Adamant Namiki Precision Jewel Co., Ltd.

Global Operations

New Jersey, USA

Adamant America, Inc.

Lausanne, Switzerland

Namiki Precision of Europe SA

Tokyo

Head Office / R&D

Kuroishi, Aomori

Aomori Kuroishi Factory

California, USA

Namiki Precision Of California, Inc.

Chiangmai, Thailand

Namiki Precision (Thailand) Co., Ltd.

Singapore

Namiki Precision Singapore Pte. Ltd.

Yokote, Akita

Akita-Adamant Co., Ltd.

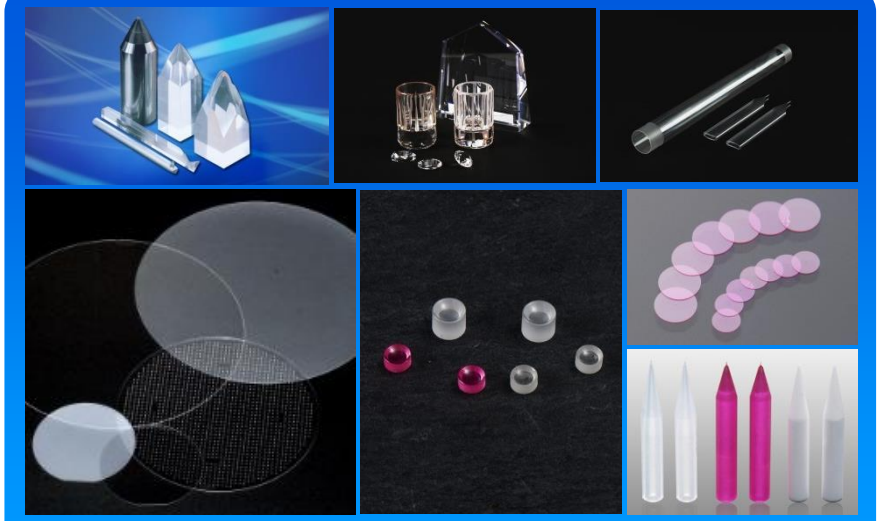
Yuzawa, Akita

Akita Yuzawa Factory

Factory

Office

Products



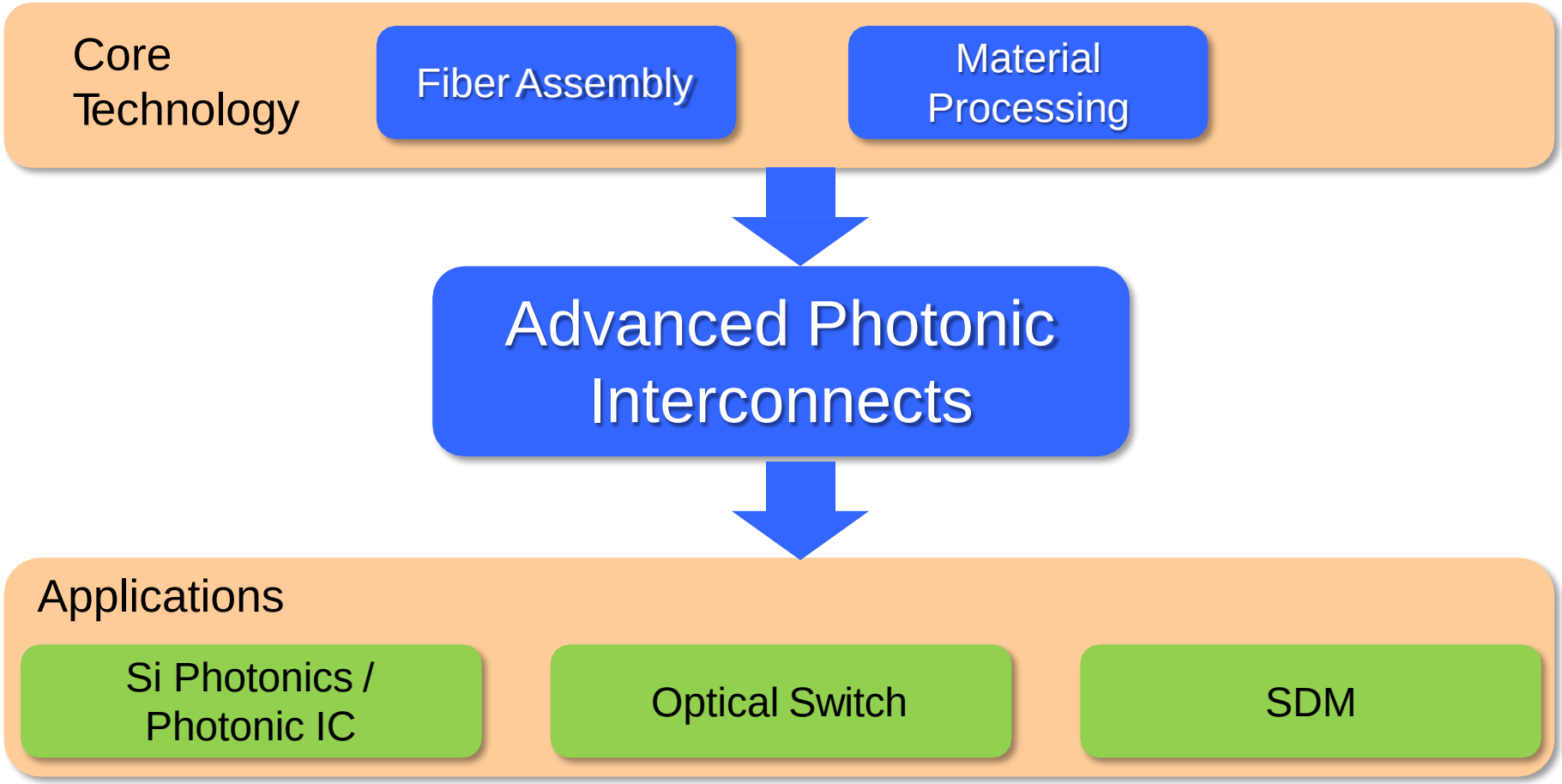
Industrial Jewel Parts

DC Coreless Motors

Fiber Optic Components

Medical Devices

Our Value



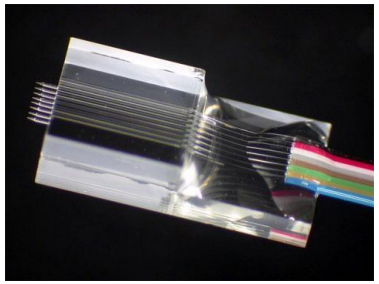
Let us design with you the optical I/O for next-generation applications.

High-speed transceivers? On-board optics? Photonics Packaging?

