

48-FPC-2-3_dc-xxx

Fiber Port Cluster 2 → 3 dichroic



FEATURES

Fiber Port Cluster for two input sources with differing wavelength and with 3 output ports.

- Configuration 2 → 3 dichroic
- Superposition by means of a polarization beam splitting cube and a dichroic wave plate
- Highly efficient coupling into polarization-maintaining fiber cables
- Adjustable splitting ratio
- Compact, rugged, transportable and sealed opto-mechanical units
- Fully fiber-coupled
- Very high long-term stability, efficiency and reproducibility

DESCRIPTION

This Fiber Port Cluster 2 → 3 dichroic is a compact opto-mechanical unit that combines two fiber-coupled sources with differing wavelengths and then splits the combined radiation into 3 output fiber cables with high efficiency and variable splitting ratio.

Optical Setup

The two input ports are fiber-coupled to [PM fiber cables](#). Polarizers define the input polarization which is necessary for a long term stable splitting ratio.

Two photo diodes right after each input port allow for a continuous monitoring of the radiation. The two differing input sources are superimposed by means of polarization beam splitting cube. A dichroic wave plate rotates the two orthogonally polarized input beams of different wave lengths into linear polarization states in parallel.

Subsequently, the radiation splitting is achieved by using a cascade of rotary half-wave plates in combination with polarization beam splitters. By use of the rotary half-wave plates, almost any desired splitting ratio can be achieved.

At the output ports further polarizers are placed in order to define the polarization at output of the system.

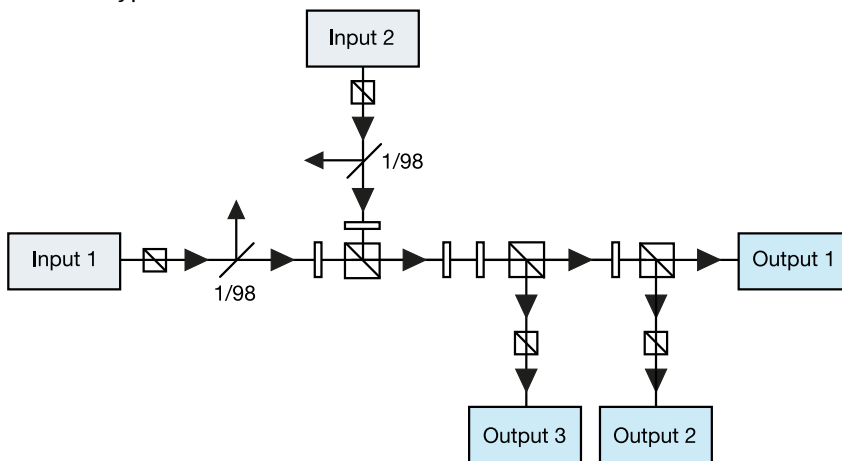
Fiber Couplers

A fundamental component of a Fiber Port Cluster is the [Laser Beam Coupler](#), which is the input into the opto-mechanical unit collimating the input radiation and, finally, couples the radiation back into the polarization-maintaining fiber cables. The stability of the total Fiber Port Cluster is determined by the [stability](#) of the laser beam coupler.

How to order

For a detailed quotation please additionally specify

- Wavelengths In 1 and In 2
- Cable lengths
- Connector types



TECHNICAL DATA

48-FPC-2-3_dc-xxx

Configuration	2 → 3 dichroic
Wavelengths*	394 + 404 nm, 606 + 628, 767 + 780 nm, 780 + 795 nm
Fiber type	polarization-maintaining
Connector type	FC APC (standard)
Cable lengths	Customer-specific
Wave plate type	dichroic
Power monitor	BPX-61 (SMA)
Transmission	≥ 65 % @ 780 nm
Polarization Extinction Ratio	≥ 23 dB @ 780 nm
Balancing	better 5 %
* Different wavelength combinations on request	

TECHNOTES

- [Article - Fiber Port Cluster](#)
[Rugged, modular and fiber coupled beam splitting and combining units](#)
- [Connecting multicube assemblies to a base plate](#)
[How to connect the self-supporting multicube system](#)

DOWNLOADS



[980129090503.pdf \(Dimensional drawing\)](#)



[Article_Cluster.pdf \(Technote\)](#)

RELATED PRODUCTS

FIBER COLLIMATOR 60FC-Q

Fiber Collimator for collimating large beam diameters
and with integrated quarter-wave plate

POLARIZATION ANALYZER SK010PA

Measurement tool for coupling into polarization-
maintaining fiber cables

FIBER COLLIMATOR SERIES 60FC-SF

Fiber Collimator/Fiber Coupler with super-fine thread

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