

## 48FI-5-810

Faraday Isolator with 810 nm center wavelength



### FEATURES

The Faraday Isolator type 48FI-5-810 is used to protect laser sources from back-reflection (optical diode), which can cause mode hopping, laser noise, frequency instability and a shorter laser lifetime.

- High isolation >30 dB
- Low insertion loss <0.5 dB
- Aperture: Ø 5 mm
- Through-holes for mounting rods
- Compatibility with multicube<sup>TM</sup> and microbench / cage systems
- Center Wavelength: 810 nm
- Bandwidth: center wavelength  $\pm 10$  nm
- Discontinued

**This product has been discontinued. Requests will be managed according to the residual stock. Contact us to discuss any specific need.**

## DESCRIPTION

Faraday Isolators are used to protect laser sources from back-reflection (optical diode), which can cause mode hopping, laser noise, frequency instability and a shorter laser lifetime.

### Protection of the laser source

If light is back-reflected into the laser source, it causes mode hopping. While the undisturbed typical laser source shows a single mode in the spectrum, the disturbed spectrum shows multiple excited modes that change stochastically over time. This mode hopping results in laser noise, frequency instability and ultimately causes the laser lifetime to be decreased significantly.

Please note that because of its [working principle](#) the polarization of the beam passed by the Faraday isolator is rotated by 45° degrees in comparison with the input polarization.

This is a printout of the page <https://sukhamburg.com/products/details/48FI-5-810> from 5/4/2024

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