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4:1 Magnification Ratio Donder Zoom Module

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General

Type of Filter:
Accepts 12.5mm Dia x 3mm Thickness Unmounted Filters

Physical & Mechanical Properties

Tube Length Adjustment (mm):
Additional Length = $(BFL_2 + ET_2)$ - 21.42mm

Optical Properties

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

Working Distance (mm):
WD = (BFL_1 + ET_1) - 17.42mm

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.

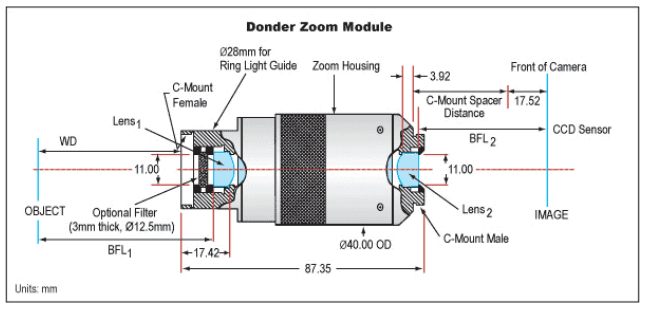
Magnification is determined by the focal length of the selected achromats (F_1 is closest to the object, F_2 is closest to the camera). The primary magnification range of the total lens is ($2F_2/F_1$) to ($0.5F_2/F_1$). Working distance is determined by the back focal length (BFL) of $Lens_1$. The image distance is determined from the back focal length of $Lens_2$ (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 $Lens_2$ is achieved by using C-Mount tubes and/or a focusing assembly. The total tube length needed is equal to BFL of $Lens_2$ plus the Edge thickness of $Lens_2$ 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 $Lens_1$.

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 ¼-20 standard mounting. Our ¼-20 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



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