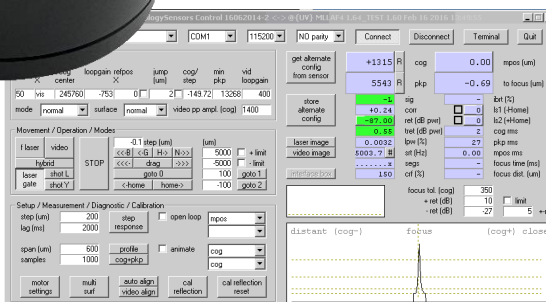
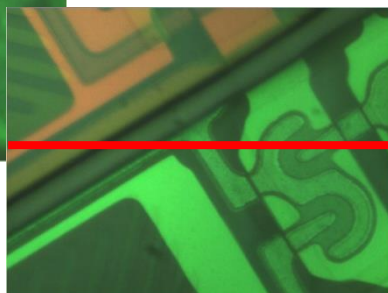
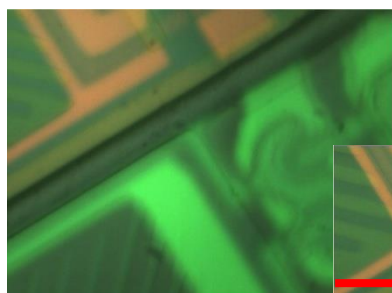


# LAF5S-MI



## Retrofit Laser Auto Focus for infinity corrected microscopes



- Adapters available for a range of different microscopes
- Motor controller interface with analog & digital outputs for a seamless closed loop integration with third parties stepper motor , piezo, voice-coil or servo drives
- Unique Correlation Processing laser focus method
- Full laser line with segment processing
- Applicable to Plan Apo lenses 1x-150x, VIS, IR & UV
- Adjustable laser power limitation
- User interface with enhanced network capabilities for multi sensor operation
- Easy integration of UI functions into the customer software without software library needed

Enables focus tracking where other laser or image auto focus systems fails

- Surfaces with extreme variation of characteristics
- Extreme thin substrate layers (close to DOF of Lens)
- Layers with very weak reflectivity
- Layers with variable reflectivity

## Specification LAF5S-MI

| Lens Type                                     | APO Plan Infinite Microscope Objective Lens      |         |               |                          |               |
|-----------------------------------------------|--------------------------------------------------|---------|---------------|--------------------------|---------------|
| Magnification                                 | 5x                                               | 10x     | 20x           | 50x                      | 100x          |
| Numerical aperture                            | 0.14                                             | 0.28    | 0.42          | 0.55                     | 0.70          |
| Sample rate                                   | 4kHz max.                                        |         |               |                          |               |
| Image sensor                                  | 250 full frames/sec. max.                        |         |               |                          |               |
| Surface detection Range                       | ±12000µm                                         | ±4000µm | ±1500µm       | ±300µm                   | ±100µm        |
| Accuracy*                                     | Laser mode: +/-0.4 of Lens DOF                   |         |               |                          |               |
| Light Source                                  | Safety Class III R Wavelength 660nm-670nm, 785nm |         |               |                          |               |
| Operation Temperature                         | + 5°C to + 50°C                                  |         |               |                          |               |
| Beam Shape                                    | 45 ° tilted laser line                           |         |               |                          |               |
| Weight Sensor + cable                         | 400gr+ 140gr                                     |         |               |                          |               |
| Weight Interface                              | 400gr                                            |         |               |                          |               |
| Recommended port                              | Beamsplitter 50/50 @670nm/@785nm                 |         |               |                          |               |
| Laser AF Cycle time                           |                                                  |         | 0.1s          |                          | Auto Tracking |
| Power                                         | In                                               | 24-48V  |               |                          |               |
| Digital Control Output                        | Pulse/Direction or Pulse 1/ Pulse 2              |         |               |                          |               |
| Analog Control Output                         | 0- 10V Distance and position                     |         |               |                          |               |
| Signal Quality Output                         | Analog                                           |         | 0- 10V        |                          |               |
| Communication                                 | RS232 (Controller LAF-C2)                        |         |               | LAN (Controller LAF-C3E) |               |
| Laser ON/OFF                                  | In                                               | TTL     | & via command |                          |               |
| *All data refer to measurement on plain glass |                                                  |         |               |                          |               |

\*All data refer to measurement on plain glass

Table 1

## Working Principle