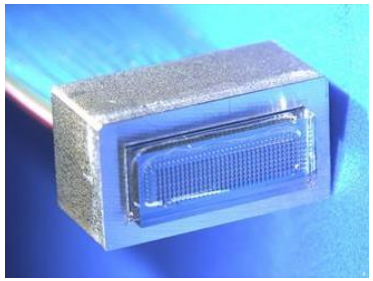
Company Confidential

Technology

Fiber Assembly

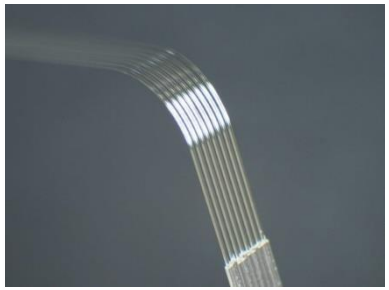


1D Array

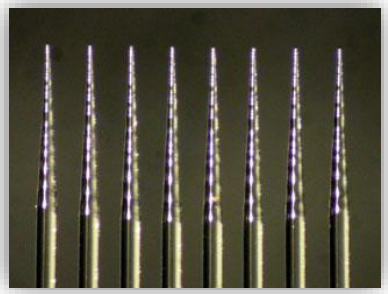


2D Array

Advanced Fiber Processing

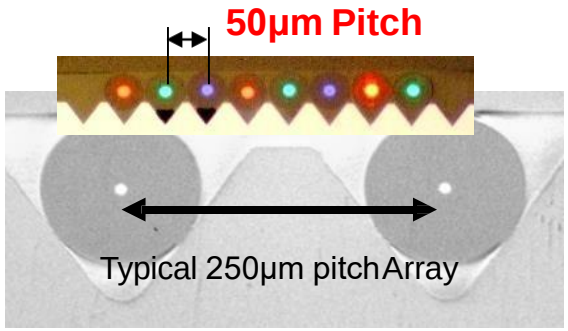


Bending / Thermal Processing

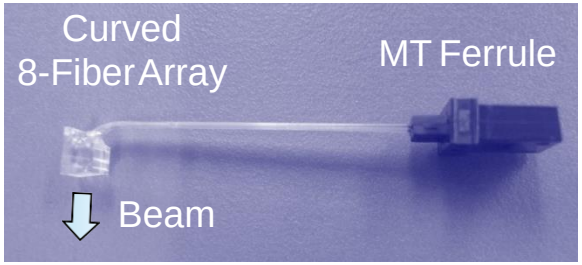


Etching / Polishing

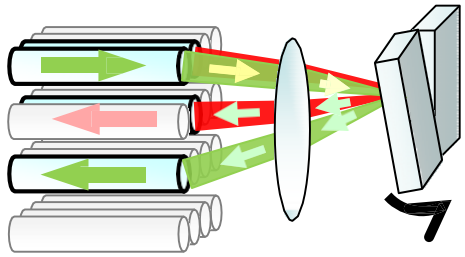
Advanced Interconnects



