

# Autofocusing Electronic Autocollimator



- A Precise USB3.0 device combining the functionality of an autocollimator with motorized feature for focusing at finite distances.
- High resolution of down to 0.01 arc sec or 0.05  $\mu$ rad, with clear aperture of 36 mm.
- Built-in computer controlled laser pointer for easy alignment.
- Built-in Pan & Tilt adjusting mechanics.
- Far Field & Near Field Optical Measurements

## Specifications

FoV Autocollimator	$\pm 25'$ (H) x $\pm 20'$ (V)
FoV of Beam Profiler	$\pm 50'$ (H) x $\pm 40'$ (V)
Clear Aperture	36 mm
Autocollimator's Resolution	0.01 sec
Autocollimator's Accuracy	1.0 sec
Light Source	LED: RGB Optional: 1060 nm
Retro-reflector for alignment	$\varnothing 64$ mm, N.W 280 g Thread $\varnothing 16$ mm, <5"
Line of Sight Retention as Function of Focusing	$\pm 2.5$ seconds
Focusing Distance	Calibrated from 17.5 cm to infinity
Built in coarse aiming Laser Pointer	638 nm power <1.0 mW Class 2 laser product, IEC60825-1

## Ordering Information

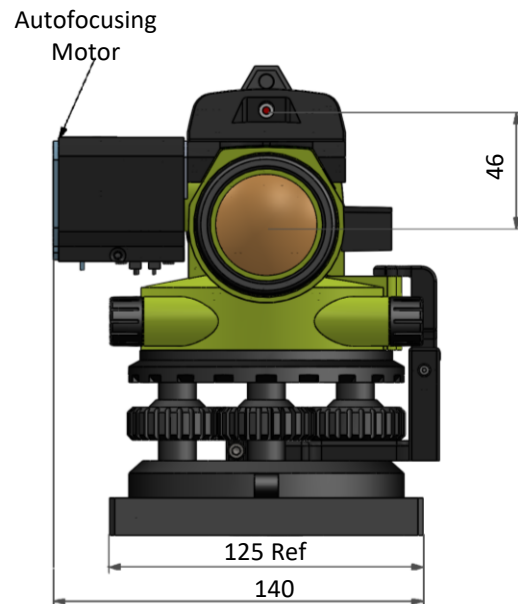
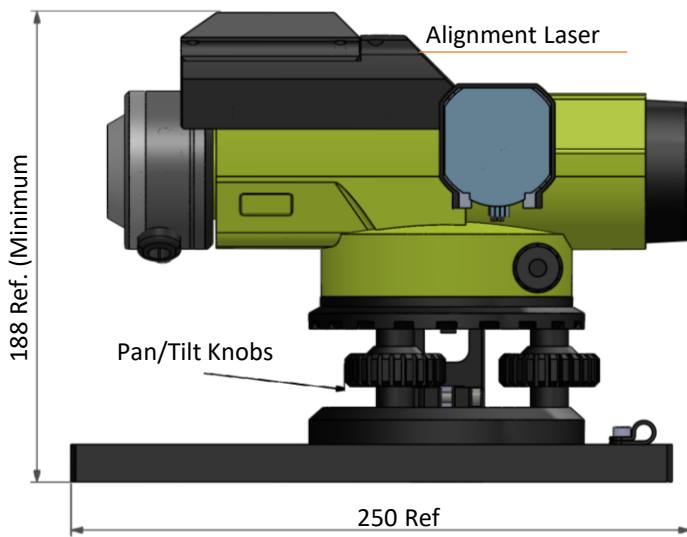
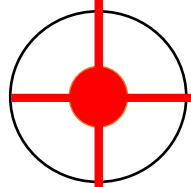
**EAC-1012-19-FO:** Complete system including a collimator unit with USB3.0 camera, focusing mechanism, software on Flash Drive and a retro-reflector for infinity adjustment.

Spectral Response	350 - 1310 nm
Resolution (H x V pixels)	1280 x 1024
Gain Control	4x
Dynamic Range	60 dB
Exposure Speed	9 $\mu$ sec to 1 sec
Frame Rate	50 fps, a few hundreds on ROI mode
Pixel Size	5.3 $\mu$ m x 5.3 $\mu$ m
Pixel Bit Depth	8/10 bits
Background Subtraction	User activated
Trigger	<ul style="list-style-type: none"> <li>• Internal Software</li> <li>• Hardware Falling or Rising Edge</li> <li>• Trigger Delay 0.015ms - 4.0 sec</li> </ul>
Fast Mode Measurement	Up to 1,000 fps for partial ROI
<b>Beam Analysis</b>	
Laser beam orientation	$\pm 50'$ (H) x $\pm 40'$ (V) $\pm 14$ mrad (H) x $\pm 11$ mrad (V)
Laser beam divergence measurement	Down to 0.1 mrad
Resolution of beam divergence	Better than $\pm 5$ $\mu$ rad
Multiple beams measurement in parallel	Standard – up to 400.
Wavelength	400 – 1310 nm
Fast Mode Measurement	Up to 1,000 fps for partial ROI
<b>Straightness Measurement</b>	
Lateral Measurement on Object Plane	With micron accuracy dependent on object distance
Virtual Image Creation*	-2.5 [m] to -Infinity
Cooperative Cross Target	Automatic display of lateral deviation along -2.5 [m] to -Infinity

\* **Typical Application** - Adjustment of projected laser beam to certain distance as dictated by the virtual image setting

# DUMA OPTRONICS LTD.

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Dimensions are in mm.

