

Available July 2016

Opt-E-Box W2

*Adaptable - Rugged - Compact
Autocollimator and Autostigmatic Microscope*

*Opt-E-Box W2 is the basis of
alignment instruments:*

*Autostigmatic microscope (right),
and
Autocollimator (below).*

*Remove the objective to turn the
autostigmatic microscope into an
autocollimator.*



Autostigmatic microscope

The Opt-E-Box W2 incorporates a cube beam-splitter and a red LED light source to form the basis of both an autostigmatic (point source) microscope and autocollimator.

An LED is used with a reticle to produce a spot that is easily seen in room lighting for initial alignment. The reticle includes a small obscuration for precision centroid measurements. A small hole in the center of the obscuration produces a point source used to assess image quality (star-test).

The box is rugged, with both M6 and 1/4"-20 mounting features on each of two surfaces (above). Additionally, a Thorlabs SM1 thread is incorporated in the front along with a Thorlabs 30 mm cage plate interface. The back incorporates a C-mount adapter that can be rotated to set camera clocking, and a second 30 mm cage plate interface.



Autocollimator using
1" diameter optics

*Custom optics, wavelengths, mounts
and software can be provided.*

*The integrated current source has
very linear, precise control for
optimal setting of the light source
via a USB2 virtual com port.*



Autocollimator using 2" diameter optics

Prices and specifications are subject to change without notice.

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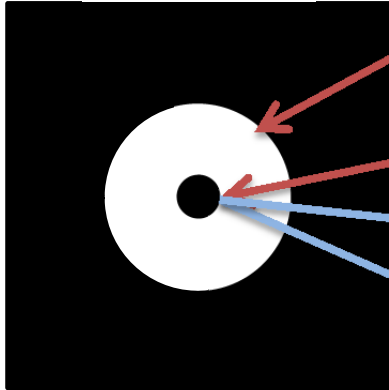


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Opt-E W2-AM

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Autocollimator and Autostigmatic Microscope*

Reticle design



Large aperture produces an easy to see “Find-It” spot with the standard red source.

Small obscuration is big enough for ultra-precision centroid measurement

Very small aperture in obscuration is a point-source used to assess spot quality.

The standard Opt-E W2-AM (alignment module) system includes an Opt-E-Box W2, a 1” format camera, bright red LED source, 100 mm focal length collimator, a 10x Nikon objective, and a notebook computer with 1 USB3 and 1 USB2 port used. There is no external box.

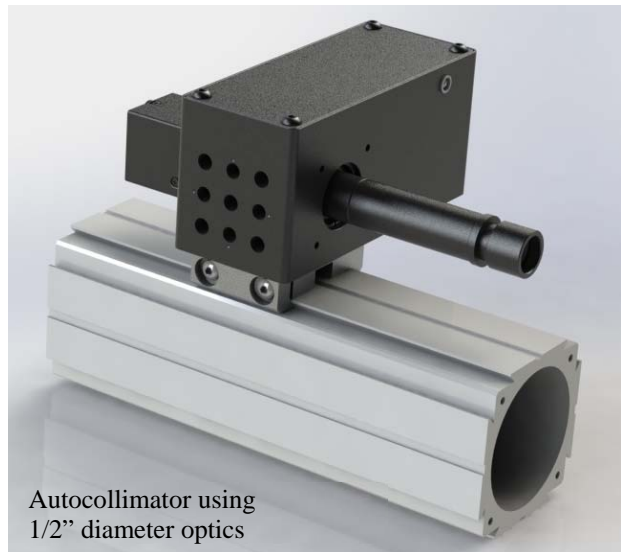
Opt-E Aligner is a simple, open-source LabVIEW program included in the Opt-E W2-AM system.

The 1” format camera has 2048 x 2048 pixels that are 5.5 μm square and provides more than ±3 degree field-of-view horizontally and vertically while the central obscuration provides excellent angular sensitivity. The image of the small hole in the center allows one to assess image quality.

The Opt-E W2-AM can be configured with different cameras, light sources, optics and mounting hardware. NIR and even SWIR wavelengths can be provided.

SolidWorks, STEP and IGES models of the housing are available to facilitate integration.

Opt-E can provide complete, custom solutions often using only a W2 and additional catalog components.



Autocollimator using 1/2” diameter optics

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