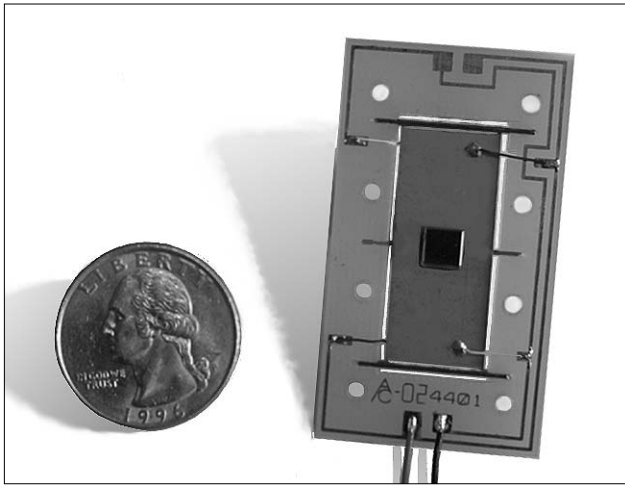


1-AXIS PIEZO MIRROR TILTERS, FROM ±0.4° TO ±1.0°



DESCRIPTION

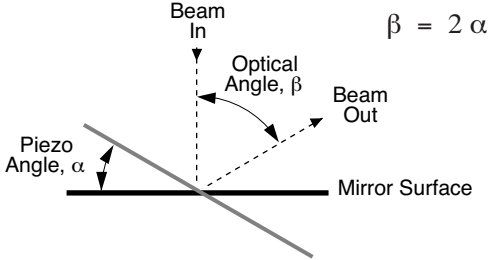
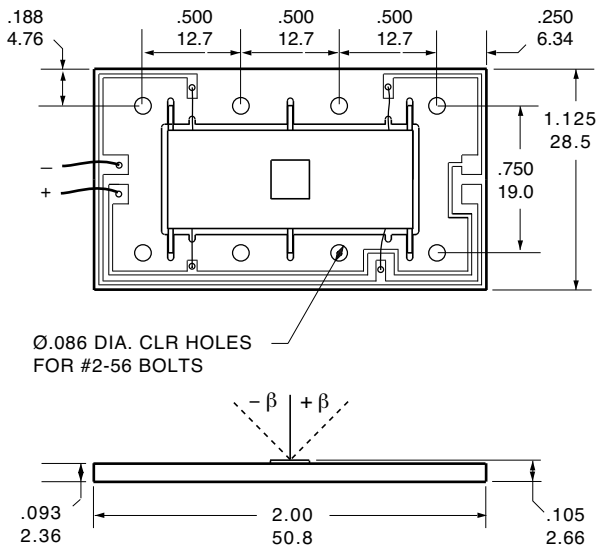
The Piezo Mirror Tilters are low profile (~2.6 mm), light weight (~6 grams), high frequency devices designed for dynamic angular positioning at low power. These devices are capable of being directly bolted to gimbal mounts to replace bulky galvanometer systems. The piezoelectric motors deliver optical angles from ± 6 to ± 16 milliradians, while providing the fine resolution associated with piezoelectric devices. The tilter has very low magnetic permeability and produces no magnetic fields.

A 5mm square x 1mm thick crown glass mirror with a protected aluminium coating is attached to the tilter assembly (protected gold mirror option available). However, the customer may define or supply the optic to be attached.

The tilter may be mounted to mechanical ground using the eight 2 mm or #2-56 clearance holes located around the periphery of the printed circuit board.

The tilter requires an electrical driver capable of supplying up to the maximum rated voltage to deliver full range angular motion. Piezo System's EPA-104 Piezo Amplifier is suitable for driving the mirror tilters.

Custom configurations available upon request.



SINGLE AXIS MIRROR TILTER PERFORMANCE

| PART NUMBER | WEIGHT | CAPACITANCE | RESONANT FREQUENCY | BROADBAND RANGE | RATED VOLTAGE | OPTICAL ANGLE, β | | ANGULAR RESOLUTION |
|----------------|--------|-------------|--------------------|-----------------|---------------|------------------------|---------|--------------------|
| | | | | | | ± milliradians | degrees | µ radians |
| IAGI-A4CL-315H | 5.6 | 23 | 2,250 | 0 - 1,000 | ± 120 | ± 16.5 | ± .95 | 3.3 |
| IAGI-A4CL-319H | 5.9 | 16 | 3,000 | 0 - 1,350 | ± 180 | ± 12.9 | ± .74 | 2.6 |
| IAGI-A4CL-323H | 6.0 | 16 | 3,800 | 0 - 1,700 | ± 180 | ± 9.7 | ± .55 | 1.9 |
| IAGI-A4CL-323F | 6.1 | 16 | 5,500 | 0 - 2,500 | ± 180 | ± 6.1 | ± .35 | 1.2 |

