

## SPECIFICATIONS

|                          |                                  |
|--------------------------|----------------------------------|
| AO Medium                | Crystalline Quartz               |
| Acoustic Velocity        | 5.74 mm/μs                       |
| Active Aperture*         | 0.5 mm 'L' X 0.24 mm 'H'         |
| Center Frequency (Fc)    | 220 MHz                          |
| RF Bandwidth             | 60 MHz                           |
| Input Impedance          | 50 Ohms Nominal                  |
| VSWR @ Fc                | 1.5:1 Max                        |
| Wavelength               | 413 nm                           |
| Insertion Loss           | 3 % Max                          |
| Anti-Reflection Coating  | MIL-C -48497                     |
| Optical Damage Threshold | 200 MW/cm <sup>2</sup>           |
| Contrast Ratio           | 100:1 Min                        |
| Polarization             | Perpendicular ° To Acoustic Wave |

## PERFORMANCE VS WAVELENGTH

|                          |      |
|--------------------------|------|
| Wavelength (nm)          | 413  |
| Operational RF Power (W) | 2.5  |
| Bragg Angle (mr)         | 7.9  |
| Beam Separation (mr)     | 15.8 |

## PERFORMANCE VS BEAM DIAMETER

|                                |     |
|--------------------------------|-----|
| Beam Diameter (μm)             | 110 |
| at Wavelength (nm)             | 413 |
| Diffraction Efficiency (%) min | 75  |
| Rise Time (nsec)               | 16  |

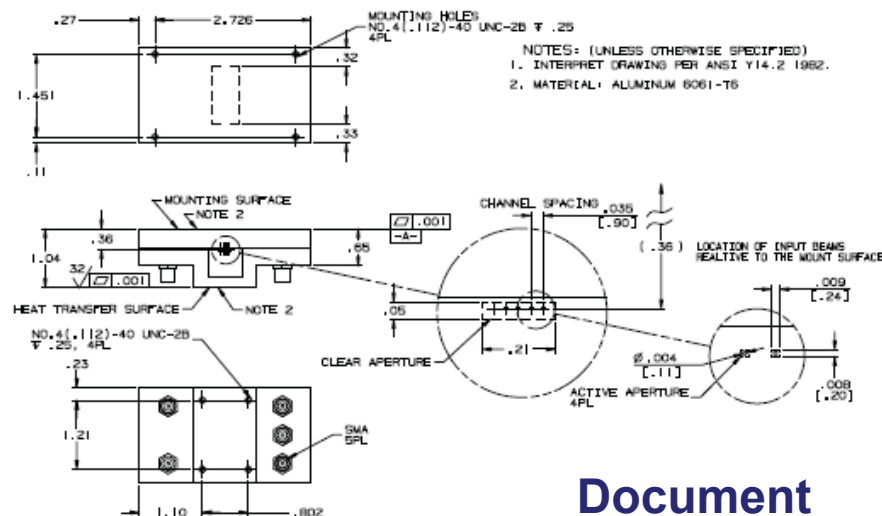
## Special Testing

|           | Min | Units | Max |
|-----------|-----|-------|-----|
| Crosstalk | 20  | dB    |     |

\*Active Aperture: Aperture over which performance specifications apply.

## Outline Drawing:

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## Document

02/13/18

## Control

Number of Channels: 5; Channel Pitch: 0.90mm  
 Contrast Ratio is measured at 2.5 watts, MAXIMUM DRIVE POWER into device with all channels 'on' is 12.5 watts with proper heat sink  
 Device is conduction cooled thru the mounting surface  
 Channel Crosstalk: < -20dB , one channel 'off' all others 'on'  
 Acousto-Optic Operation: First Order  
 Distance to Output face of crystal to the edge of the housing will be minimized.  
 Mounting surface flatness is .001  
 SMA connectors: Gold plated Brass, <4% Pb.  
 Finish: Electroless Nickel per AMS-2404C.

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|                                        |     |                       |                        |      |        |
|----------------------------------------|-----|-----------------------|------------------------|------|--------|
| TOLERANCES:<br>XX ± .01<br>.XXX ± .005 | DR  | A. Campi<br>2/12/2018 | Gooch & Housego        |      |        |
| MATERIAL:                              | CHK |                       | DESCRIPTION:           |      |        |
| FINISH:                                | APP |                       | AOMC MC220-5           |      |        |
|                                        | APP |                       | .413um, 5 channel RoHS |      |        |
|                                        |     |                       | PART NUMBER:           | REV: | SHEET  |
|                                        |     |                       | 97-02411-53            | 1    | 1 OF 1 |