

4:1 Magnification Ratio Donder Zoom Module



Stock #55-406 [CONTACT US](#)

C\$805⁰⁰

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General

Type of Filter:
Accepts 12.5mm Dia x3mm Thickness Unmounted Filters

Physical & Mechanical Properties

Tube Length Adjustment (mm):
Additional Length = $(BFL_2 + ET_2) - 21.42\text{mm}$

Optical Properties

Primary Magnification PMAG:
 $PMAG = \text{Min: } (2F_2 / F_1), \text{ Max } (0.5F_2 / F_1)$

Working Distance (mm):

$$WD = (BFL_1 + ET_1) - 17.42\text{mm}$$

Regulatory Compliance**Certificate of Conformance:**[View](#)**Product Details**

- Easily Build A Zoom Lens to Fit Your Specific Application
- Choose the Working Distance and Field of View to Meet Your Needs

This 4:1 zoom module facilitates design/construction of zoom lenses with varying magnifications and working distances. Magnification is adjustable by the addition of two 12.5mm diameter achromats (not included). Front and back C-mounts permit easy attachment to C-Mount cameras and integratable components. An optional ring light guide (#54-175) mounts on the front of the tube. A retainer enables mounting of 12.5mm diameter, 3mm thick filters to the front of the lens.

Magnification is determined by the focal length of the selected achromats (F_1 is closest to the object, F_2 is closest to the camera). The primary magnification range of the total lens is $(2F_2/F_1)$ to $(0.5F_2/F_1)$. Working distance is determined by the back focal length (BFL) of Lens₁. The image distance is determined from the back focal length of Lens₂ (note that there will be 17.5mm between camera sensor and the shoulder of threading on a C-mount camera). The tube length between the camera and Lens₂ is achieved by using C-Mount tubes and/or a focusing assembly. The total tube length needed is equal to BFL of Lens₂ plus the Edge thickness of Lens₂ minus 21.42mm. (this is an approximation, ignoring the sag of the lens). The achromats are placed so that the sharper curvature faces the zoom module. In addition, the included retainer ring can be used to place a 12.5mm diameter filter in front of Lens₁.

Applications: Suited to inspection, measurement and prototyping applications at a variety of magnifications and working distances.

Mounting: A C-Mount Ring Clamp (#52-930) attaches to C-Mount extension tubes to allow 1/4-20 standard mounting. Our 1/4-20 Threaded Coarse and Fine Movement (#54-794) is recommended for fine adjustment of working distance.

Illumination: A Ring Light (#54-175) is recommended.

Technical Information