

## FTIR, Raman, Microscopy

# Silicon Filters for Microplastic Particle Analysis

### Features

- IR transparent, roughness < 10 nm
- variable pore geometry and filter sizes
- laser micro machining (pat. pend.)

### Raw Material

- double-sided polished silicon CZ wafer
  - diameter: 15,24 cm (6")
  - thickness: 300 ± 15 µm

### Details

- in general: flexible adaptation according to customer requirements/agreement possible
- external dimensions
  - square: 5 x 5 mm<sup>2</sup> ... 50 x 50 mm<sup>2</sup>
  - round: 5 mm...100 mm Durchmesser
- pore geometry: conical to cylindrical
  - laser entrance:: 1000...50 µm
  - laser outlet:: 1000...25 µm
- pore spacing/pitch (center - center): 1000...100 µm
- pore arrangement:: quadratisch, sechseckig

### Standard 300 µm Wafer Thickness (for Minimum IR Interference and High Strength):

<u>Dimension</u>	<u>Pore Geometry</u>	<u>Pitch</u>	<u>Arrangement</u>
round d = 9 mm	entry/exit: 50/25 µm	200 µm	square
round d = 9 mm	entry/exit: 50/25 µm	100 µm	hexagonal

### Contact

Paul-Tiberiu Miclea  
Diagnostics & Metrology  
Solar Cells  
Tel. +49 345 5589-5413  
Fax +49 345 5589-5999  
paul-tiberiu.miclea@  
csp.fraunhofer.de

Fraunhofer CSP  
Otto-Eissfeldt-Sr. 12  
06120 Halle (Saale)  
Germany  
www.csp.fraunhofer.de