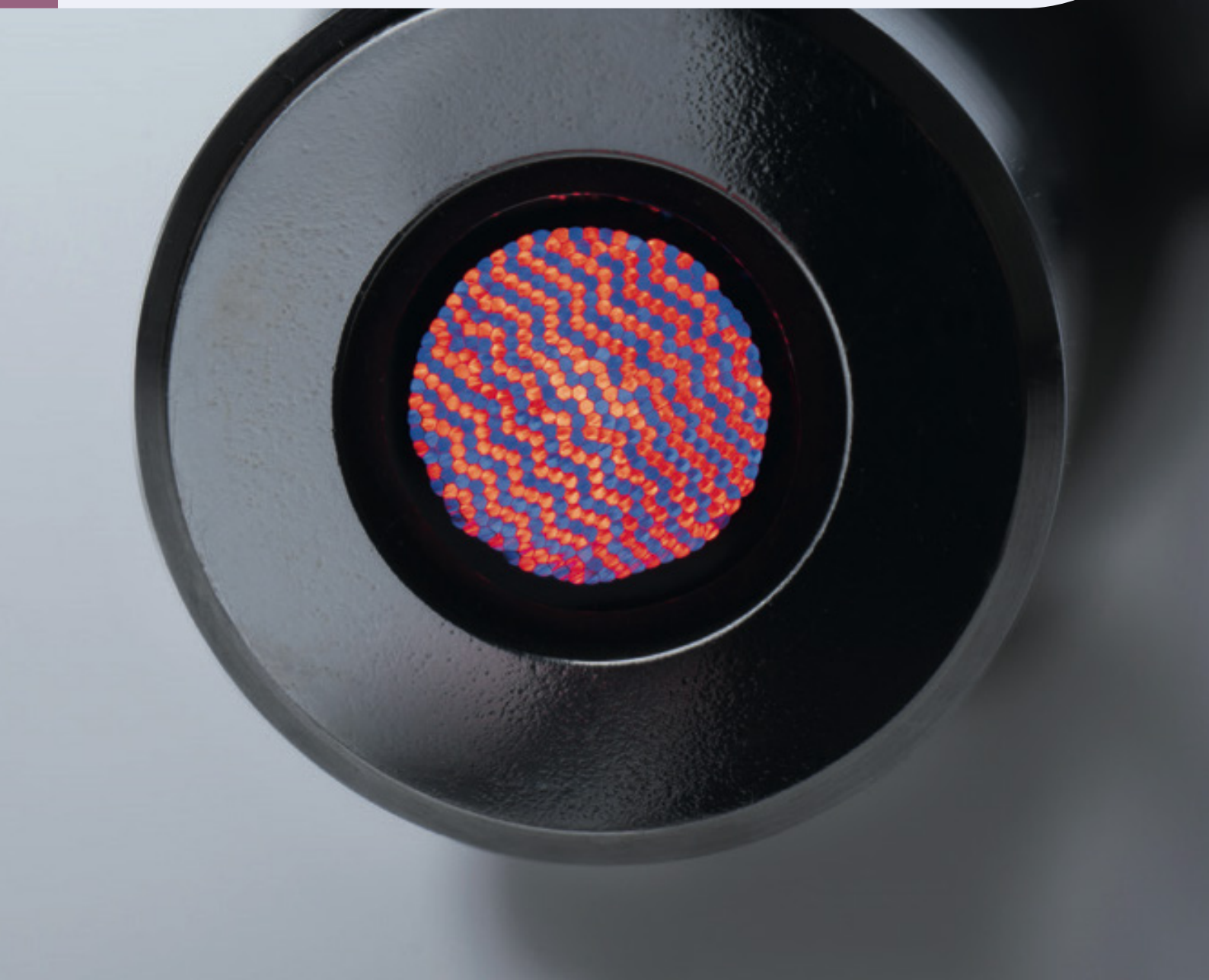
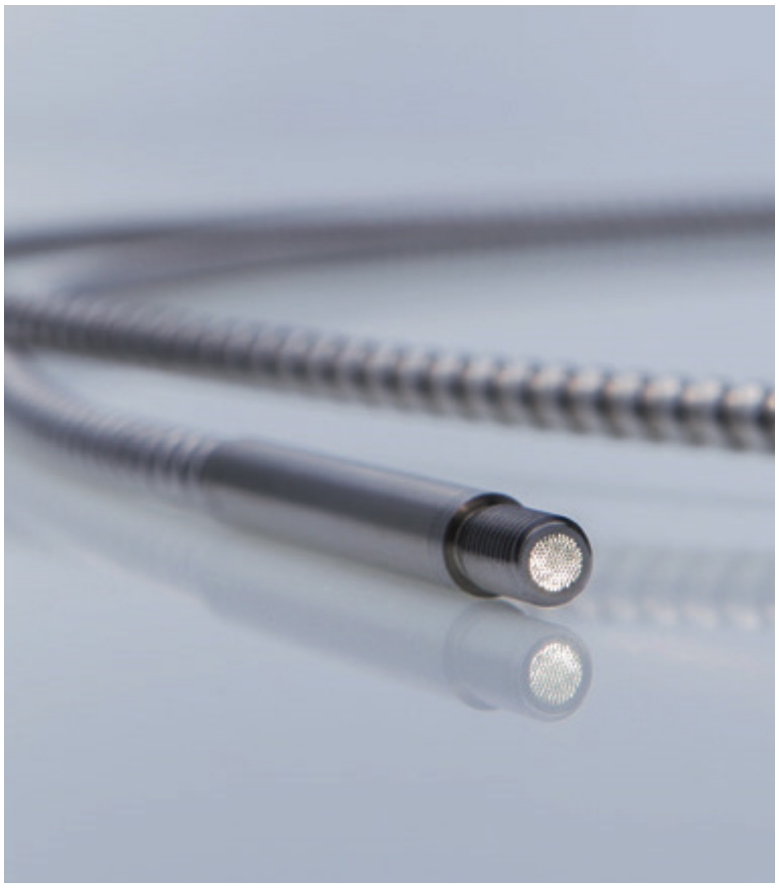
Armadillo
Brightness all the way up