ORDERING INFORMATION

| | PART NO. | 1 pc. | 5 pc. | 25 pc. | 100 pc. |
|-------------------------------|----------------|-------|-------|--------|---------|
| 1- Axis Mirror Tilter, ± .95° | IAGI-A4CL-315H | \$999 | \$749 | \$549 | \$399 |
| 1- Axis Mirror Tilter, ± .74° | IAGI-A4CL-319H | \$999 | \$749 | \$549 | \$399 |
| 1- Axis Mirror Tilter, ± .55° | IAGI-A4CL-323H | \$999 | \$749 | \$549 | \$399 |
| 1- Axis Mirror Tilter, ± .35° | IAGI-A4CL-323F | \$999 | \$749 | \$549 | \$399 |



SPECIFICATIONS

1- AXIS PIEZO MIRROR FILTERS

MECHANICAL

| | |
|------------------------------|---|
| Overall Dimensions | |
| Length | 50.8mm (2.00 inches) |
| Width | 28.5mm (1.125 inches) |
| Height | 2.66mm (0.105 inches) |
| Mounting | 2.2mm (.086") diameter clearance holes for 2mm or #2-56 screws, 8 places. |
| Wires | 2 wires, 32 AWG 305 mm (5 inches) long. |
| Mirror (Square, Flat) | |
| Material | Crown glass |
| Coating | Protected Aluminum |
| Reflectance range | 100nm to 950nm |
| Mirror Dimensions | |
| Length | 5.0mm (.197 inches) |
| Width | 5.0mm (.197 inches) |
| Height | 1.0mm (.039 inches) |
| Flatness | 3 λ per 25 mm |

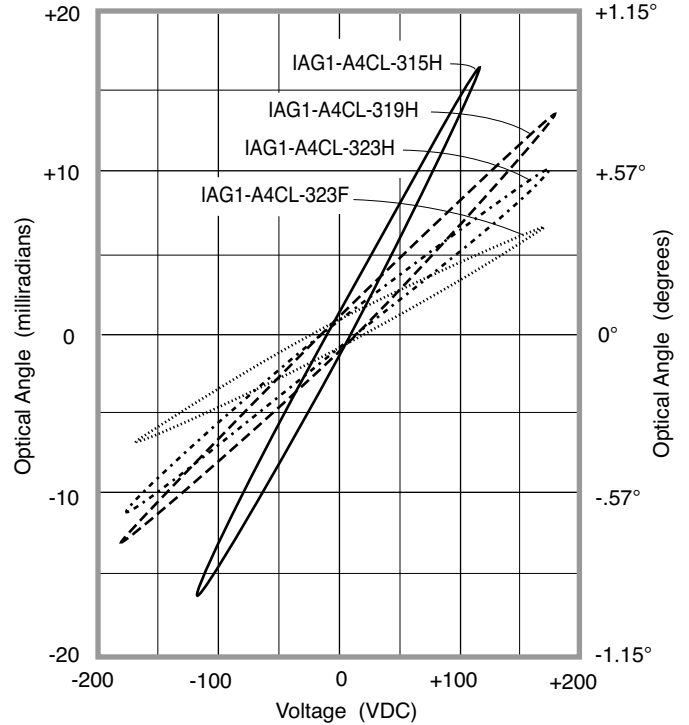
THERMAL

| | |
|-------------------------|--------------|
| Thermal Operating Range | -20 to 60° C |
| Thermal Storage Range | -30 to 70° C |

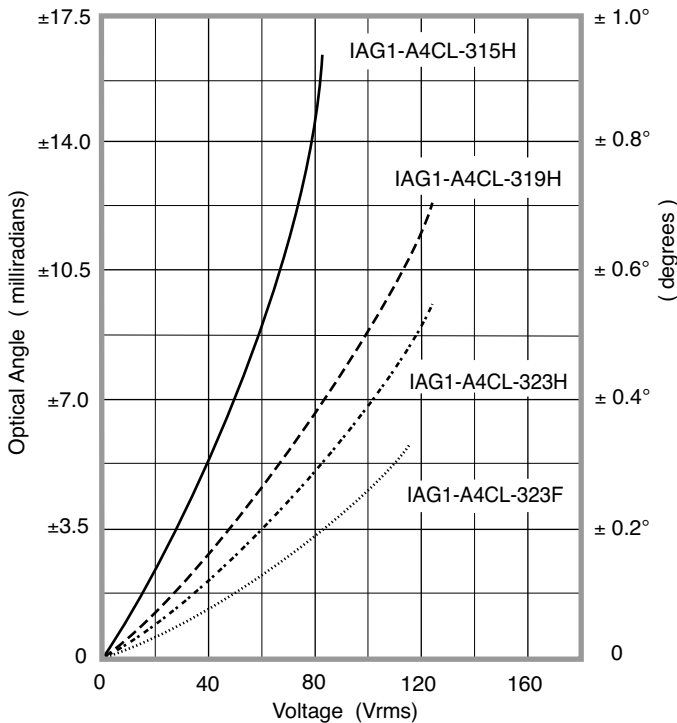
ROHS

Compliant

Optical Angle versus DC Voltage



Optical Angle versus AC Voltage



Optical Angle versus Frequency
Drive voltage ~ 1/10 rated voltage

