

# Mid-IR Isolators

---

Our **Mid-IR Optical Isolators** eliminate the annoying effects of feedback in quantum cascade laser applications and systems, operating at specific wavelengths from 4  $\mu\text{m}$  to beyond 14  $\mu\text{m}$ .

Standard wavelengths in stock are:

4.5  $\mu\text{m}$ , 8.0  $\mu\text{m}$ , 10.6  $\mu\text{m}$

These can be tuned more than  $\pm 10\%$  of center  $\lambda$

Other wavelengths available. Please inquire.



**It's the IR that makes IR isolators difficult.** The critical component in any isolator is the magneto-optic material that performs the rotation of the plane of polarization in the magnetic field. Whereas in the VIS and NIR there are many candidate magneto-optic materials, in the infrared the choices are greatly reduced. In our Mid-IR Isolators we utilize a very small family of highly specialized materials that demonstrate low absorption and acceptable Verdet Constant at the wavelength of operation.

The other critical component is the polarizer, and again, there are few choices in the infrared. See **POLARIZERS** (pages 5-6) for descriptions of our **IR Polarizers**.

**Escape Window** option allows monitoring of feedback that is rejected by the Isolator. When ordering, specify Escape Window on Input or Out-put Polarizer.

<b>Catalog Number</b>	<b>Aperture</b>	<b>Transmittance</b>	<b>Isolation</b>	<b>Total Length</b>	<b>Power Rating</b>
FIO-5- $\lambda$	4.5 mm	75-86%	>> 1000:1	~ 6 "	inquire

$\lambda$ : When ordering, specify wavelength between 4  $\mu\text{m}$  and 14  $\mu\text{m}$ .