Narrow-Pitch Array



Curved Fiber Array + MT



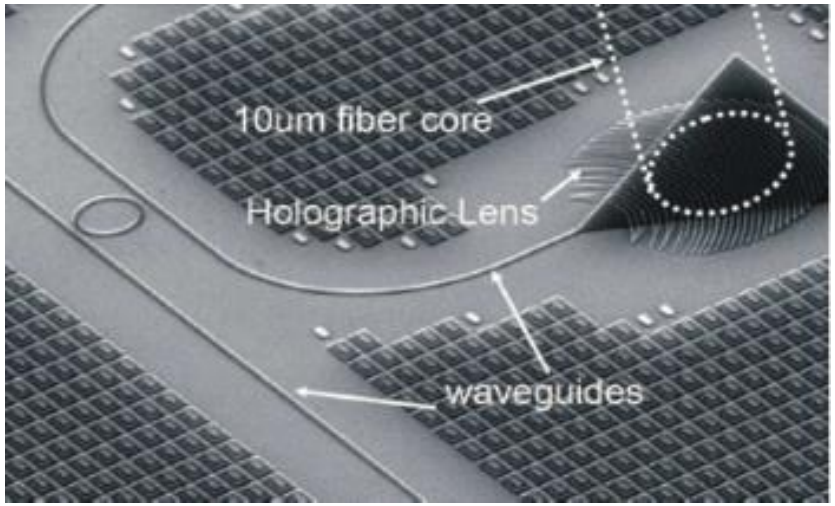
2D MEMS Switch

MCF Array, Fan-In/Out

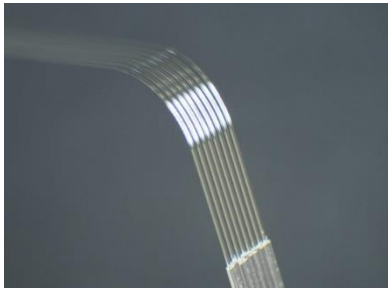
Company Confidential

Inter Connecting Device

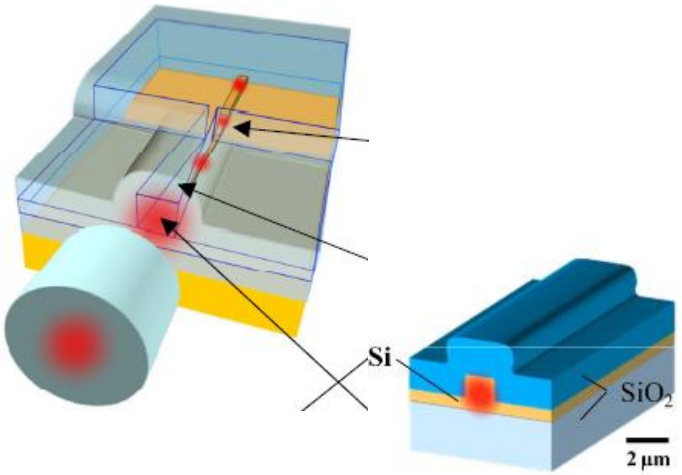
Grating Coupler



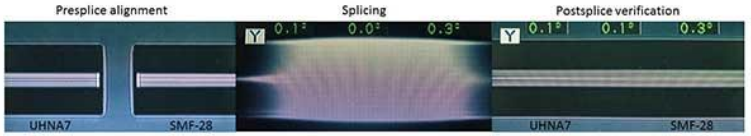
Bending Fiber / Laser Micromachining

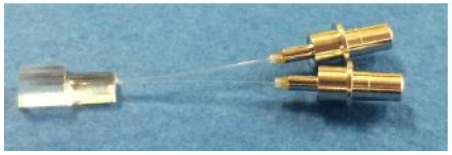


Edge Coupler



MFD Conversion Fiber(TEC Fusion)

