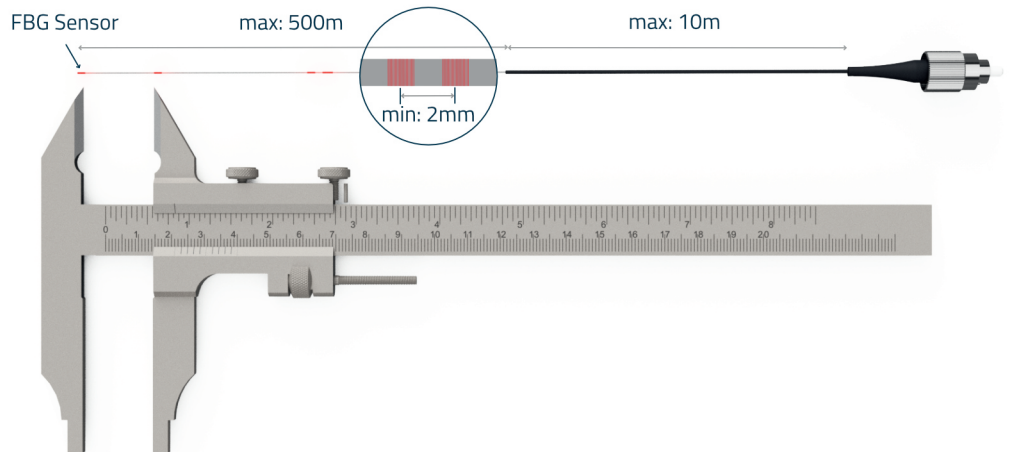


Fiberoptic Rapid Prototyping

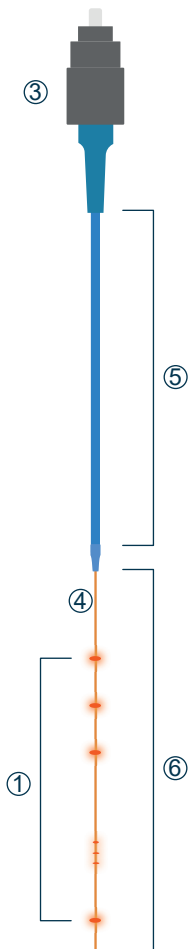
Customized 1550nm FBG Arrays

Up to 200 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%
- UHS40 - Ultra-High Strength R>40%
- UHS50 - Ultra-High Strength R>50%
- SH25 - Short 1mm FBG R>25%
- SH50 - Short 1mm FBG R>50%

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	Length	SLSR ²	IL/PWDS ³	Max FBG ⁴	Max Strain	Max Temp
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%	0,3-0,45nm	3-5mm	>18dB	++++	200	>4,0%	350°C
UHS40	>40%	0,2-0,3nm	6-8mm	>18dB	++++	200	>4,0%	350°C
UHS50	>50%	0,15-0,25nm	7-10mm	>18dB	++++	200	>4,0%	350°C
SH25	>25%	1,2-1,8nm	1mm	>12dB	-	20	>1,5%	600-900°C
SH50	>50%	1,5-2,0nm	1mm	>12dB	-	10	>1,0%	600-900°C

(1) For the reflectivities of all FBG within the spectrum, the accumulated losses are taken into account

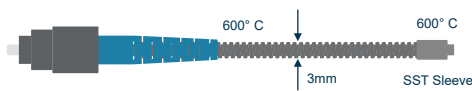
Reflectivity tolerances up to 20 FBG/array: -3% +25%; for >20 FBG/array: -5% + 25%

(2) Minimum SLSR >15-18dB; Typical SLSR >20dB

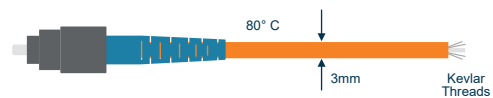
(3) For UHS25, UHS40 and UHS50: IL < 0.01dB (ascending WL order), PWDS < 5pm

(4) For >50 FBG/array dropouts possible: 1 of 50 FBG with relaxed tolerances Ref -15%; SLSR >12dB

