantity

- 1 - 1 FBG
- 2 - 2 FBGs
- ...
- 50 - 50 FBGs

③ Connector Type

- NC - No connector
- FC - FC/APC
- LC - LC/APC
- HT - HT FC/APC

⑤ Lead-in Protection

- GL - Glass Textile
- SST - SS Flexible Tube
- HY - Hytrel Buffer
- PVC - Standard PVC Tube
- LSZ - Low Smoke Zero Halogen
- NL - No lead-in protection

UHS50 - 5 - FC - SC - PVC - FI

① Spectral FBG Configuration

- STD1 - Standard R>25% Narrow
- STD2 - Standard R>25% Wide
- STD3 - Standard R>50% Narrow
- STD4 - Standard R>50% Wide
- STD5 - Standard R>75% Narrow
- STD6 - Standard R>75% Wide
- UHS25 - Ultra-High Strength R>25%
- UHS50 - Ultra-High Strength R>50%
- SH25 - Short 1mm FBG R>25%
- SH50 - Short 1mm FBG R>50%
- CC - Custom Configuration

④ Fiber Type

- SC - Silica Core/PI
- BI - Bend-Insensitive/PI
- SMF - Corning SMF28 e+

⑥ Sensor Capillary

- FI - Bare Fiber
- PE - PEEK Tubing
- SSC - SS Capillary
- SI - Silica Capillary

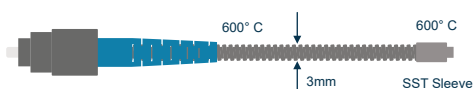
① FBG Properties

	Ref ¹	FWHM ²	Length	SLSR ³	IL/PWDS ⁴	Max FBG ⁵	Max Strain ⁶	Max Temp ⁷
STD1	>25%	0,25-0,35nm	5-6mm	>15dB	++	30	>2,0%	600-900°C
STD2	>25%	0,4-0,6nm	3-4mm	>15dB	++	30	>2,0%	600-900°C
STD3	>50%	0,25-0,35nm	6-7mm	>15dB	+	30	>2,0%	600-900°C
STD4	>50%	0,4-0,6nm	3-4mm	>15dB	+	30	>2,0%	600-900°C
STD5	>75%	0,25-0,35nm	7-8mm	>15dB	+	25	>1,5%	600-900°C
STD6	>75%	0,4-0,6nm	4-5mm	>15dB	+	25	>1,5%	600-900°C
UHS25	>25%	0,25-0,35nm	3-4mm	>15dB	++++	50	>4,0%	350°C
UHS50	>50%	0,2-0,3nm	6-7mm	>15dB	+++	50	>4,0%	350°C
SH25	>25%	1,0-2,0nm	1mm	>12dB	-	20	>1,5%	600-900°C
SH50	>50%	1,0-2,0nm	1mm	>12dB	-	10	>1,0%	600-900°C

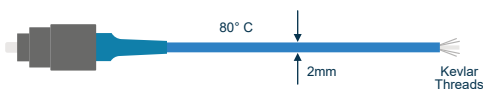
Annex¹⁻⁶

Work-in-progress

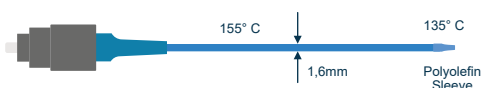
⑤ SST - Stainless Steel (1.4301) Corrugated Tube



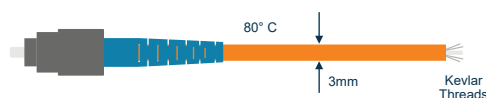
LSZ - Low Smoke Zero Halogen



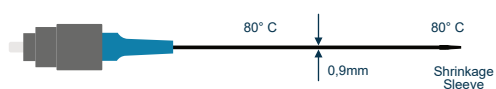
GL - Glass Textile



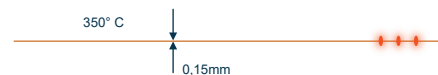
PVC - Standard PVC Tube



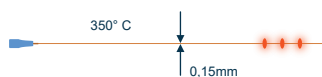
HY - Hytrel Buffer



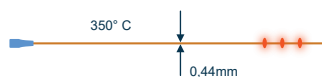
NC/NL - No connector/No lead-in



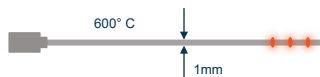
⑥ FI - Bare Fiber with Polyimide Coating