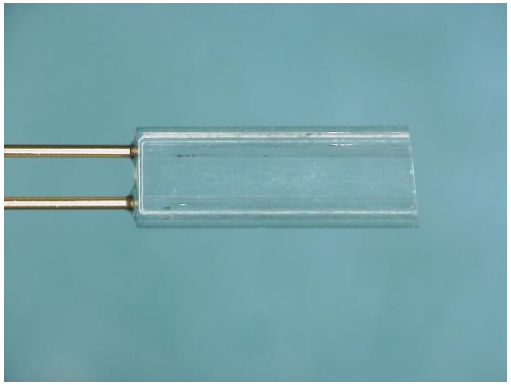




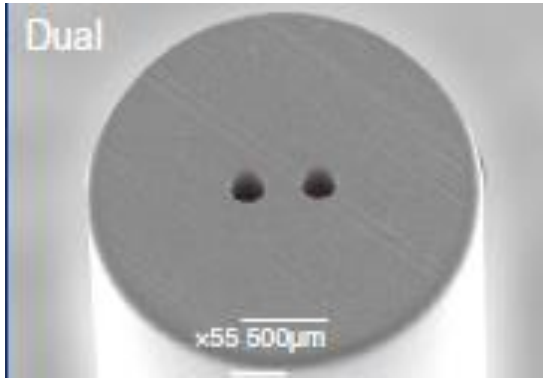
Fiber Assemblies for Coherent Devices

2 Channel Fiber Coupler

Glass Capillary Assembly

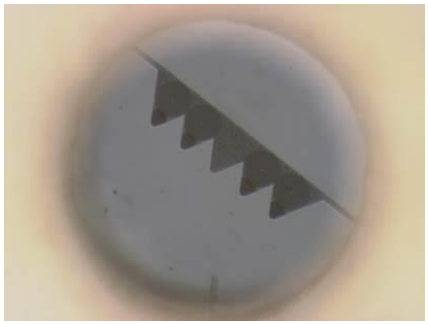


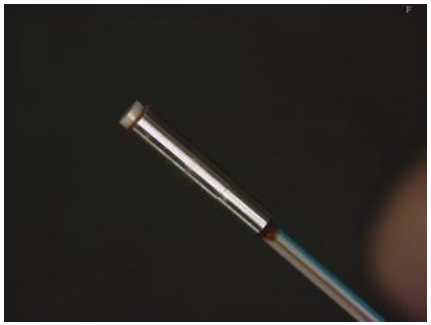
Dual Hole Ferrule Assembly



Fiber Block with Lensed Fiber

Multi-Channel Fiber Coupler (SUS Ferrule)



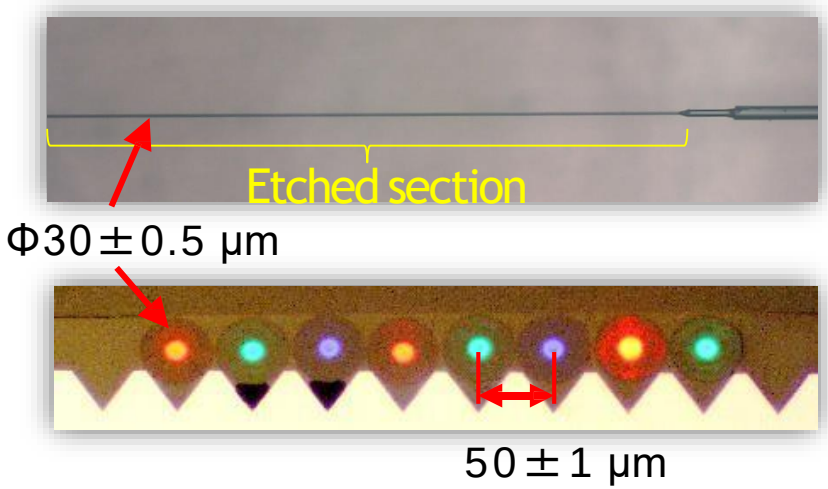


For a fiber and chip combination, a multi-channel fiber assembly is possible. Glass capillaries for direct coupling with a chip, a ceramic capillary with a SUS ferrule base for spatial beam combinations are applicable as well. In the case of 2 channels, a combination of SMF + PMF, PMF + PMF as well as SMF + SMF are considered. Further multi-channel combinations using specialty fiber are assumed requiring fiber array coupling using 4 core SUS ferrule and PMF multi-core fiber, which has been developed.