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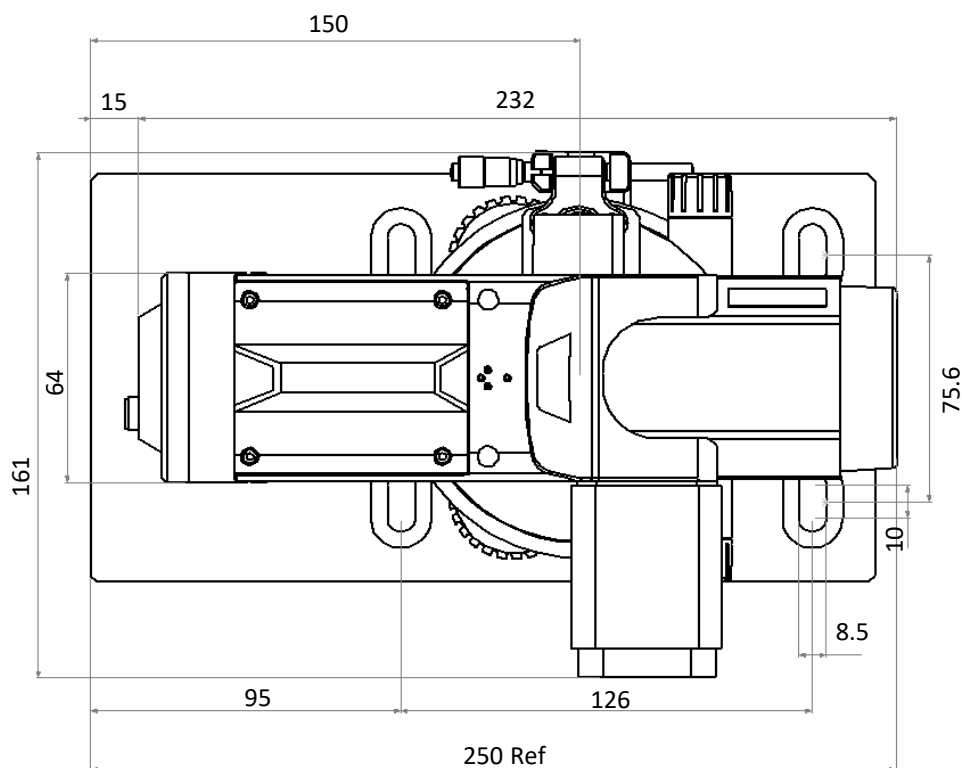
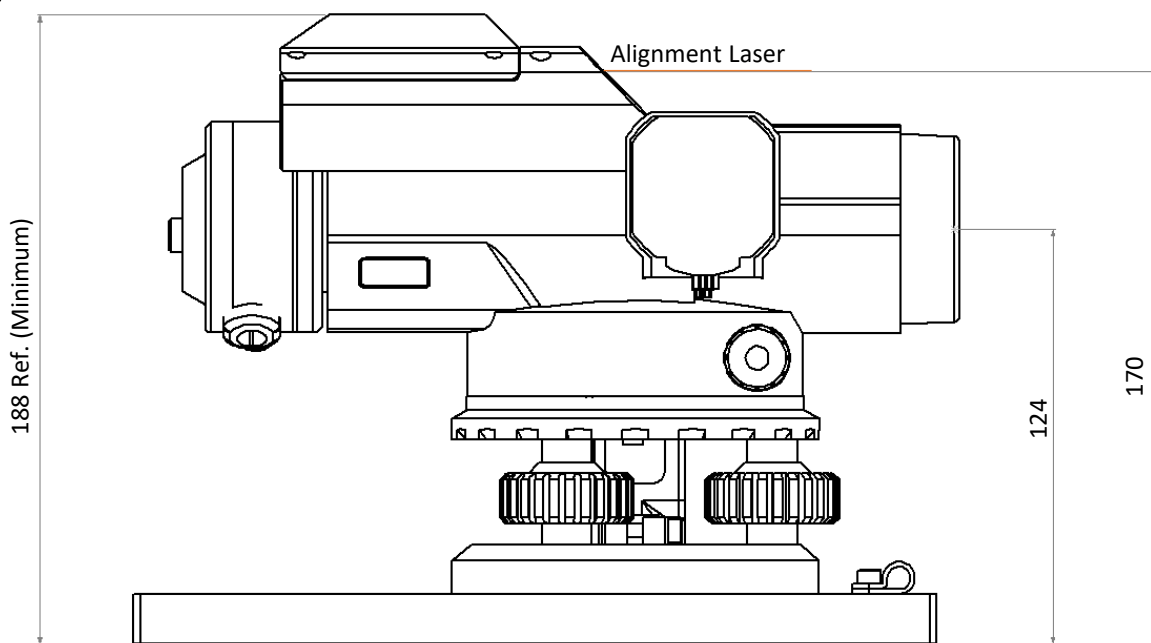
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February 2022



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