SIA Armadillo
Specialty Fiber Bundles



Fiber Bundles
Multi-fiber assemblies



Armadillo's Light Guide bundles are meticulously designed to ensure superior quality and optimal fiber optic properties. We fine-tune bundles to meet specific parameters, including numerical aperture (NA) and packing efficiency. Our fiber assemblies are highly flexible and can be precisely tailored to suit the unique needs of your application.

Options

Available fibers	All fibers from our range
Active bundle surface geometries	Circular | Semi-circular | Square | Rectangular | Line | Ring | Segmented ring
Bundle design	Single-branch | Dual-branch | Multi-branch
Bundle variant	Glued | Fused end
Connectors	SMA | FC / PC | ST and others upon customer request

Fused-End Light Guide Bundles

Armadillo's Fused-End Light Guide Bundles establish the standard for consistently high long-term performance. The fusing process eliminates inter-fiber spaces, distinguishing Armadillo's bundles as among the most sophisticated in the market. Free from reliance on adhesives, these bundles exhibit exceptional resistance to temperatures exceeding +600 °C, making them the premier choice for demanding applications.

Wavelength

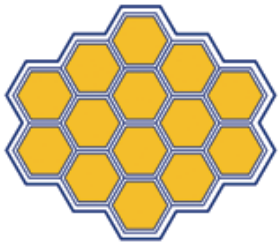
PowerLightGuides	190 – 2400 nm

Numerical aperture (NA)

Low	0,12 ± 0,02
Standard	0,22 ± 0,02
High	0,37 ± 0,02

Advantages

- High transmission
- Elimination of inter-fiber spaces
- Large active diameter
- Availability of a wide range of ready-to-use assemblies
- Long service life
- Even distribution in multi-branch bundles
- Exceptional high-temperature resistance above +600 °C

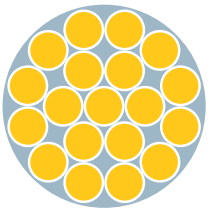


Bundles made from end-fused fibers show no gaps between individual fibers, since the fibers attain a hexagonal shape during the fusing process.

Fiber Bundles
Overview

Gluing

Glued fiber bundles provide unparalleled flexibility, allowing for a wide range of achievable diameters and geometries.



Sorting

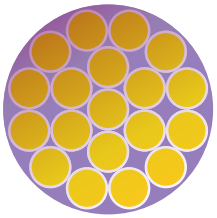
Sorting the fibers enables an even power distribution among multiple bundle arms and enhances measurement precision through spatial mapping of the fibers.

Fusion

In fused fiber bundles, the elimination of gaps between fibers leads to an increased filling factor, consequently boosting transmission by up to 20%.

AR coating

An anti-reflective (AR) coating effectively minimizes reflection back-losses at the fiber ends, resulting in a direct increase in transmission by approximately 3.5% per end.



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