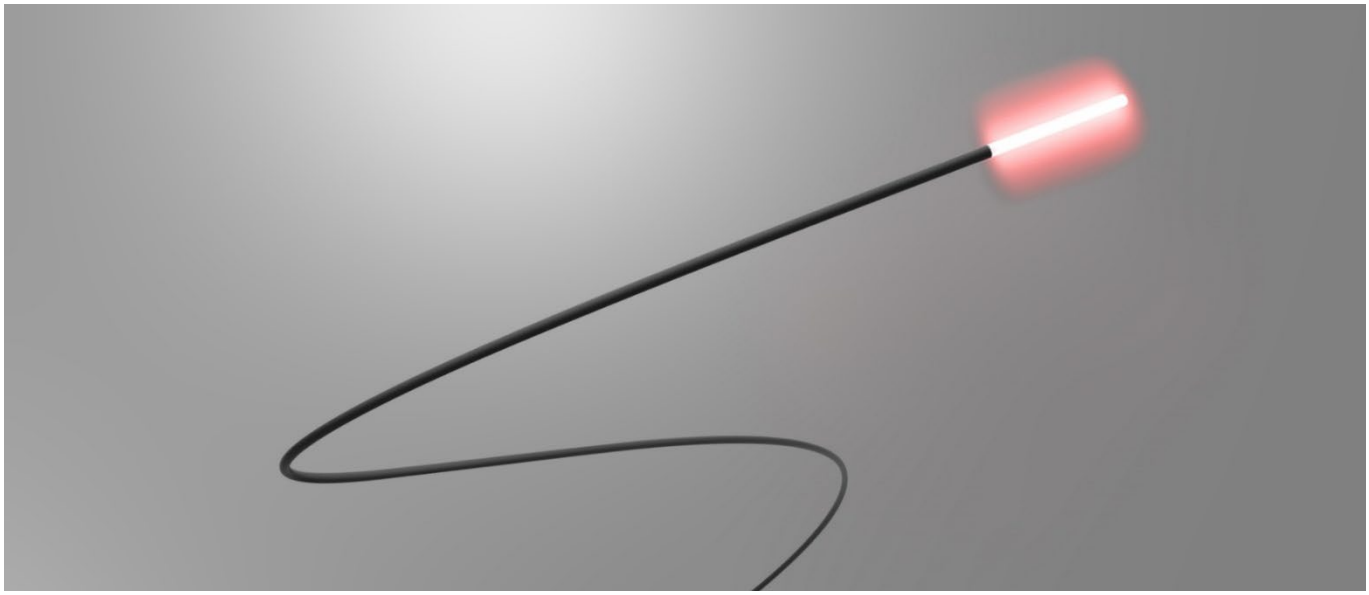
SCHOTT® Luminous Diffusers

Enabling more effective light-based therapies

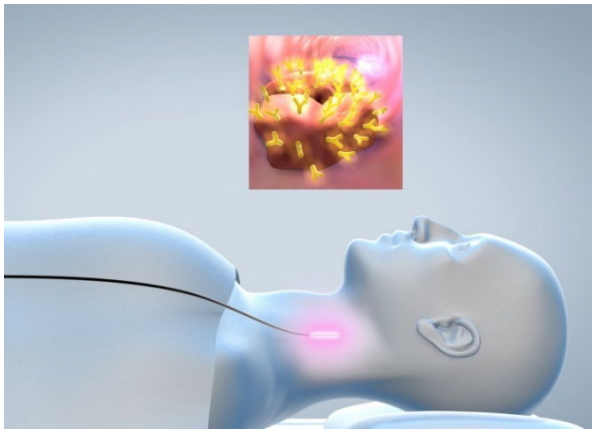


Product information

SCHOTT brings innovation to the market with a performance profile unseen to date: glass-based laser-diffusing materials that radiate light extremely homogeneously and boast very high optical efficiency of more than 80 %. The SCHOTT® Luminous Diffusers efficiently transmit VIS wavelengths and the important near-infrared (NIR) band, with high-power throughput of up to 20 W while keeping heat emissions low. This throughput outperforms other diffuser materials on the market.

The patent-pending laser-diffusing materials are available in various geometries, including cylindrical, front-emitting, spherical and special shapes.

