**Broadband Faraday Isolators for Ti:Sapphire Lasers**

Newport’s Broadband Isolators rotate the plane of polarized light 90° at 800nm in the forward direction and 0° from 720-950nm in the reverse direction while maintaining the light’s linear polarization. Broadband Faraday Isolators provide high transmission in the forward direction and strongly attenuates back-reflected light between 720-950nm in the reverse direction protecting Ti:Sapphire oscillators from the deleterious effects of back reflections and also eliminating preferential lasing at the lower gain wavelengths of Ti:Sapphire lasers. Utilizing optics with low refractive indices and short optical pathlengths minimizes pulse broadening due to dispersion in the optics associated with ultra-short laser pulses.

**Features:**
- All devices are completely passive; no tuning is required
- Combination of low refractive index optics and short optical pathlengths minimizes pulse broadening that can be associated with ultra-short pulses
- All isolators contain escape ports; all rejected beams are deflected at 90°

**Benefits:**
- Eliminate ASE from high-gain amplifiers that can cause parasitic or relaxation oscillations
- Prevent preferential lasing at low-gain wavelengths by providing broadband isolation

**Specifications**

<table>
<thead>
<tr>
<th></th>
<th>ISO-05-800-BB(^b)</th>
<th>ISO-08-800-BB(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center Wavelength (nm)</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td>Spectral Range (nm)</td>
<td>720-950</td>
<td>720-950</td>
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<tr>
<td>Polarizer Type</td>
<td>PBS Cube</td>
<td>PBS Cube</td>
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<tr>
<td>Transmission at 22°C (%)(^c)</td>
<td>&gt;92</td>
<td>&gt;92</td>
</tr>
<tr>
<td>Isolation at 22°C (dB)</td>
<td>&gt;30</td>
<td>&gt;30</td>
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<tr>
<td>Pulsed Damage Threshold(^d)</td>
<td>1J/cm² at 10ns</td>
<td>1J/cm² at 10ns</td>
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</tbody>
</table>

\(^a\) Product specifications are subject to change.
\(^b\) RoHS compliant.
\(^c\) At center wavelength.
\(^d\) CW damage threshold is 2kW/cm².
5mm Broadband Isolator Dimensions\textsuperscript{a}:

\begin{figure}
\centering
\includegraphics[width=\textwidth]{5mm_isolator.dimensions.png}
\end{figure}

8mm Broadband Isolator Dimensions\textsuperscript{a}:

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\includegraphics[width=\textwidth]{8mm_isolator.dimensions.png}
\end{figure}

\textsuperscript{a} All dimensions in inches