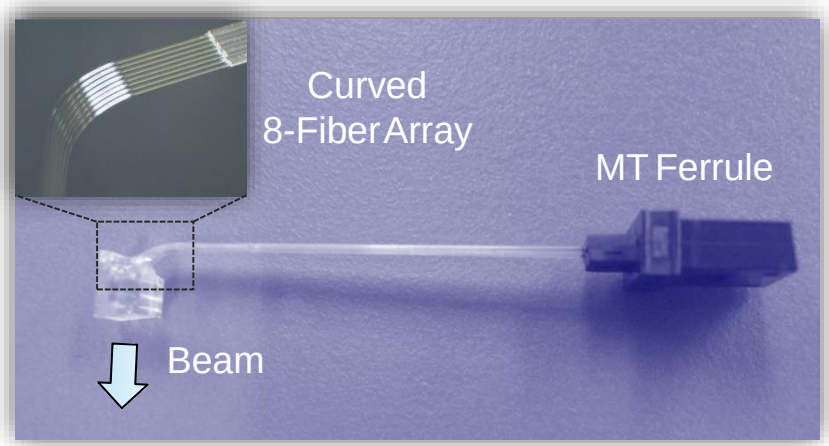
Pigtail fiber for Custom module

Advanced Fiber Processing

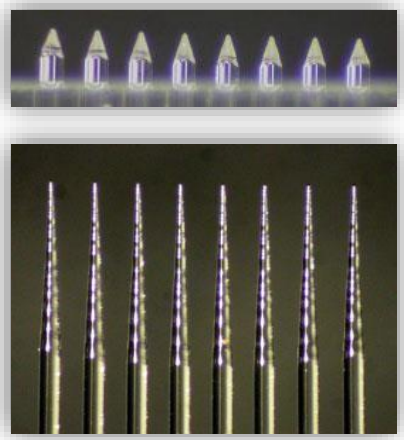
Fiber Etching → Narrow-Pitch Array



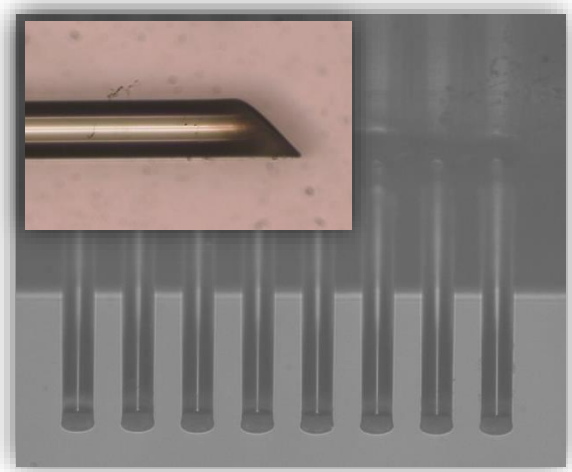
Thermal Processing → Curved Fibers



Grind / Polish → Lensed Fibers



Laser Cleave → Angled Fiber Tips



Company Confidential

Laser Micromachining for Fiber Optics

Field of Target

Photonic IC Interconnects

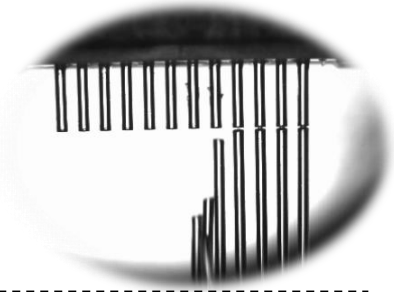
Pigtail Fiber for Small Form Transceivers

Technologies/Products

Fiber Processing by Laser

FAU by Laser processing

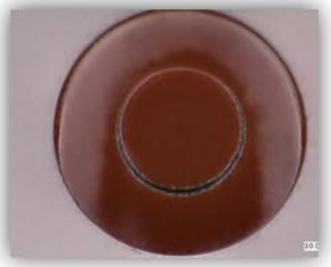
Laser Cleave of Fiber with Glass Capillary

