

High-Density Fiber Array Unit (FAU) Specification

Description

Vlink's High-Density Fiber Array Unit (FAU) is engineered for ultra-high-channel-count optical interconnection scenarios, including silicon photonics chip packaging, co-packaged optics (CPO) and next-generation hyperscale data center networks. Manufactured with high-precision V-groove substrate technology, it delivers industry-leading fiber core positioning accuracy, ultra-low insertion loss and excellent optical uniformity even at extreme channel density. Supporting a wide range of channel counts and customizable fiber pitch options, this product provides a compact, reliable and scalable optical interconnection solution for 51.2T/102.4T switching systems and high-performance computing (HPC) architectures.

Key Features

- Sub-micron precision core pitch control
- Low insertion loss & high return loss
- Multiple fiber pitch options (84μm / 127μm / 250μm)
- Compatible with SM, PM and reduced-clad specialty fibers
- Robust Reliability

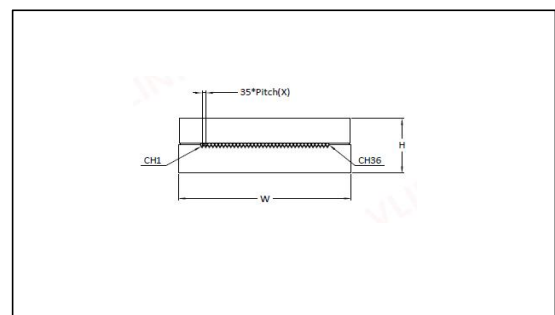
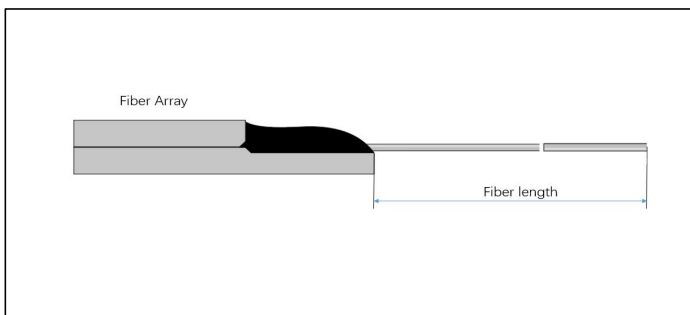
Applications

- CPO (Co-Packaged Optics)
- High-density Wavelength Selective Switch (WSS)
- AI/ML clusters & GPU-to-GPU interconnects
- HPC optical backplane systems

Specifications

Parameter	Unit	Value
Wavelength	nm	1310, 1480, 1550, 1620 (Customizable)
Fiber Count		16ch, 32ch, 40ch, 80ch, 128ch, 256ch(Customizable)
Typ. Insertion Loss	dB	0.10
Max. Insertion Loss	dB	0.15
Min. Return Loss	dB	30.0
Min. PER	dB	20.0
Fiber Pitch Spacing	μm	84μm, 127μm, 250μm (Customizable)
Max. Core Pitch Error	μm	± 0.7
Fiber Type		SM (G.657.A1/A2), PM Fiber, RCBI (Reduced-Clad)
Termination connector type		LC, FC, MPO, MMC, ELSFP connector(Customizable)
Operating Temperature	°C	- 40 °C to + 85 °C

Package Dimensions



Ordering Information

FA-①①-②-③-④-⑤

①①: Fiber Count

01 - 36 Channel

02 - 40 Channel

03 - 80 Channel

S - Specify

②: Fiber Pitch Spacing

1 - 84 μm

2 - 127 μm

3 - 250 μm

SS - Specify

③: Fiber Type

F - SM Fiber

P - PM Fiber

R - RCBI Fiber

S - Specify

④: Connector Type

N - None

S - Specify

⑤: Fiber Length

1 - 1 m

S - Specify