

Edge-Coupling Fiber Array Unit

Description

The Edge-Coupling Fiber Array Unit is designed for High-Precision optical coupling between fiber arrays and photonic integrated circuits, including silicon photonics, thin-film lithium niobate, InP, glass waveguides, and other Edge-Coupled optical chips.

With tightly controlled fiber core positioning, customized End-Face geometry, and flexible mechanical design, the FAU enables stable, Low-Loss, and scalable optical interconnection for High-Speed optical transceivers, coherent modules, CPO/OIO architectures, optical sensing, and advanced photonic packaging.

Key Features

- High-precision fiber core alignment for edge-coupled photonic chips
- Customizable fiber pitch: 127 μm /250 μm /Customer-Specific (1D or 2D)
- Supports SMF, PM fiber, polarization-maintaining fiber arrays, and specialty fibers
- Optional angled polish for back-reflection reduction
- Compatible with SiPh, TFLN, InP, PLC, glass, and other photonic platforms
- Custom mechanical outline for active/passive alignment and automated assembly
- Available with lid glass, V-groove substrate, spacer, stopper, and customized bonding area
- Suitable for High-Density optical I/O and advanced photonic packaging

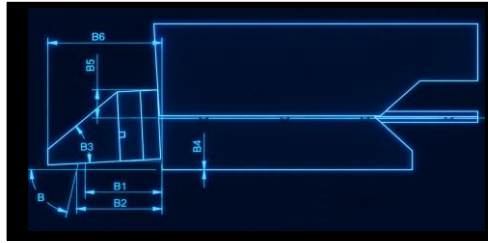
Applications

- Silicon photonics edge coupling
- Thin-Film lithium niobate modulator coupling
- Coherent optical modules
- 800G/1.6T optical transceivers
- CPO/optical I/O packaging
- Optical engine assembly
- LiDAR optical modules
- Fiber sensing and test systems
- Medical and scientific photonic systems

Specifications

Parameter	Unit	Value
Wavelength	nm	1310
Fiber Count	-	8 ch, 16 ch, 32 ch, 40 ch, 80 ch + (Customizable)
Max. Connector Insertion Loss	dB	0.5
Max. Coupling Insertion Loss	dB	1.0
Min. Return Loss	dB	30.0
Min. PER	dB	20.0
Fiber Pitch Spacing	μm	84 μm , 127 μm , 250 μm (Customizable)
Max. Core Pitch Error	μm	± 1.0
Fiber Type	-	SM (G.657.A1/A2), PM Fiber, RCBI (Reduced-Clad)
Termination Connector Type	-	LC, FC, MPO, MMC, ELSFP Connector (Customizable)
Operating Temperature	$^{\circ}\text{C}$	- 40 $^{\circ}\text{C}$ to + 85 $^{\circ}\text{C}$

Package Dimensions



Ordering Information

FA-①①-②-③-④-⑤

①①: Fiber Count

08 - 8 Channel

16 - 16 Channel

40 - 40 Channel

S - Specify

④: Connector Type

N - None

S - Specify

②: Fiber Pitch Spacing

1 - 84 μm

2 - 127 μm

3 - 250 μm

SS - Specify

⑤: Fiber Length

1 - 1 m

S - Specify

③: Fiber Type

F - SM Fiber

P - PM Fiber

R - RCBI Fiber

S - Specify