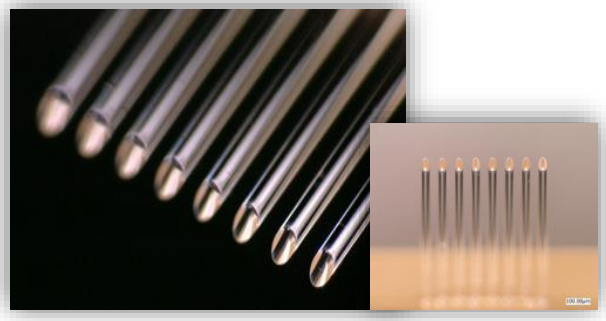


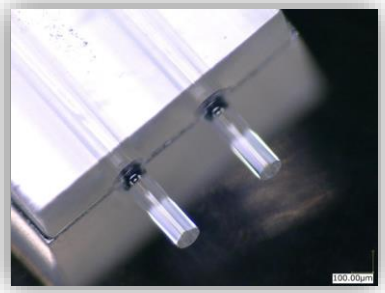
Adamant's laser processing technology realizes high efficiency coupling between optical fiber and optical parts (Si / Quartz waveguide, LD, PD, etc.) by its high accuracy micromachining.
Our highly skilled engineering customized coupling devices design to our clients' needs.

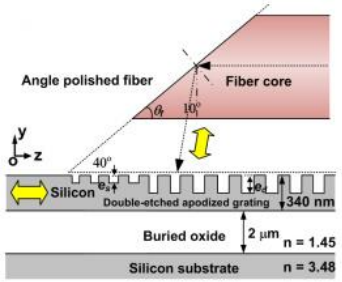
Parameter	Specifications
Channels	Single, Arrayed (≤12ch)
Diameter of Fiber	Φ80um, 125um (standard) or Others
Type of Fiber	SMF, MMF, PMF
Variation of fiber protruding	≤1um (fiber core to core as same fiber array)
Angle of Fiber Endface	0 to 45 deg. or Custom
Variation of Angle	+/-0.5deg (3σ), +/-0.3 deg (typical)
ROC of Fiber Endface	R0.4mm (typical)
Reflection	≤60dB (8 deg.)
Ra	0.03um

Fiber Cleaving
with Glass Tube(Φ0.4Max)









Specific Fiber Array

Field of Target

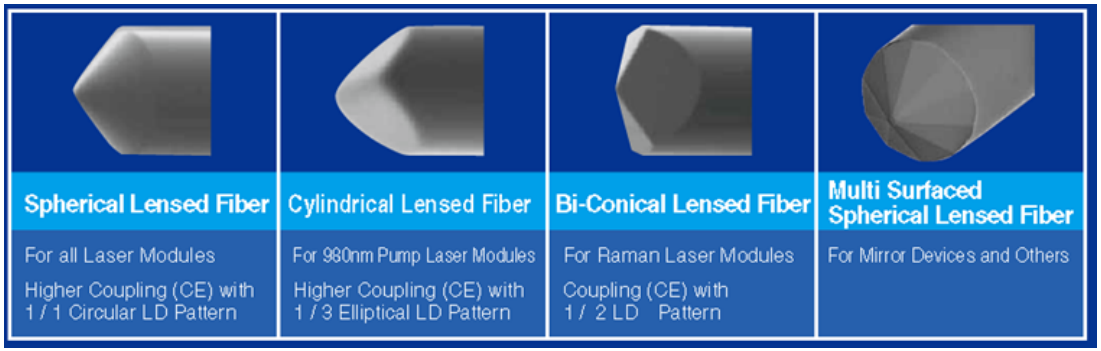
Photonic IC Interconnects

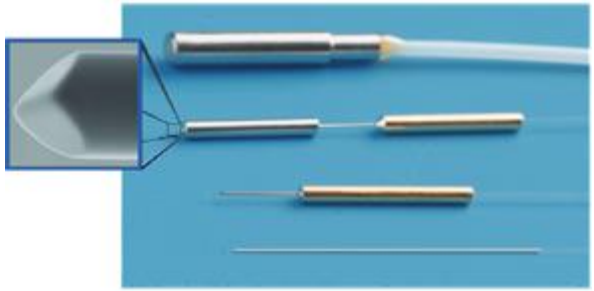
Pigtail Fiber for Small Form Transceivers

Technologies/Products

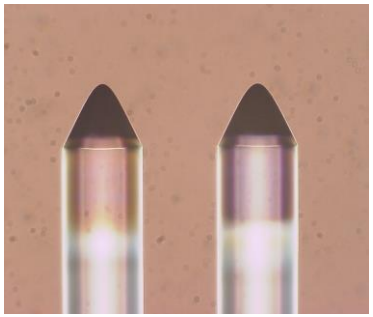
- Lensed Fiber Assembly
- Fiber Array for Reflow Process
- Narrow Pitch Fiber Array

Adamant embodies the fiber coupler according to market requirements with original technology.



