Gooch & Housego Acousto-Optic Beam Deflectors are specialized designs for high speed scanning applications.

Acousto-optic (AO) beam deflectors induce an angular shift of the diffracted first order proportional to the applied RF frequency carrier signal. Current devices will handle UV wavelengths down to 266 nm. Aperture heights of up to 7 mm are offered as well as aperture widths over 60 mm. Beam deflectors offer scan angles up to 5 mrad. These AO devices offer accurate, agile control of the beam position for linear scanning or random frequency hopping.

A variety of designs using optimized optical materials are available. Devices range from conduction cooled to high power water cooled designs. Our expert design staff can tailor deflector performance to meet your specific needs.

G&H UV deflectors are ideal for applications such as micro machining, inspection systems, via drilling and graphic imaging. Two dimensional scanning can be achieved by cascading two deflectors in series.

As with all of our acousto-optic devices, the deflector line utilizes our high quality crystals and AR coatings housed in a rugged and reliable package. The solid state design offers unsurpassed reliability and consistency.

Key Features
- Solid state design
- Accurate position control
- Fast scan speeds
- Good temperature stability
- Repeatable performance
- Variety of offerings

Key Benefits
- Proven reliability
- Consistent performance
- Technical support
- Test documentation
- One year limited warranty

Applications
- Micro machining
- Inspection
- Via drilling
- Graphic imaging
## UV Deflector Specifications

<table>
<thead>
<tr>
<th></th>
<th>2960</th>
<th>3246</th>
<th>3283</th>
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<tbody>
<tr>
<td><strong>Optical Performance</strong></td>
<td></td>
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<tr>
<td>AO medium</td>
<td>Sapphire</td>
<td>Crystal quartz</td>
<td>Crystal quartz</td>
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<tr>
<td>Acoustic mode</td>
<td>Longitudinal</td>
<td>Longitudinal</td>
<td>Longitudinal</td>
</tr>
<tr>
<td>Wavelength</td>
<td>266</td>
<td>355</td>
<td>355</td>
</tr>
<tr>
<td>Insertion loss</td>
<td>10%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>Center frequency</td>
<td>330 MHz</td>
<td>170 MHz</td>
<td>110 MHz</td>
</tr>
<tr>
<td>RF bandwidth</td>
<td>202 MHz</td>
<td>80 MHz</td>
<td>20 MHz</td>
</tr>
<tr>
<td>RF power</td>
<td>22 W</td>
<td>20 W</td>
<td>12 W</td>
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<td>Active aperture</td>
<td>0.8 x 67 mm</td>
<td>7 mm Ø</td>
<td>6 mm Ø</td>
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<tr>
<td>Diffraction efficiency</td>
<td>78%</td>
<td>85%</td>
<td>85%</td>
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<tr>
<td>Flatness across bandwidth</td>
<td>&lt; 35%</td>
<td>NA</td>
<td>&lt; 10%</td>
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<tr>
<td>Scan angle</td>
<td>NA</td>
<td>4.9 mrad</td>
<td>1.2 mrad</td>
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</tbody>
</table>

### Scan Flatness

**Scan Flatness 2960**

**Outline Drawing 3283**

**Scan Flatness 3246**

**DE vs Frequency**

**Scan Flatness 3283**

**DE vs Frequency**

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For further information

E: sales@goochandhousego.com
goochandhousego.com

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2960 | 3246 | 3283
As part of our policy of continuous product improvement, we reserve the right to change specifications at any time.

18 January 2016
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