M1201E-SF40-1.7
Acousto-Optic Modulator

APPLICATIONS
- Intensity Modulator
- Frequency Shifter

FEATURES
- 7MHz Video Bandwidth
- Good Temperature Stability

MODEL NUMBER
M1201E-SF40-1.7V
M1201E-SF40-1.7N

OPERATING WAVELENGTH
440nm–633nm
NIR/1.06μm

OUTLINE DRAWING

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE
ISOMET CORP, 5263 Port Royal Rd, Springfield, VA 22151, USA.
Tel: (703) 321 8301     Fax: (703) 321 8546
E-mail: ISOMET@ISOMET.COM     Web Page: WWW.ISOMET.COM

Quality Assured.
In-house: Crystal Growth,
Optical Polishing,
A/R coating, Vacuum Bonding
M1201E-SF40-1.7
Acousto-Optic Modulator

SPECIFICATIONS

A/R Spectral Range: 440-633nm, or 1.06μm
Interaction Medium: Dense Flint Glass
Acoustic Velocity: 3.509mm/μs
Active Aperture: 1.7mm
Centre Frequency (CF): 40MHz
Input Impedance: 50Ω
Input VSWR: <1.5:1 @ 40MHz
Optical Power Density: 80KW/cm² Gaussian Beam
DC Contrast Ratio: >1000:1 min (2000:1 typical)

PERFORMANCE vs. WAVELENGTH

<table>
<thead>
<tr>
<th>Wavelength (nm):</th>
<th>442</th>
<th>515</th>
<th>633</th>
<th>1060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Power (W):</td>
<td>0.8</td>
<td>1.1</td>
<td>1.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Bragg Angle (mr):</td>
<td>2.5</td>
<td>3.0</td>
<td>3.6</td>
<td>6.0</td>
</tr>
<tr>
<td>Beam Separation (mr):</td>
<td>5.0</td>
<td>5.9</td>
<td>7.2</td>
<td>12.0</td>
</tr>
<tr>
<td>Static Insertion Loss (%)*:</td>
<td>15</td>
<td>6</td>
<td>6</td>
<td>5</td>
</tr>
</tbody>
</table>

PERFORMANCE vs. BEAM DIAMETER

<table>
<thead>
<tr>
<th>Beam Diameter (mm):</th>
<th>1.7</th>
<th>1.0</th>
<th>0.5</th>
<th>0.25</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rise Time*:</td>
<td>315</td>
<td>185</td>
<td>93</td>
<td>46</td>
</tr>
<tr>
<td>Video Bandwidth (MHz):</td>
<td>1.2</td>
<td>1.9</td>
<td>3.8</td>
<td>7</td>
</tr>
<tr>
<td>Deflection Efficiency (% @ C.F.):</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>70</td>
</tr>
</tbody>
</table>

DRIVERS:

<table>
<thead>
<tr>
<th></th>
<th>DIGITAL MODULATION</th>
<th>ANALOG MODULATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1201E-SF40-1.7V</td>
<td>521C</td>
<td>531C</td>
</tr>
<tr>
<td>M1201E-SF40-1.7N</td>
<td>521C-6</td>
<td>531C-6</td>
</tr>
</tbody>
</table>

*TEM₀₀ Gaussian Beam profile

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