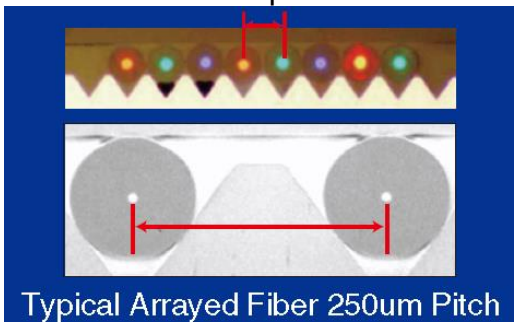


Multi Channel Lensed Fiber Array



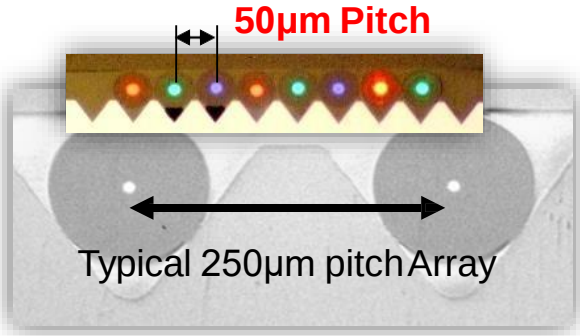
Reflow(over 250℃) FA

80um pitch

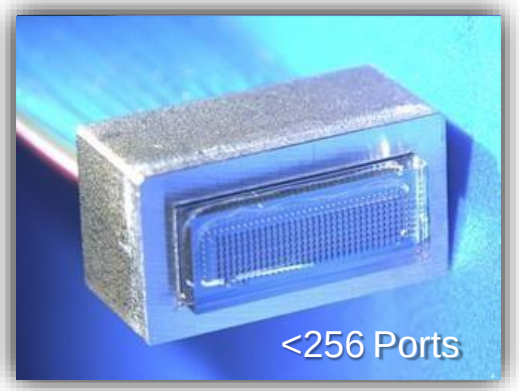


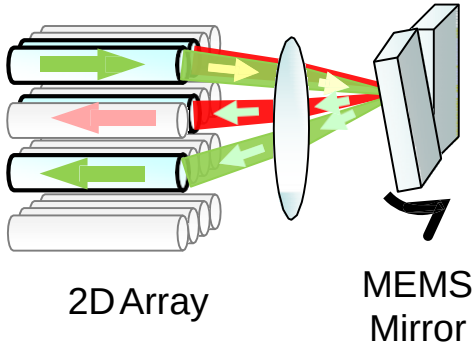
High-Density Interconnects

High-Density Fiber Arrays



Narrow-Pitch Array

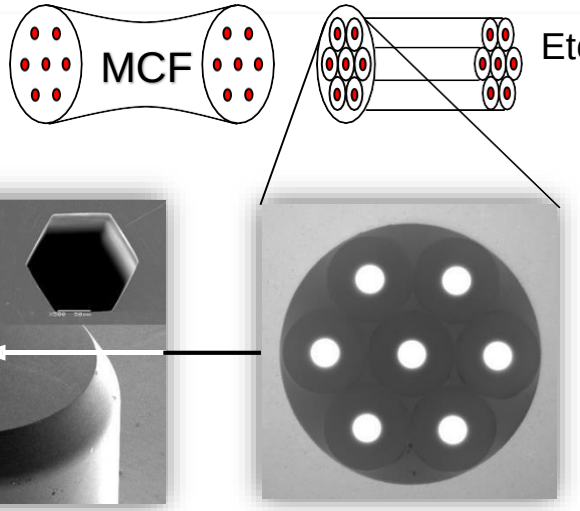




2D Array for MEMS Optical Switch

SDM Solutions

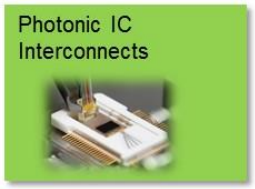
Multi-Core Fiber Array



Etched-Fiber Bundle for MCF Fan-In/Out

2D Fiber Assembly

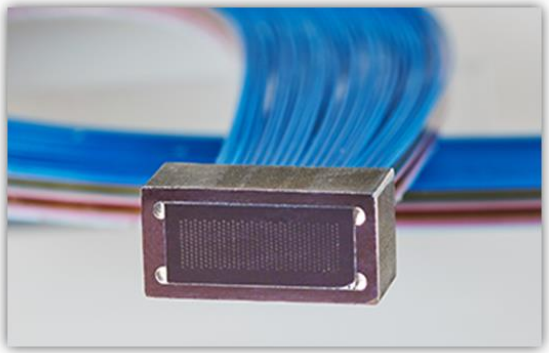
Field of Target

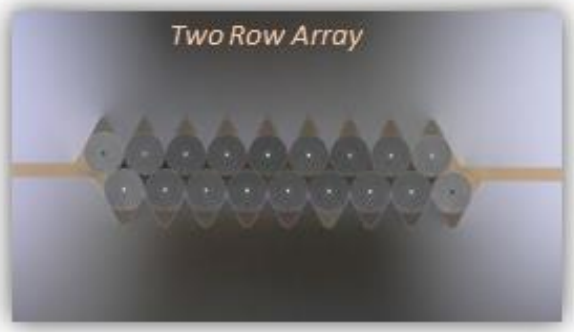


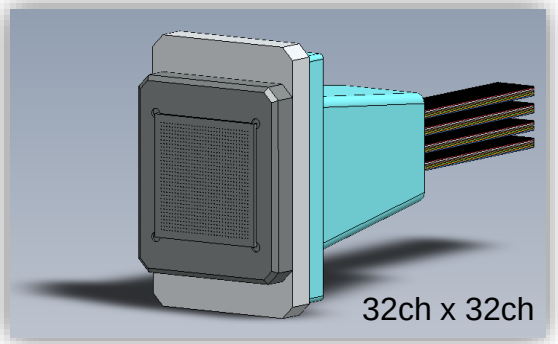
Technologies/Products

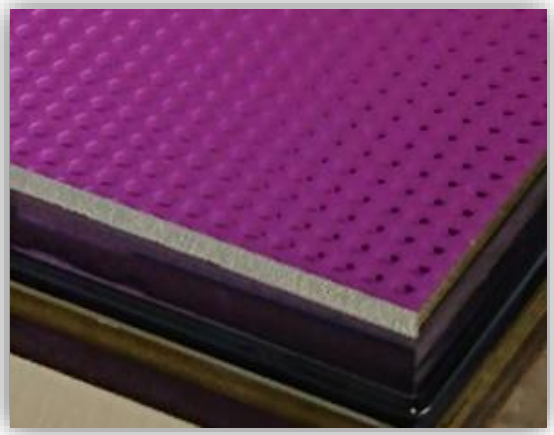
- 2D Fiber Assembly for PIC Coupling
- 2D Fiber/Collimator Array(SMF)