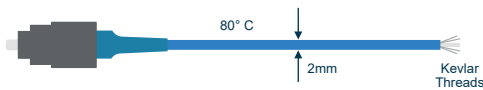
⑤ SST - Stainless Steel (1.4301) Corrugated Tube



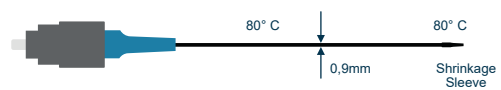
PVC - Standard PVC Tube



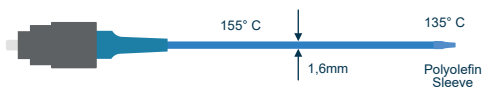
LSZ - Low Smoke Zero Halogen



HY - Hytrel Buffer



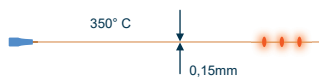
GL - Glass Textile



NC/NL - No connector/No lead-in



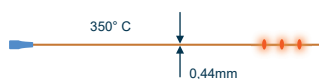
⑥ FI - Bare Fiber with Polyimide Coating



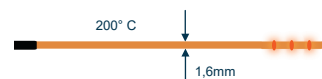
SSC - Stainless Steel (1.4301) Capillary



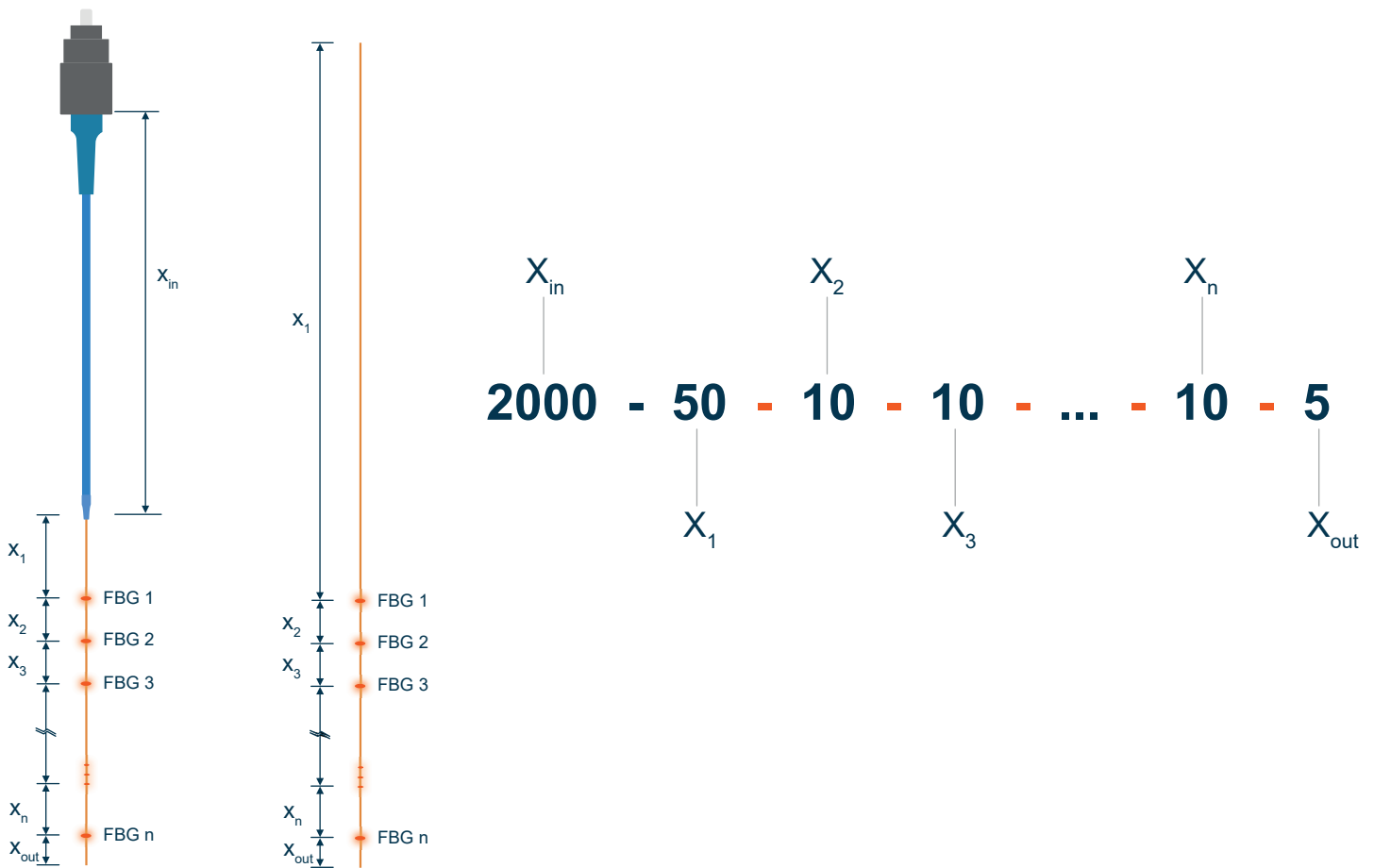
