

Heraeus Quartz Glass Sleeves High Quality from the Lamp Specialist

UV lamps and sleeves from Heraeus Noblelight are manufactured from high quality quartz glass: a material noted for its extremely high mechanical and thermal stability. In addition, quartz glass is highly transparent to UV radiation.

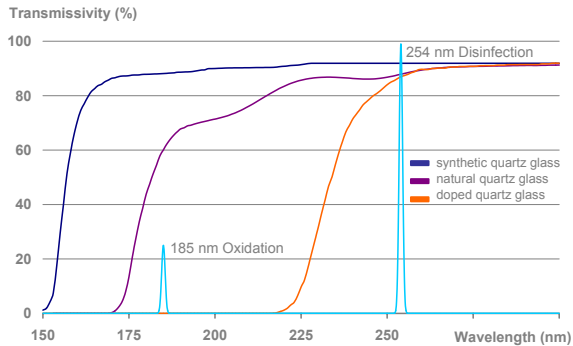
Various types of quartz glass (natural, synthetic or doped) are used for the tubes and sleeves of UV lamps.

Protection tubes can be used for electric isolation in water and for thermal insulation. The use of protection tubes permits easy cleaning of UV lamps and is used in various applications.

Heraeus offers protection tubes for all lamps and provides advice on their selection.

For example, ozone-generating lamps should be mounted in protection tubes of synthetic quartz glass. Synthetic quartz glass is most suitable as this offers the best ozone output. This ensures that the 185 nm radiation is efficiently transmitted through the tube wall. It is also important to minimize the spacing between lamp and tube. 185 nm radiation is absorbed by air. Thus, a large spacing would imply losses in VUV intensity.

Transmissivity of Quartz Glass



The discharge of low pressure lamps generally emits radiation at wavelengths of 185nm and 254nm. While all lamps made of the diverse material (natural, synthetic or doped quartz) have approximately the same output at 254nm, the output at 185nm depends on the quartz type used.

- Lamps made of natural quartz convert approximately 5% of the electrical input power into 185nm UV radiation.
- Synthetic quartz offers approximately 50% more transmission and UV at 185nm than natural quartz. Approximately 9% of the input power is converted into 185nm UV radiation.
- Using doped quartz the 185nm UV radiation can be completely filtered out while leaving the intense UV radiation at 254nm. These ozone-free lamps can be used for applications which do not require any ozone.

Quartz Sleeve Types

Heraeus offers a variety of quartz sleeves. Open and closed (domed) ends are available.



Features of Heraeus Quartz Sleeves:

- Customized length
- Flame-polished sleeve ends
- Standard wall thickness: 1.5 mm
- Individual diameters and wall thicknesses available upon request.

Configuration

Following example configuration should help you to understand finding the right configuration.

Following standard diameters are available:

Natural Quartz

Outside Diameter	Inside Diameter	Recommended for lamp diameter
■ 23 mm x	20 mm	15 mm
■ 25 mm x	22 mm	15 mm
■ 28 mm x	25 mm	19 mm
■ 29 mm x	26 mm	19 mm
■ 44 mm x	41 mm	32 mm

Synthetic Quartz

Outside Diameter	Inside Diameter	Recommended for lamp diameter
■ 28 mm x	25 mm	19 mm

- Lamp G36T5VH - 15 mm lamp diameter
- Quartz material of lamp: natural quartz
- Recommended sleeve: natural quartz, 25mm diameter; synthetic quartz is an alternative with even higher transmissivity.

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