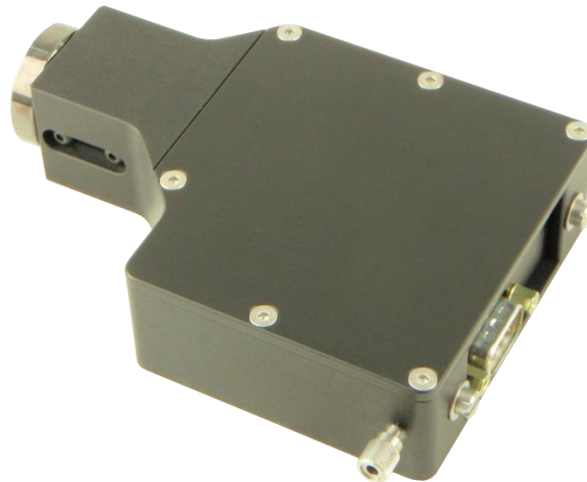




Applied Scientific Instrumentation

CRISP Autofocus System

Continuous Reflective Interface Sample Placement



Features

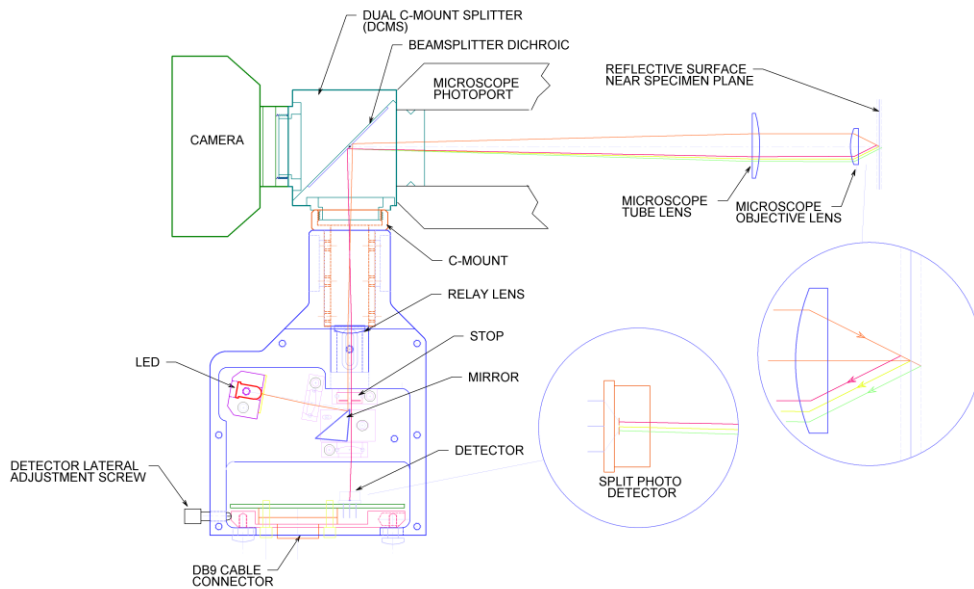
- Mounts onto any microscope's standard C-mount port
- Maintains ideal focus for days
- Works with most normal microscope objectives
- Low noise electronics allows locking to glass/water interfaces
- Integrates with ASI Piezo-Z or motorized focus stages
- Simple post-lock fine adjustment of focus
- Automated control

Theory of Operation

The CRISP system projects the image of a mask illuminated with an IR LED into the sample plane. Only one half of the objective pupil is illuminated. This means that the point spread function of the objective is highly skewed, so that the reflected image of the mask will move laterally as focus is changed. CRISP detects this lateral motion of the LED image to obtain a focus error that is used to close the focus positioning loop.

We Create Solutions

Applied Scientific Instrumentation, Inc. ♦ 29391 W Enid Rd ♦ Eugene, OR USA 97402-9533
(541) 461-8181 ♦ (800) 706-2284 ♦ info@ASImaging.com ♦ www.ASImaging.com



Installation

CRISP is usually installed with ASI Dual C-Mount Splitter (DCMS) that contains the required dichroic beam combiner and blocking filters and provides the C-mount port for the camera.

Adjustments, Options, and Control

- Built-in C-mount extension for optical offsets
- LED beam iris to match illumination beam to objective pupil for optimum performance
- Lateral detector adjustment
- Other LED colors possible
- LED intensity control
- Programmable gain and averaging functions to optimize system for stability or speed

Specifications

Light Source	LED
Wavelength	850 nm
Optical Interface	C-mount
Typical Focus Accuracy	<5% of objective Depth of Focus
Controller	MS2000 w/ CRISP card

We Create Solutions

Applied Scientific Instrumentation, Inc. ♦ 29391 W Enid Rd ♦ Eugene, OR USA 97402-9533
 (541) 461-8181 ♦ (800) 706-2284 ♦ info@ASImaging.com ♦ www.ASImaging.com