

Dichroic Beam Combiner 2 → 1, 48-MCS-028

Compact, rugged and highly efficient opto-mechanical unit with dichroic beam combining plate



FEATURES

Beam Combiner 48-MCS-028

- Configuration 2 → 1, dichroic
- Highly efficient coupling into polarization-maintaining fiber cables
- Superposition of two different wavelengths or wavelengths ranges
- Compact, rugged, transportable and sealed opto-mechanical units
- Fully fiber-coupled
- Very high long-term stability, efficiency and reproducibility

DESCRIPTION

This fiber-coupled Beam Combiner 2 → 1 is a compact opto-mechanical unit that combines 2 fiber-coupled sources with different wavelength or wavelength ranges into 1 output fiber cable with high efficiency.

Please note, that this configuration allows for superimposing two nearby wavelengths (wavelength difference < 10 nm).

In case of a larger difference in wavelength (> 10 nm) the configuration [48-MCS-016](#) is to be preferred.

Optical Setup

The input ports are each fiber-coupled to [PM fiber cables](#).

The radiation is superimposed by means of a polarization beam splitter

An adjacent dichroic wave plate rotates the linear state of polarization of one wavelength by 90° while the polarization of the second wavelength is not affected.

Fiber Couplers

A fundamental component of a fiber-coupled Beam Splitter are the [Laser Beam Couplers](#), which are the inputs into the opto-mechanical unit collimating the input radiation and, finally, couples the radiation back into the common polarization-maintaining fiber cable. The stability of the total Beam Splitter is determined by the [stability](#) of the laser beam coupler.

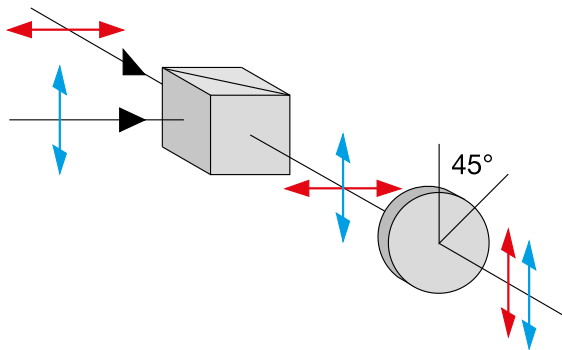
How to order

For a detailed quotation please additionally specify

- Wavelength In 1
- Wavelength In 2
- Receptacle type

If you need a system with fiber cables, please additionally specify

- Cable lengths
- Connector types



TECHNICAL DATA

Dichroic Beam Combiner 2 → 1, 48-MCS-028

Order code	48-MCS-028
Configuration	2 → 1, dichroic polarization beam Splitter and dichroic wave plate
Available wavelengths	400 - 1700 nm
Fiber type	polarization-maintaining
Connector type	FC APC (standard)
Cable lengths	customer-specific
Transmission	≥ 70 % @ 780 nm

Polarization Extinction Ratio

 ≥ 23 dB @ 780 nm

DOWNLOADS

[980129090603.pdf \(Dimensional drawing\)](#)

RELATED PRODUCTS

**DICHROIC RGB BEAM
COMBINER**

Compact, rugged and highly efficient opto-mechanical unit for combining several wavelengths

BEAM COMBINERS

Compact, rugged and highly efficient opto-mechanical unit for combining fiber-coupled radiation

**RGB FIBER
COLLIMATOR SERIES
60FC**

for collimating radiation exiting an optical fiber or as an incoupler

**RGB LASER BEAM
COUPLERS SERIES
60SMS**

for coupling into single-mode and polarization-maintaining fiber cables

This is a printout of the page <https://sukhamburg.com/products/details/48-MCS-028> from 5/7/2024

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