- 2D Fiber/Array(MCF, PMF)

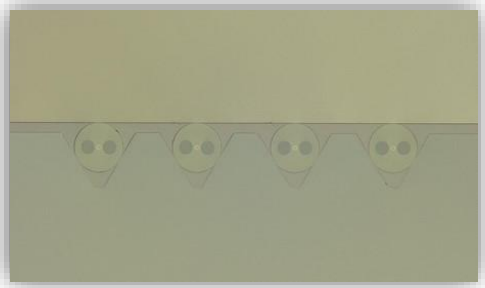
Adamant is developing 2D fiber coupler for multi channel transmission.
In the future, we plan to apply special fiber (Multi Core Fiber, PMF).











Ceramic Ferrule Molding

Field of Target

Ceramic Ferrule for Advanced Connecting

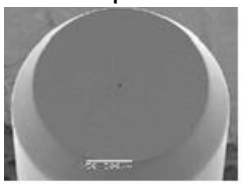
Technologies/Products

- Special Inner Diameter Ferrule
- Non Circular Hole Ferrule
- 4ch LC Ferrule for MMF, SMF
- 4ch LC Patch Cord for SMF

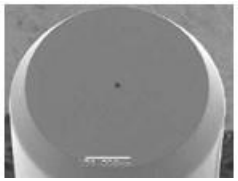
Adamant is developing its next generation ferrule with own injection molding technology.

Special Inner Diameter Ferrule →

60μm



80μm



500μm

Developing SMF ferrule of minimum 40 um

Non Circular Hole Ferrule for MCF, PMF →

D-hole

Square

Hexagon

Multi Channel Ferrule and Assembly →