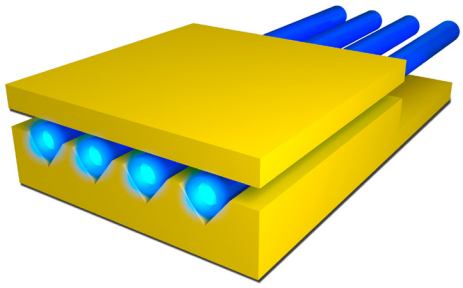
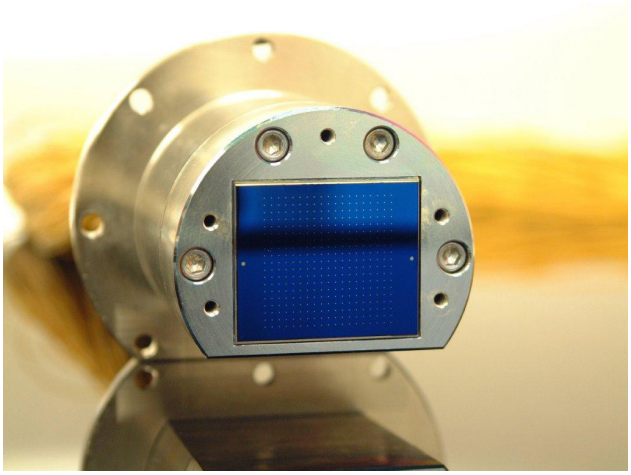
fiberguide industries
THE FIBER OPTIC SOLUTIONS COMPANY
A HALMA COMPANY

Fiber Optic V-Grooves & Arrays



V-Groove



2D-Array

Fiberguide produces extremely tight tolerance one-dimensional (V-Grooves) and two-dimensional arrays using our patented manufacturing techniques.

These arrays range from a few fibers to thousands of fibers depending on the application. Optical Arrays are used in optical switching and in sensing applications where spatial optical data is necessary, such as DNA sequencing, astronomy, and nuclear research.

STANDARD SPECIFICATIONS:

- Single Mode, Multimode, PM/PZ
- Array End: Precision Machined or Silica V-Grooves, Custom Silicon Wafers
- Connector Options: SMA, FC, ST, SC, LC, MTP, etc.
- Packaging: Fiberguide can design and fabricate custom array housings and sheathing arrangements to protect the fiber depending on the application.
- Standard Temperature Range: -40°C to +100°C / -40°F to +212°F

APPLICATIONS:

- Fiber Optic Switch
- Signal Processing
- Astronomical Analysis
- Military Mapping
- DNA Micro-array technology
- Optical Tomography

Headquarters & Fiber Manufacturing
1 Bay Street, Stirling, New Jersey 07980
Phone: (908) 647-6601

Assembly & Manufacturing Facility
3409 E. Linden St., Caldwell, Idaho 83605
Phone: (208) 454-1988

Contact Us
Email: info@fiberguide.com
www.fiberguide.com

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V-Grooves

Fiber Type	Single Mode, Multimode, Polarization Maintaining (PM/PZ)
Fiber Size (µm)	Cladding OD = 125
Fiber Count	≤ 128
Fiber to Fiber Pitch (µm)	≥ Cladding OD + 2µm = 127
**** Fiber Height Above Substrate (µm)**	0 or 10-100 ± 0.5
*** Flatness (Peak to Valley) (µm)**	≤ 5
RMS Fiber Roughness (nm)	≤ 100
Fiber Yield	≥ 98%

	Single Mode	Multimode	PM/PZ
Fiber Core True Position (µm)	≤ 1	≤ 3	≤ 3
Maximum Fiber Angularity (Fiber to Substrate)(mrad)	≤ 30	≤ 50	≤ 50
Visual Alignment	N/A	N/A	± 3˚

2D Arrays

Fiber Type	Single Mode, Multimode, PM/PZ
Fiber Size (µm)	Cladding OD = 125 - 220
Fiber Count	≤ 4096
Fiber to Fiber Pitch (µm)	≥ Cladding OD + 45
**** Fiber Height Above Substrate (µm)**	0 ± 0.5
*** Flatness (Peak to Valley) (µm)**	≤ 0.5
RMS Fiber Roughness (nm)	≤ 30
Fiber Yield	98%

	Single Mode	Multimode	PM/PZ
Fiber Core True Position (µm)	≤ 2	≤ 5	≤ 5
Maximum Fiber Angularity (Fiber to Substrate)(mrad)	≤ 15	≤ 20	≤ 20
Visual Alignment	N/A	N/A	± 3˚

Note:
*** = 25mm x 25mm measurement area (Max)**
**** = Adjacent to Fiber Location**

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