

Tech Brief

Diffuser

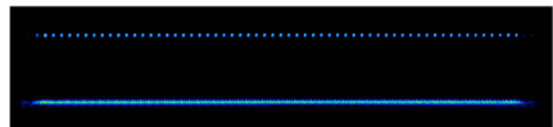
Interference and Speckle-Reduction

The performance of laser beam homogenizers is limited by interference and speckles effects. 1D or 2D diffusers are commonly used to smoothen the laser intensity profiles for cw-laser or pulse lasers with multiple pulse exposure.

SUSS MicroOptics has developed a unique manufacturing technology which allows the **precise control** of the diffusing angle over a large angular range.

Features for SUSS MicroOptics Diffusers

- Bulk material: Fused Silica
- Spectral wavelength 193 nm – 3 μ m
- Random diffusers 1D and 2D
- Anti-Reflection coatings available on request

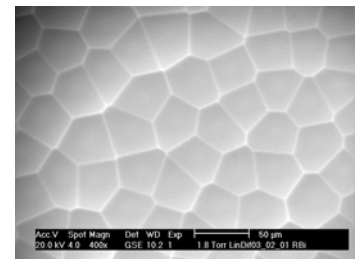


Line without (top) and with 1D diffuser (bottom)

Features for Rotating Diffusers

Rotating diffusers are used to integrate a changing speckle or interference pattern over time

- 2D random diffuser
- For multi shot and cw applications
- Power supply, motor and mount included



A Large Selection of Diffusers Available Off-The-Shelf

- Diffusing angles of 1°, 2°, 5°, 10° FWHM on stock
- Array sizes available from 5x5 mm² to 120x120 mm²
- Complete rotating diffuser set on stock



Rotating diffuser disk & mount

Tailor-Made Diffusers

Customized diffusers or modification of our standard diffusers (AR-coatings, etc.) are available with short delivery time.

Our Technology is Your Benefit

With our precise metrology techniques, SUSS MicroOptics is able to meet very tight specifications for our micro-optics. SUSS MicroOptics is the preferred supplier for leading companies worldwide using our diffusers in highly demanding applications such as wafer stepper illumination. Our wafer-based manufacturing technology (8") enables us to provide outstanding quality for very competitive prices. Simply send us your requirements, and we will find the appropriate solution.

Contact

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