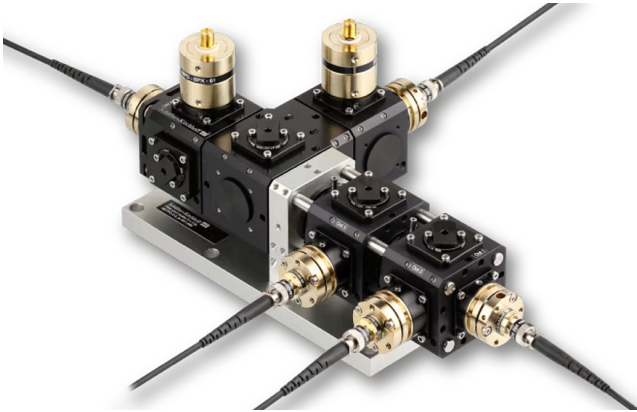


## 48-FPC-2-3\_lp-xxx

Fiber Port Cluster 2 → 3 long pass



### FEATURES

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

- Configuration 2 → 3 long pass
- Superposition by means of a dichroic mirror
- 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 long pass 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 a dichroic mirror (long pass).

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.

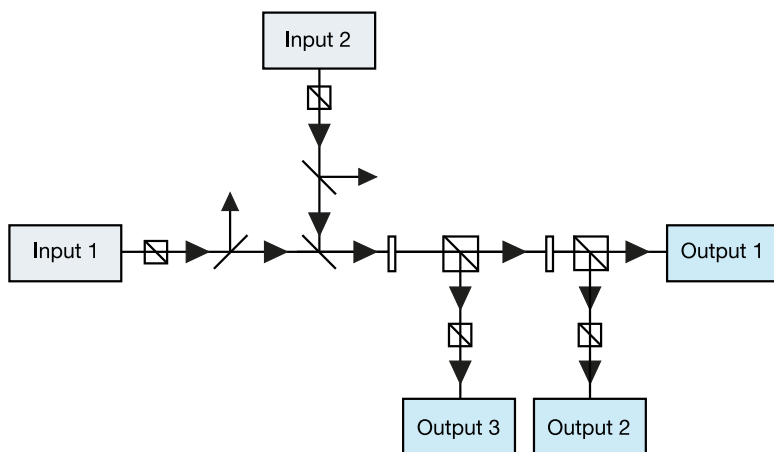
### Fiber Couplers

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\_lp-xxx

<b>Configuration</b>	2 → 3 long pass
<b>Wavelengths*</b>	399 + 556 nm, 403 + 461, 461 + 689 nm, 780 + 852 nm
<b>Fiber type</b>	polarization-maintaining
<b>Connector type</b>	FC APC (standard)
<b>Cable lengths</b>	Customer-specific
<b>Wave plate type</b>	dichroic
<b>Power monitor</b>	BPX-61 (SMA)
<b>Transmission</b>	≥ 65 % @ 780 nm
<b>Polarization Extinction Ratio</b>	≥ 23 dB @ 780 nm
<b>Balancing</b>	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



[980129090507.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

This is a printout of the page [https://sukhamburg.com/products/details/48-FPC-2-3\\_lp-xxx](https://sukhamburg.com/products/details/48-FPC-2-3_lp-xxx) from 5/5/2024

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