SCHOTT offers a full range of services along the development pipeline: from early-stage development, component design and prototyping, application engineering, customization and micro-assembly to high volume serial production.



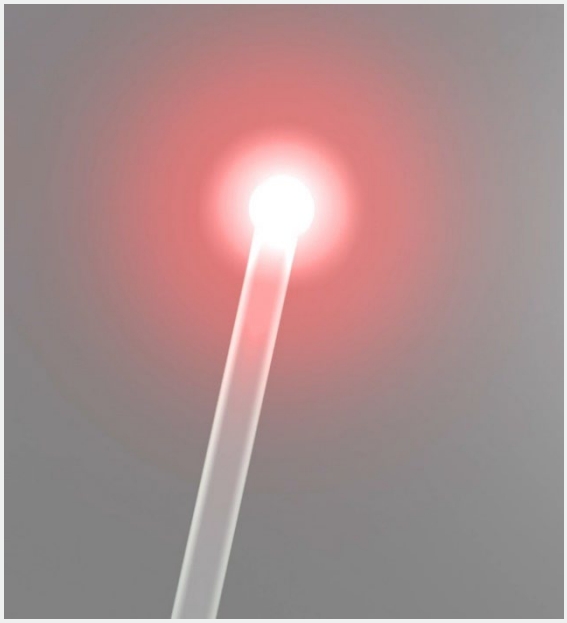
Applications

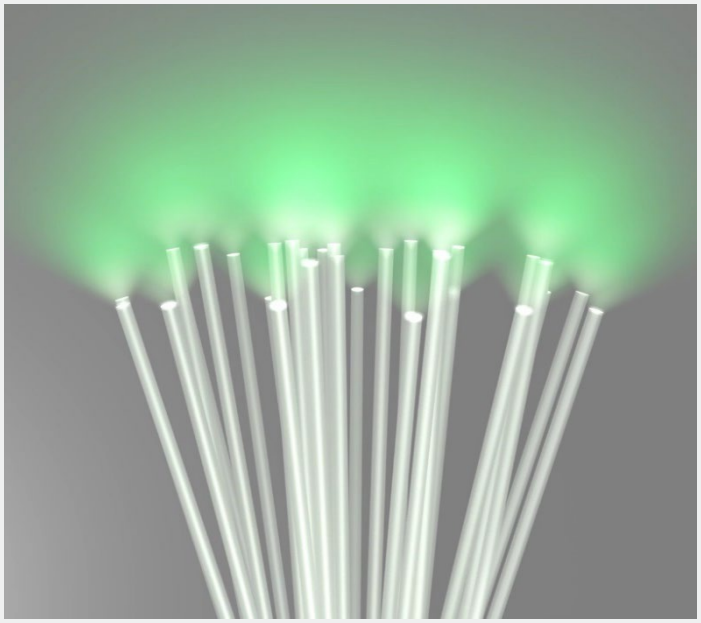
The SCHOTT® Luminous Diffusers enable medical treatments to be conducted more effectively, helping to improve patients' health.

Ideally suited for light-based medical treatments such as photodynamic therapy (PDT), photoimmuno therapy (PIT) or laser-induced thermal therapy (LITT), laser diffusers support, for example, the fight against cancer or can be used for higher power applications such as vein sclerotherapy.

They can also be used in other medical fields such as dentistry or dermatology.

SCHOTT
glass made of ideas





Product Variants

Various geometries are available:

- **Cylindrical diffusers**, typically 5 mm to 50 mm in length, radiate light to the side but not the front, with a power output of up to 500 mW/cm². Directed or sectional radiation profiles are also possible. Typical applications are photodynamic and photoimmuno therapy.
- **Front-emitting diffusers** radiate light only from the tip. Optical components can be combined with the fiber to achieve a specific light homogeneity or beam shape. These diffusers can be used for various medical applications. Customized shapes are available upon request.
- **Spherical diffusers** with a typical diameter of 0.3 mm to 1.0 mm are composed of a fiber with a ball-shaped tip and are used for laser-induced thermal therapies. SCHOTT's glass-based materials offer extremely homogeneous radiation characteristics and support power up to 20 W.
- **Special-shaped diffuser** solutions are also available.

Prospects are encouraged to approach us early on and to explain their needs so that we can cooperate closely to develop a customized solution.

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