Light Guides for Medical Applications

Excellent transmission and long lifetimes make light guides from SCHOTT the first choice in endoscopy and other demanding medical illumination applications.

SCHOTT's access to highest quality optical materials and experience in glass fiber drawing and assembly processes rounds up with large scale production capabilities. From custom branding an universal light guide to entirely customer specified designs SCHOTT is working closely with clients to find optimum solutions, technically as commercially.

Universal Light Guide

Universal light guides can be used with various endoscopes and light sources by means of threaded proximal and distal end tips, which will accept commercially available adapters. The distal end tip is branded with a customized logo.

The standard version "EP" is supplied with SCHOTT's well proven A2-fibers, protected with non-stick silicone sheathing, and ends terminated with a high temperature epoxy. This version offers an economical price point for standard procedures.

For demanding applications with high intensity light sources, Universal Light Guides "HF" with hot-fused input end provide maximum temperature resistance. Equipped with the eco-friendly PURAVIS® glass optical fiber, the light guides feature high transmission with low color shift for applications where color fidelity is critical. The silicone sheathing, with its rugged metal spiral core ensures high mechanical stability and repeated reprocessing allowing longer lifetimes in the hospital environment.

Custom Light Guides

SCHOTT offers large scale production of Light Guides in customer specific designs. Please contact Your sales representative with specific requirements.

Universal Light Guide Options

Glass Optical Fibers
- **SCHOTT® A2-Fiber**
- **PURAVIS® GOF70**

Bundle Diameter
Standard: 3.5mm, 4.8 mm

Sheathing
- Non-Stick silicone, biocompatible and autoclaveable
- Sheathing color: grey
  Optionally red, blue, green, yellow

Length Variation
- Common length: 2300 and 3000 mm
- Other length upon request. .

End Termination
- Epoxied ends:
  temperature stability up to 200°C
- Hot-fused ends:
  temperature stability up to 350 °C

Customization
Your Company Logo on distal end tip

Minimum order quantities: 500 pcs.

Legal Compliance

Medical Device Regulation
- Design and risk analysis according to ISO 13485.
- Optional marking of distal end tip with Lot-No and UDI-Code.

REACH
SCHOTT ensures full compliance with REACH regulations

ROHS
EP-Version: Compliant with exemption
HF-Version: Compliant without exemption

Biocompatibility
according to ISO 10993-5

SCHOTT
glass made of ideas

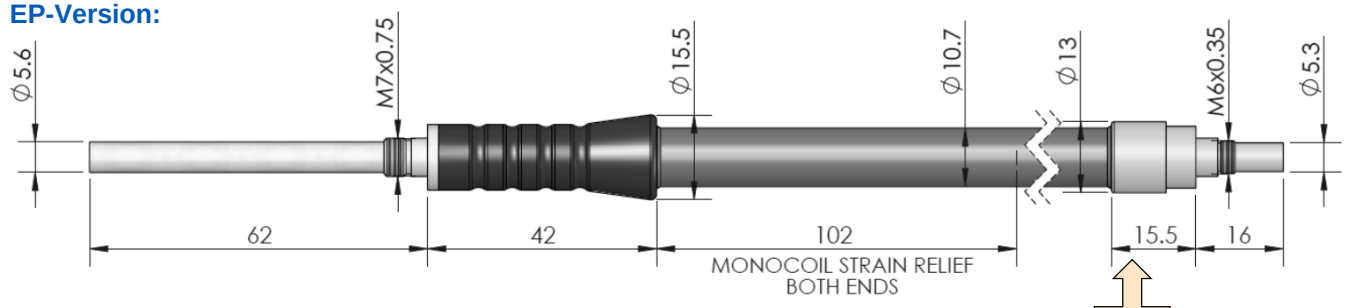
Universal Light Guides

			Hot-fused Version „HF“	Epoxied Version „EP“
Optical Data	Fiber Type		PURAVIS® GOF70	SCHOTT® A2 Fiber
	Numerical Aperture	Theoretical value at 587 nm	NA = 0.55	NA = 0.64
	Eff. acceptance angle (2α)	@ V(λ) and 1 m length	~ 70°	~ 83°
	Transmission	Acc. to DIN 58141 Part 2 @ 546 nm and 3 m length	> 70 % (typical value)	> 55 % (typical value)
Mechanical Data	Bundle Diameter		3.5 mm, 4.8 mm	3.5 mm, 4.8 mm
	Total length		2300 mm , 3000 mm	3000 mm
	Sheathing		Non-stick silicone sheathing /w metal reinforcement	Non-stick silicone sheathing
	Min. bending radius		50 mm	50 mm
Operating Temperatures	Operational long-term	Entire length	+10°C … +40°C	+10°C … +40°C
	Operational long-term @ Optical End Surface	Input end (Light source)	350°C	200°C
		Output end (Endoscope)	150°C	150°C
	Transportation and Storage		- 20°C …+ 60°C (Non-condensing)	
Re-processing	Cleaning & Disinfection	Cleaning, disinfection and sterilization approved according to ISO 17664	Manual & machine-made chemical cleaning and disinfection	
	Autoclaving		@ 134°C, 3 bar, 10 min. > 100 cycles	
	Plasma Sterilization		Low temperature plasma sterilization (STERRAD 100S)	

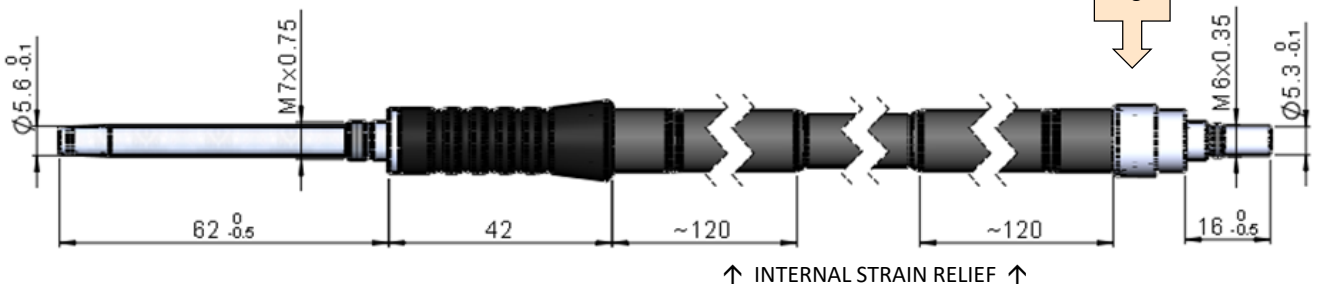
Proximal End (Light Source)

Distal End (Endoscope)

EP-Version:



HF-Version:



All dimensions in mm

Version 05.2018

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