



BODKIN
DESIGN & ENGINEERING

Remove Laser Speckle

Dual Rotating Disc

Large Aperture

APPLICATIONS

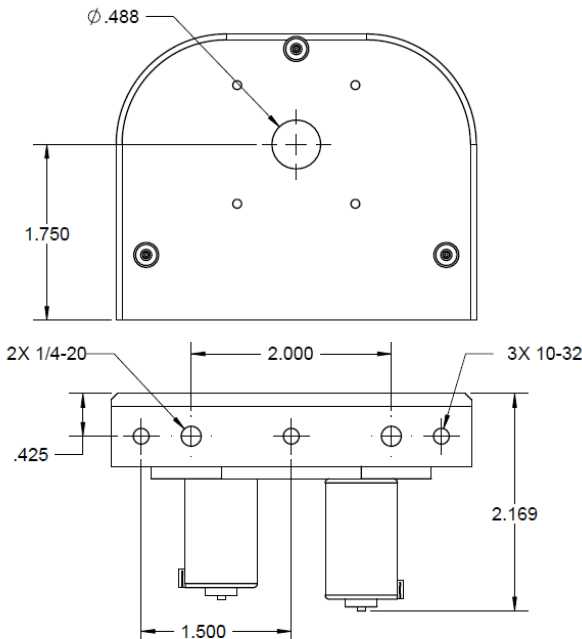
- Laser illumination
- Camera Systems
- Microscopy
- Holography

DD-12

DYNAMIC DIFFUSER

SPECIFICATIONS

Clear Aperture	12.4mm
Optical Center Line	1.75"
Dimension	3.6" x 2.8" x 2.17"
Mounting	1/4" -20 holes on 2" Centers #10-32 holes on 1 1/2" Centers
Weight	.7 lbs
Dimensions	3.5" W x 5" H x 20" L
Power Req.	12 VDC, 5 W



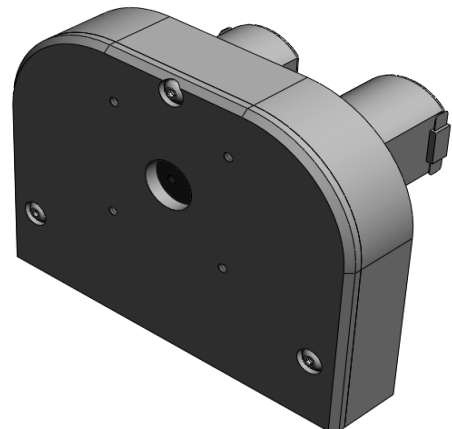
DIFFUSER

Dual rotating diffusers remove laser speckle

Typically, when lasers are used to illuminate an object, a standing pattern of laser 'speckle' is projected onto the target. This irregularity in illumination is detrimental to imaging systems and can increase the uncertainty in sensor measurements.

To eliminate this effect, Bodkin Design has developed a dynamic diffuser that smoothes the beam by inducing a motion blur into the speckle pattern. Averaged over time, this blur results in a uniform illumination field.

Because the diffuser motion must be faster than the integration time of the sensor for the full diffusive effect to be realized, the DD-12 utilizes two high speed rotating discs. This arrangement allows for smoothed blurring to be observed even at high video frame rates.



07.12

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