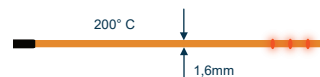
SI - Silica Capillary



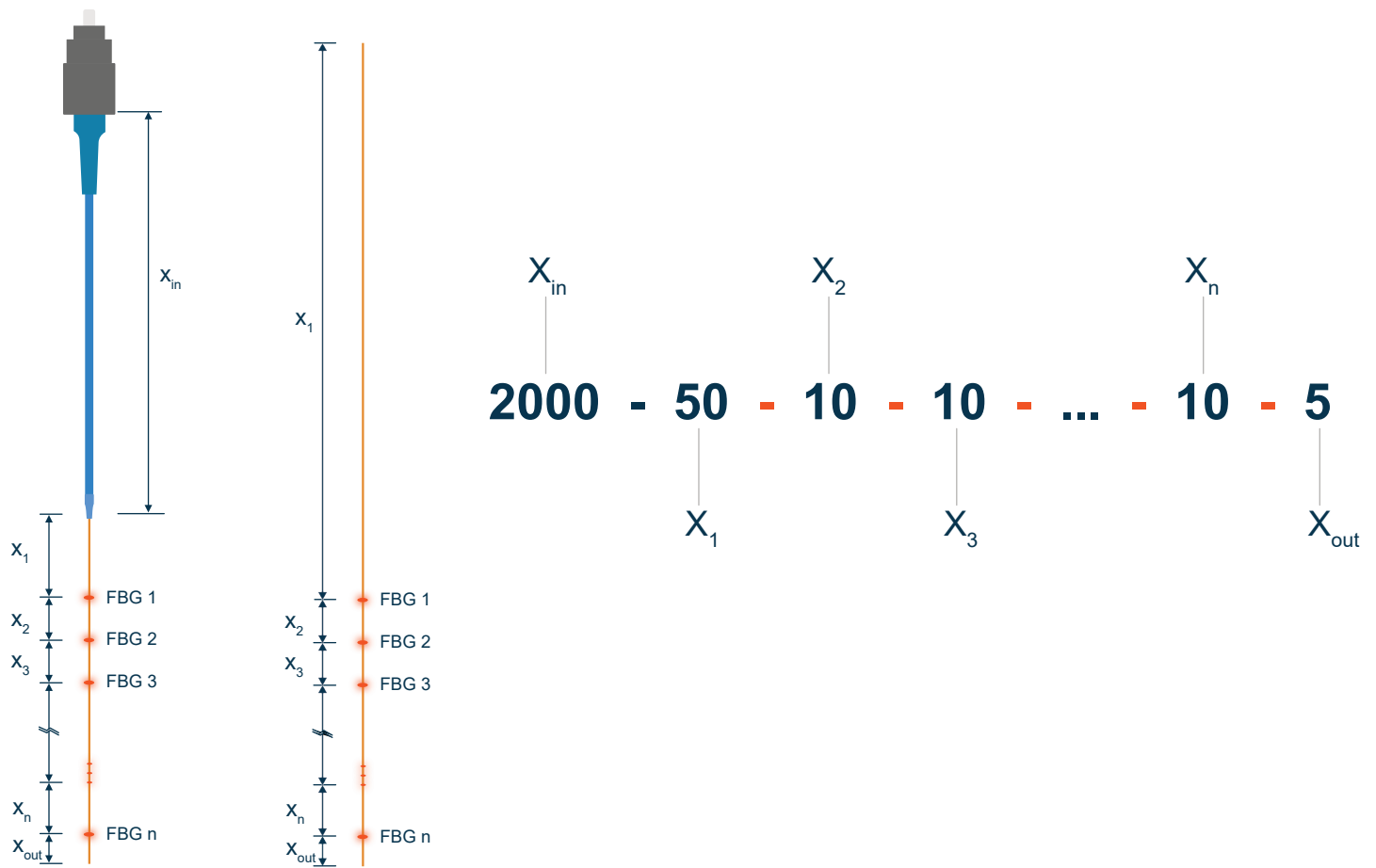
SSC - Stainless Steel (1.4301) Capillary



PE - PEEK Tubing



Ⓑ FBG Array Distance Code



Ⓒ FBG Wavelength Code

CWL Tolerance: 0,15nm

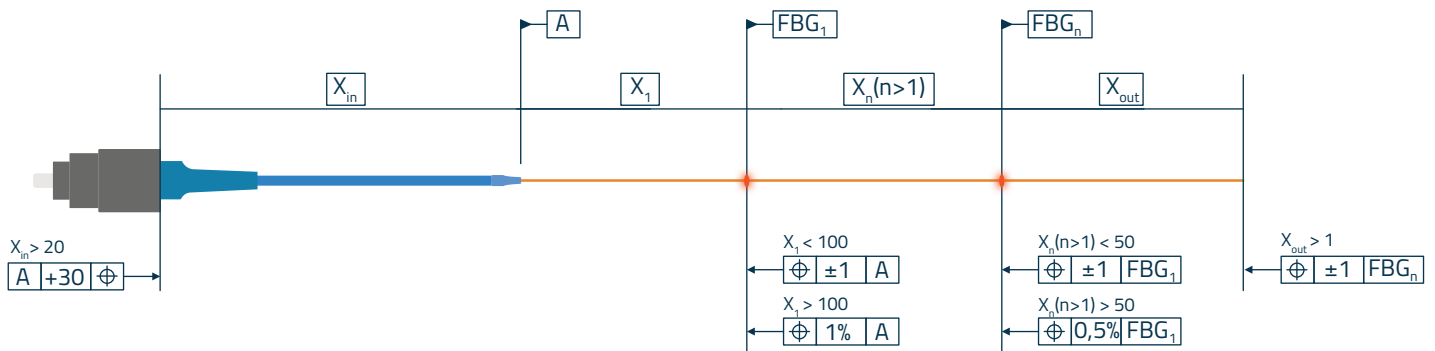
CWL Range: 1480-1620nm



Length/Bending Limitations

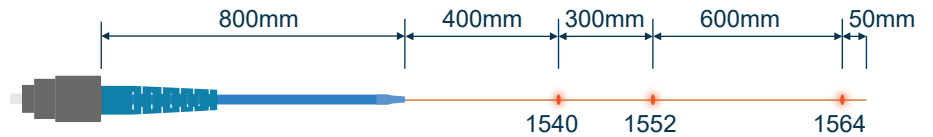
	4. Lead-in Protection				5. Sensor Capillary			
	SST	LSZ	GL	HY	FI	SSC	SI	PK
Crit. Bending Radius	15mm	10mm	5mm	5mm	5mm	100mm	20mm	40mm
Max length	10m	10m	5m	5m	500m	3m	2m	10m
Min length	0,5m	0,5m	200mm	20mm	20mm	100mm	50mm	50mm

Length Tolerances (in mm)



Exemplary Order Codes

A: STD5-3-FC-LSZ-FI
 B: 800-400-300-600-50
 C: 1540-1552-1564



Exemplary Spectrum of UHS FBG Array