SI - Silica Capillary



PE - PEEK Tubing



Ⓑ FBG Array Distance Code



Ⓒ FBG Wavelength Code

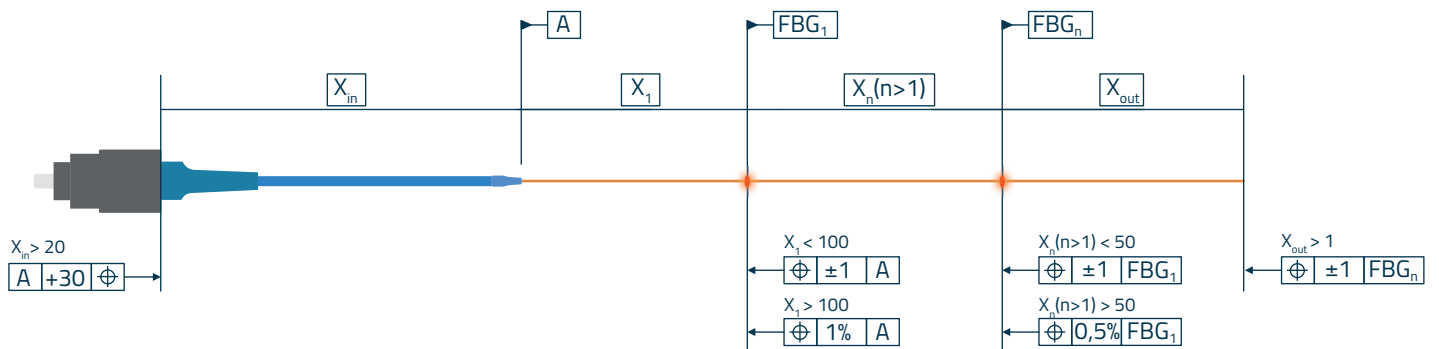
CWL Tolerance: 0,15nm CWL Range: 1480-1620nm



Length/Bending Limitations

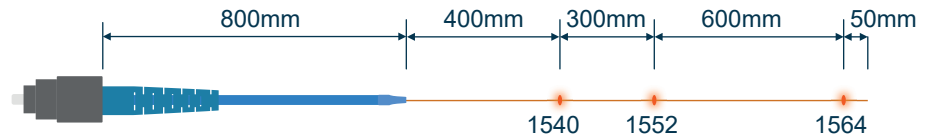
	4. Lead-in Protection				5. Sensor Capillary			
	SST	LSZ	GL	HY	FI	SSC	SI	PK
Crit. Bending Radius	15mm	10mm	5mm	5mm	5mm	100mm	20mm	40mm
Max length	10m	10m	5m	5m	500m	3m	2m	10m
Min length	0,5m	0,5m	200mm	20mm	20mm	100mm	50mm	50mm

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 UHS40 FBG Array

