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THE ART OF VIEWING

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User manual for:
3D Close-up lens
Model 21-14-F80x110

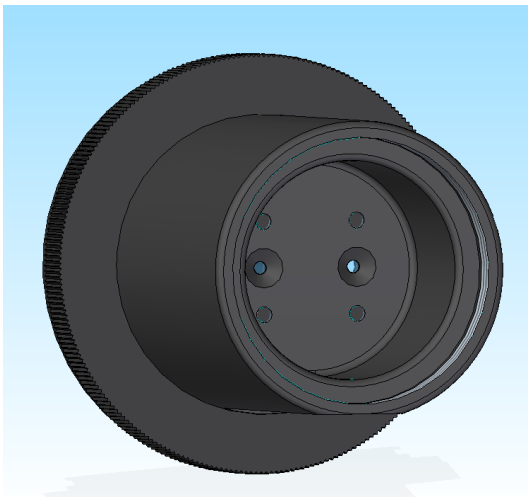


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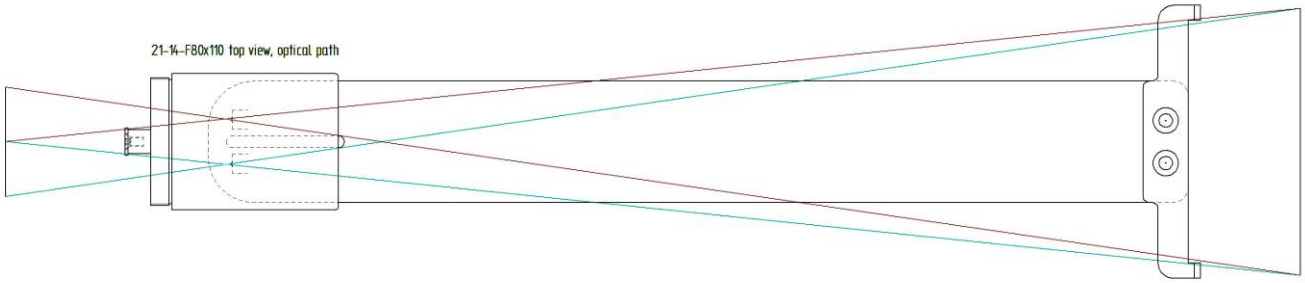
1. Introduction

This close up lens is intend to be used as 3D camera lens for camera's having a 24x36mm. sensor of film plane. The imaging plane is located 55 mm. behind the start of the M42 thread. The lens is set to a fixed object size of 80x110 mm. and is set for a fixed focal distance and lens separation. The main scope is the combination of (D)SLR's and mirrorless camera bodies.

With the release of the close up lens model 21-14-F80x110 de Wijs responds to the demand for a successor of the 3D macro lens series produced in the 2007's. With the growing abilities of other digital solutions to shoot in the object field of 80x110 mm. it was the objective to make the lens simple and robust. With that in mind, and having listened to the user, we decided to remove the often unnecessary viewfinder bracket. But added some other options, the previous series didn't have.

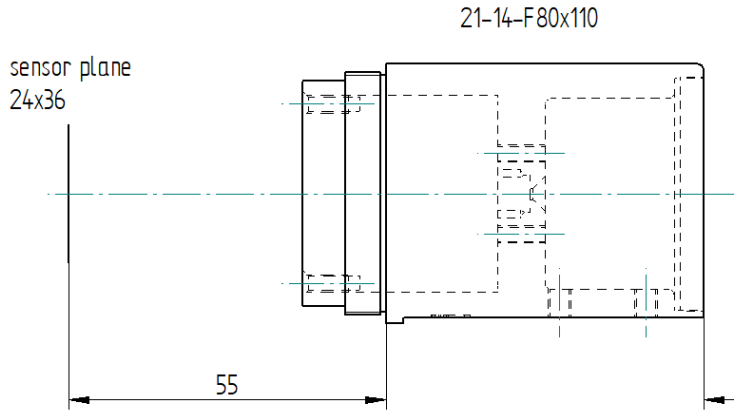
1.1 Acknowledgements

- Hugo de Wijs for his initial design of this concept in the late '80.



2. Attaching the T2 adapter ring .

The camera end of the lens allows a M42x0,75 (T2) threaded counterpart.
You can buy any T2 adapter ring for your camera that will fit on the 3D lens.



The fixed focal distance will result in a physical distance of the outer edge of the lens to the sensor / film to be 55 mm. Mirrorless camera T2 adapters will compensate this distance.

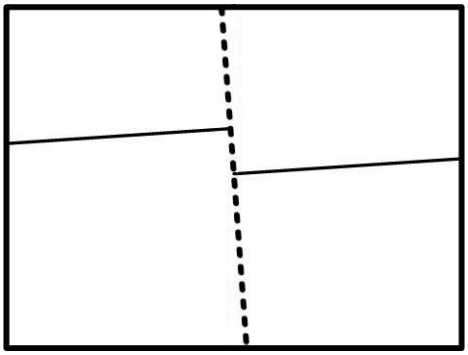
Before fixing and locking the adapter ring to the 3D lens be aware that in the future you might decide to exchange the adapter ring for another one and brand.

- T2 adapter rings often come in 2 parts; the inner M42x0,75mm. ring and the outer bayonet ring. First fix the inner ring to the outer one by tightening the 3 small screws cylindrical aligned on the outer bayonet ring.

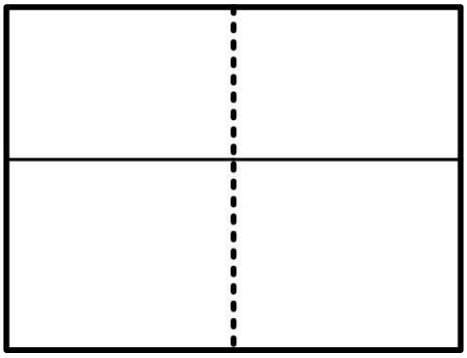


- You can choose to apply glue to the thread but it is smart to use a type that allows to unscrew the ring in the future.
- Screw the ring tight to the 3D lens. Be sure that it is fixed tight enough. That tight so when detaching the bayonet from the camera, by holding on the 3D lens, the M42 ring is not coming loose from the 3D lens barrel.
- Attach the lens to the camera body. Obviously it is totally miss aligned to the 3D lens.
- Loosen the 3 small screws that are cylindrically aligned on the bayonet ring. The bayonet ring will come loose from the inner M42 ring. It allows the camera body to revolve and align with the 3D lens.
- On the camera's display or through the viewfinder check the 3D lens orientation alignment with respect to the camera body. