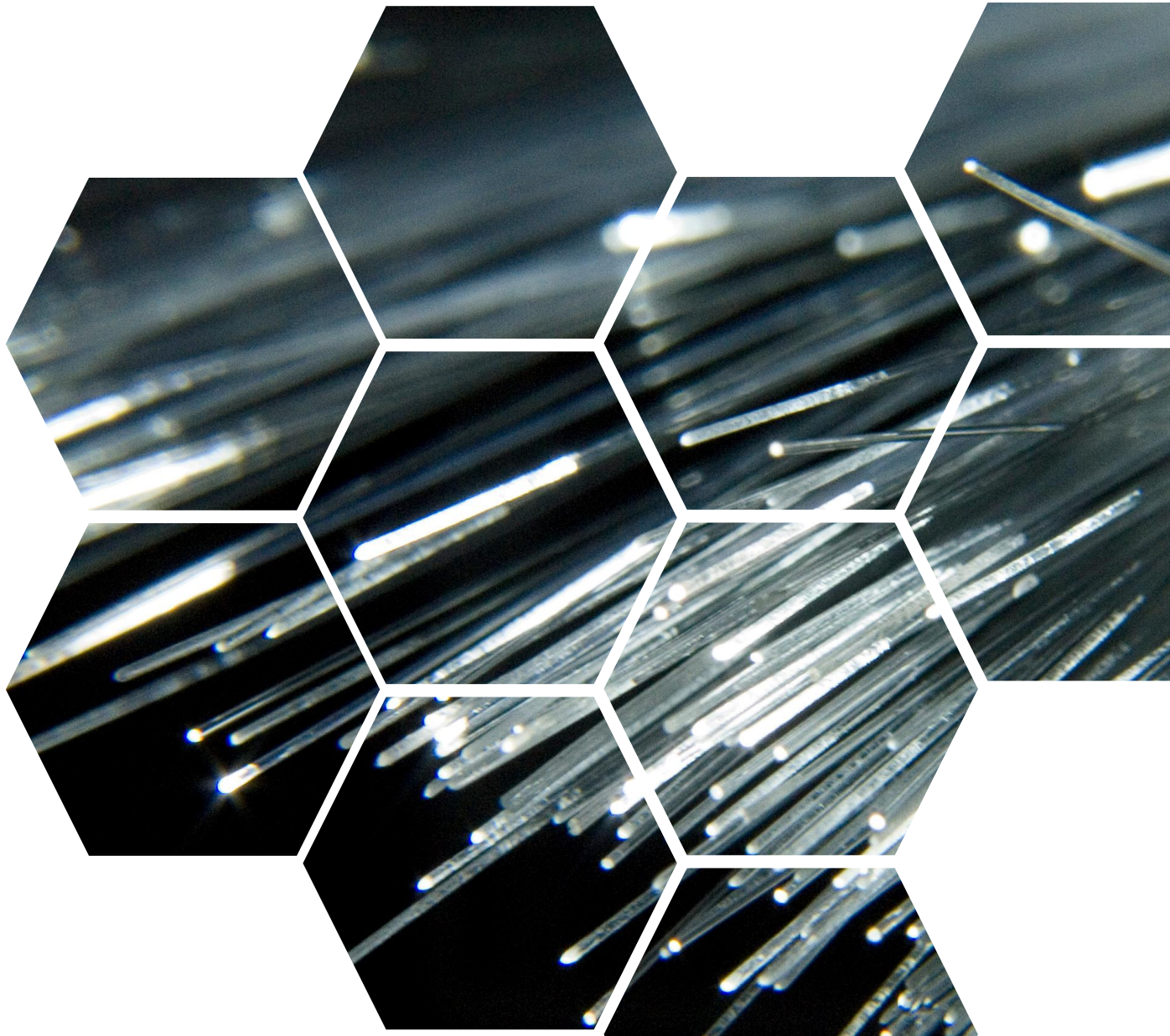
FOS

Inon optics

FOS Inon Optics

- Production side and
- Legal Office: Eiserfelder Strasse 316, 57080 Siegen

High-performance Manufacturing.
Specialized in producing optical fiber bundles and cables for wide industrial and scientific applications.



FOS Inon Optics is specialized in design and producing a full range of custom Products.

We work with all Fibers

Borosilica | PMMA | Silica-Hard Clad | Silica-Silica for UV and NIR wavelength

„We make the impossible happen “

We offers you:

Custom-made **Fiber Optics Solutions** from **1st piece**

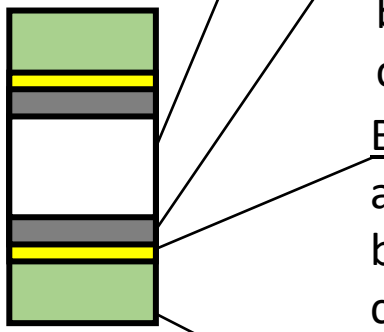
10µm up to **2400µm**, all fibers Ferrules and Connectors. We meet up with your requirements.

Production technics

- **Glued Bundles** and **Cables**, for laboratory use
- Fused / **Welded Fiber Bundle Tips**, for special Environments or Temperature issues
- **Sorted fiber Bundle**, for perfect randomization
- **Deep UV-wavelength** Applications from 189nm
- **NIR-wavelength** Application till 2380nm
- **Illumination** Borosilica Bundles

$\varnothing_{core}$	=	10	–	2400µm
$\Delta\varnothing_{core}$	=	±2%		
$\varnothing_{core} : \varnothing_{clad}$	=	1	:	1.05 – 1.4
$\varnothing_{jacket}$	=	100	–	2900µm
$\Delta\varnothing_{jacket}$	=	±5%		
NA	=	0.06	–	0.27 (silica/silica F-doped)
				0.37 (silica/silica Ge-doped)
				0.5 (hardclad)

All fibers



Core (n1): Fused silica, quartz, SiO_2
a) pure
b) Germanium doped
c) PMMA

Clad (n2): Fused silica, quartz, SiO_2
a) Fluorine doped
b) no clad
c) PMMA doped

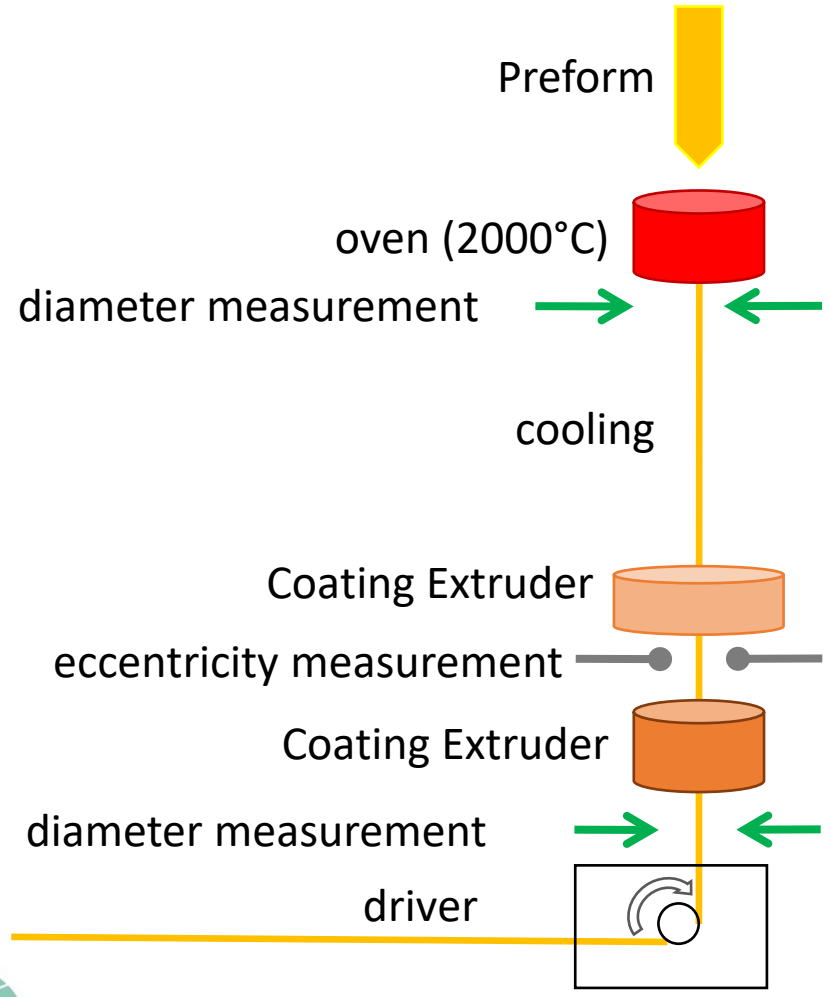
Buffer:

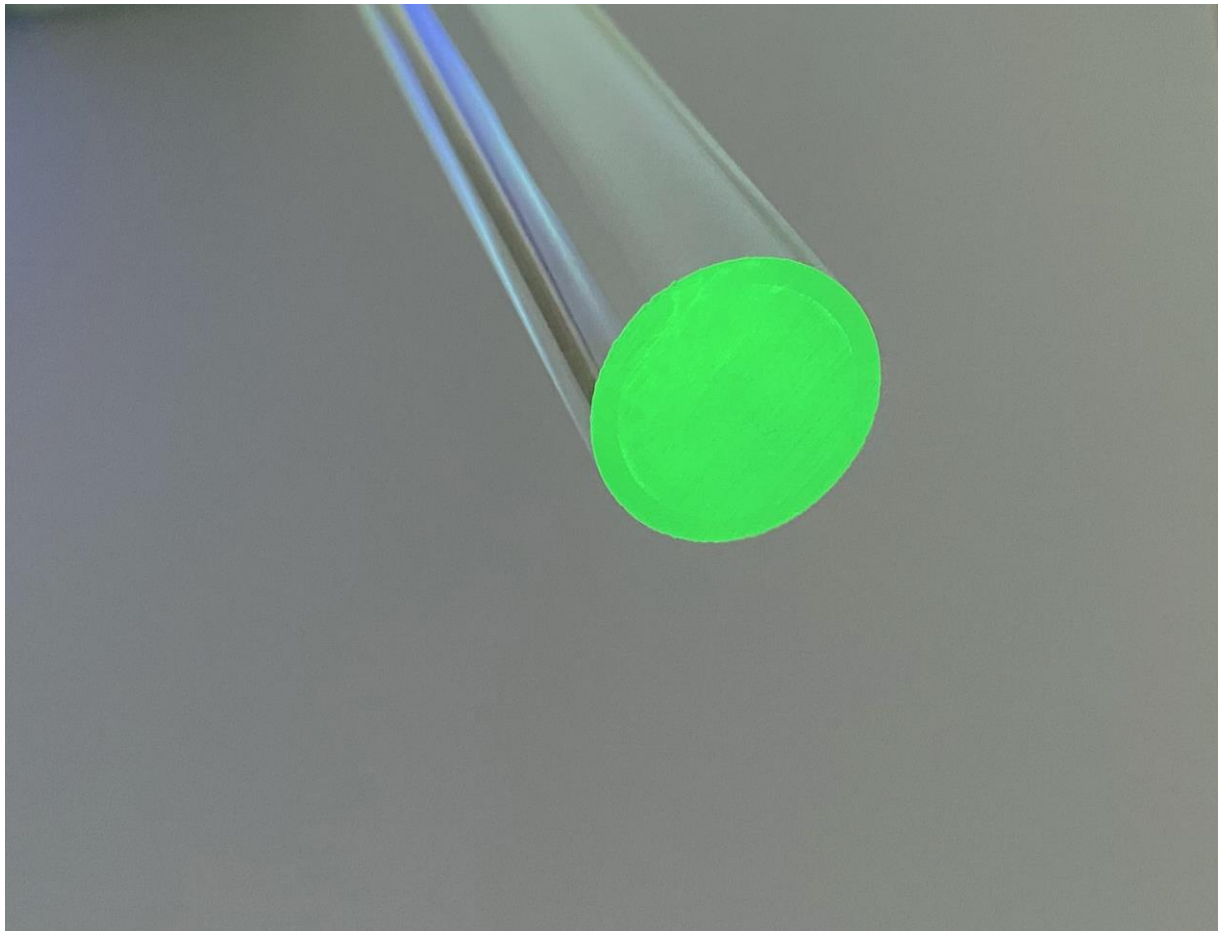
a) Polymer Clad, “Hardclad“ → n2 (n3)	Temp. < 70°C
b) Silicone	Temp. < 200°C
c) no buffer	

Jacket:

a) Polyimide	Temp. -190°C…390°C, vacuum ok
b) Nylon	Temp. < 100°C
c) ETFE (“Tefzel“)	Temp. < 150°C
d) Acrylate	Temp. < 85°C

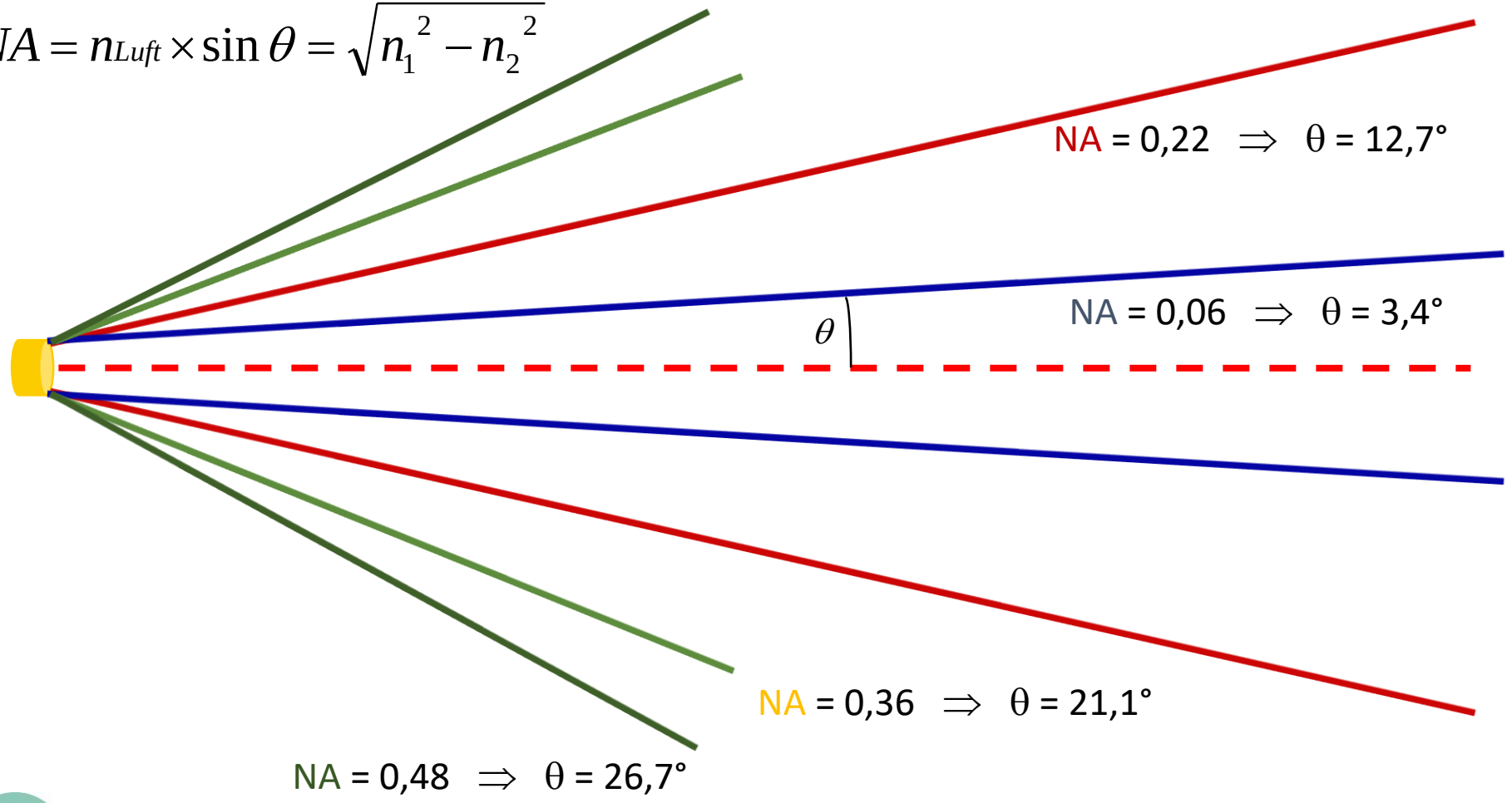
Fiber Manufacturing



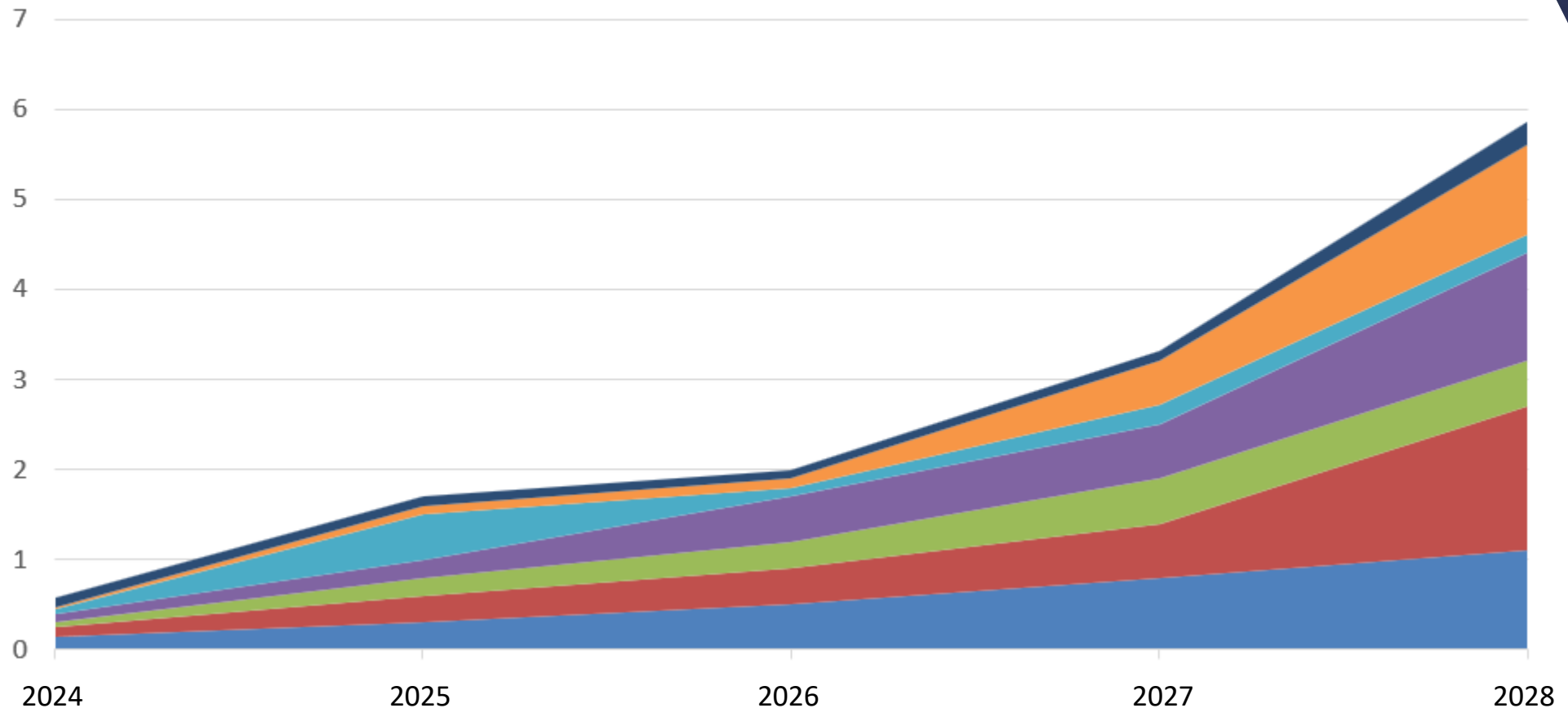


Numerical Aperture

$$NA = n_{Luft} \times \sin\theta = \sqrt{n_1^{\,2} - n_2^{\,2}}$$



Expected Growth of FOS – Industrial side



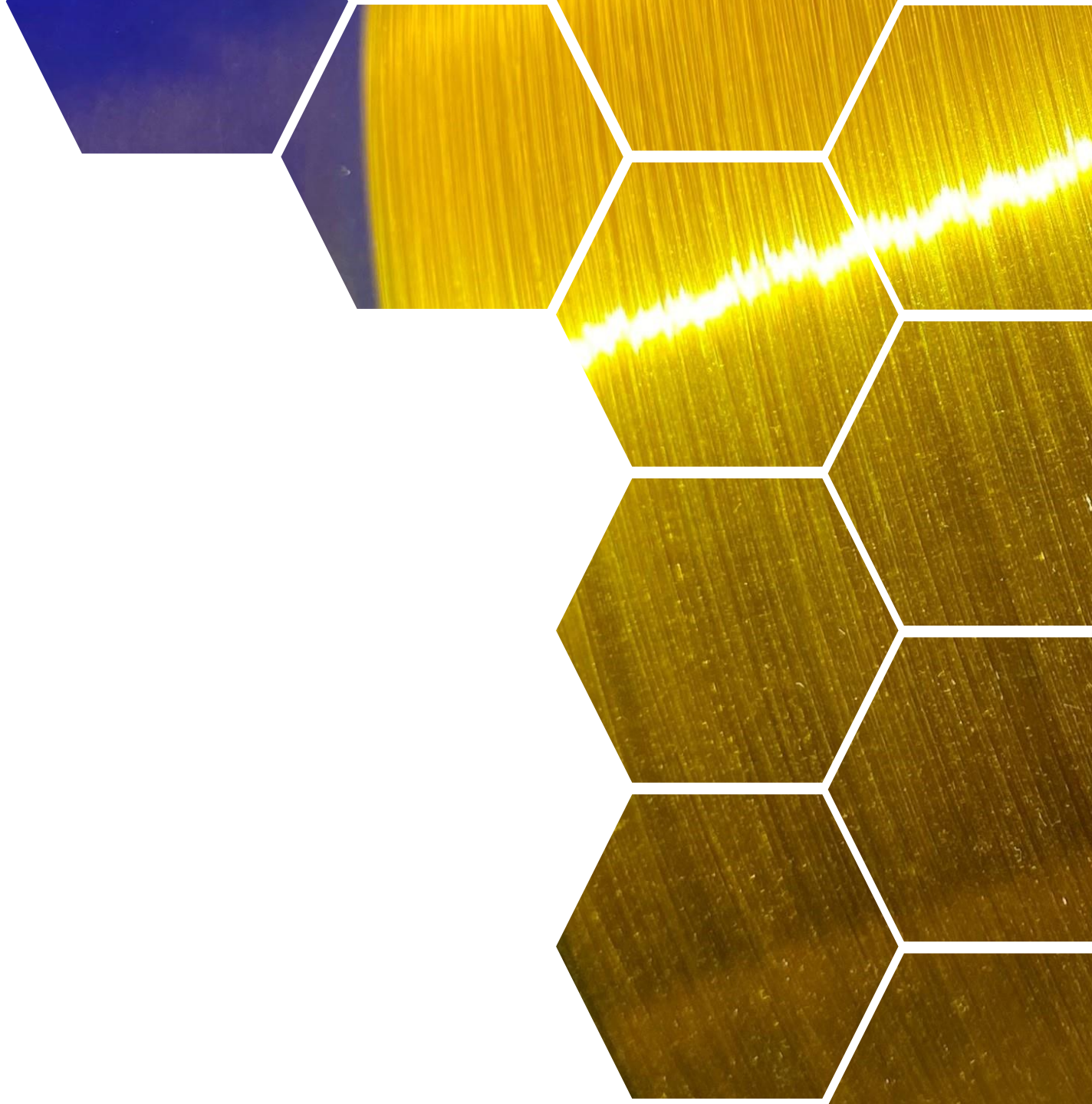
Quality control and testing

FOS Inon has its own independent production Quality Control, which will make sure that the requirements stated in technical drawings have been met accordingly.

Our ISO 9001: 2015 certification underlines this; within a short time, less than two years after the company was founded, we have proven that our quality standards are not just an idea.

QUALITY SYSTEM CERTIFICATION
DNV
ISO 9001

Thank you!



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