Disinfection and cleaning with ultraviolet light is a cost-effective and environmentally friendly alternative to conventionally used chemical processes. Especially the deep UV radiation is becoming a more and more important tool in modern industrial applications. In LCD and semiconductor industries high energy 172 nm UV radiation is used for surface cleaning and processing of wafers and flat panel displays. Other application examples for 172 nm radiation are photochemical vapour deposition, surface activation and photochemistry. The materials specialist Heraeus provides premium synthetic quartz glass especially for deep UV applications.

Heraeus features:

- full synthetic quartz glass tubes for 172 nm applications (furnace cut, machine cut, fire polished, domed)
- highest transmission
- longest lifetime
- outstanding chemical purity
- technical product support
- flexible order quantities
- customized tube size: OD 3 – 350 mm diameter
Suprasil® 310

Typical transmission spectrum of Suprasil® 310

Heraeus provides premium quartz glass tubes for UV and deep UV applications with superior visual quality. These tubes have a superior transmission and a significantly improved lifetime compared to standard natural quartz glass tubes. Supporting highest UV output over a very long operation time Heraeus synthetic tubes provide highest reliability for your products and lower operational costs.

Transmission of different quartz glass types at 172 nm as a function of irradiation time


Suprasil® 310 features

- Wavelength range: > 160 nm
- Optical transmission: Outstanding transmission in the deep UV < 200 nm (80% @ 172 nm for 2 mm thickness)
- Resistance to deep UV radiation: Withstands even aggressive 172 nm radiation
- Application examples:
  - Cleaning of surfaces, e.g. in processing of semiconductor wafers and flat panel displays
  - Photochemical vapour deposition
  - Changes in structure and composition of surfaces
  - Activation of surfaces
  - Photochemistry
- Lamp types:
  - 172 nm excimer lamps
  - Deep UV lamps
- Visual quality: Outstanding visual quality, almost free of any bubbles and inclusions
- Availability/MOQ: 10 kg

Typical impurity content in weight ppm (µg/g)

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<th>Element</th>
<th>Li</th>
<th>Na</th>
<th>K</th>
<th>Mg</th>
<th>Ca</th>
<th>Fe</th>
<th>Cu</th>
<th>Cr</th>
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www.lamp-materials.heraeus-quarzglas.com