

SCHOTT® SingleEZ Guide

Especially designed for the needs of the single-use endoscopy industry



SingleEZ Guide –
glass fiber illumination made easy

Single use endoscope assembly needs to be fast.

The *SingleEZ Guide* is a new generation of glass fiber illumination: It comes as a single **plug-and-play component** which makes **installation easy and fast**.

It combines the advantages of glass fiber technology with a new ease of handling. No handling of individual fibers and termination after installation is required.

Available space for scope illumination is rare.

The new approach maximizes the active light conducting area for a given outer diameter. **This optimized ratio is the ideal solution for small scopes.** The result: **more light at a smaller footprint.**

Reducing endoscope heat emission is critical for patient safety.

Light sources generate heat. So to protect tissue from damage, scope manufacturers must comply with defined **temperature thresholds** (of **maximum 41°C / 105,8 F°**). **Fiber optics separates this light source energy from the patient.** With excellent temperature resistance our glass fibers withstand direct coupling with high energy light sources.

Compliance is important for medical approval.

For medical approvals OEMs do not only need to manage heat but also **electromagnetic fields**. Cameras are sensitive electronic parts and are vulnerable to electromagnetic interference resulting in image errors or severe failures. **A glass fiber based lighting solution significantly reduces electromagnetic fields** at the distal end thus eliminating such failures.

Cost plays a major role for single-use endoscopes.

The value created by the above mentioned advantages of our illumination system needs to be affordable. The innovative design of the **SingleEZ Guide** is **optimized for the high volumes and lower costs** associated with single-use endoscopes. **Easy integration** saves time and money during production and thus offers **advantages in total costs of ownership.**

Fast time-to-market requires a reliable partner.

Developing a disposable endoscope is a complex and challenging task. With **50 years of expertise in endoscope illumination** and being the **world's leading partner** to the endoscope industry, **SCHOTT provides full support for your scope illumination** - from first idea to R&D supported product development to mass production.

Five advantages of glass fibers compared to other fiber types

1. Larger beam angle of up to **120° matches the capturing angle of the camera.** For shadow free illumination and better image



2. Effortless bending into **small radii** improving ease-of-use and maneuverability.
3. Enables a system of **higher CRI** for better image quality.
4. Redundancy - multiple fibers for more **safety** from single fiber severe failures.
5. Higher **temperature stability** – compatible with high energy light sources.

Ureteroscopes
Cystoscopes
Bronchoscopes
Rhinoscopes
...

Version 19-11 - Preliminary datasheet - all specifications are subject to change without prior notice.

SCHOTT
glass made of ideas

Technical Data

Plug-n-play component	Outer diameter	0.55 mm 0.7 mm 1.0 mm (other diameters upon request)
	Length	according to individual needs from 200 – 1000 mm end surfaces terminated ready to use
	Sheathing material	medical grade polymer
	Installation	plug-and-play - no grinding and polishing after installation - no fiber handling know-how necessary
	Compatibility	elements are: - biocompatible (EN ISO 10993-5 / USP class VI) - EtOx sterilizable (DIN EN ISO 11135:2014) - RoHS compliant - REACH
Active core (fiber bundle)	Material	multi component glass
	Beam angle (eff. aperture angle 2α)	up to 120°
	Redundancy	Yes (multiple fibers)

Your Partner for Single Use Endoscope Illumination



Consulting in light design

Light performance simulation
and light path optimization



Unique lighting solutions

Proprietary SCHOTT glass
fibers



Reliability

- Manufacturing expertise
- Lot control traceability



Scalability

From prototypes to validated
mass production



Certifications

- ISO 9001: 2015
- ISO 13485: 2016
- MDD 93/42/EEC reg.
- FDA reg.



Trusted partner

50 years of experience in
endoscope lighting



Seamless link

- Easy to integrate product design
- Complete modular lighting systems



Easier medical approval

Regulatory documentation



Reduce time-to-market

Development of light solutions from
first idea to mass production.



Reduce costs

- Save development costs by sourcing fully
developed lighting solutions
- Product design for single use applications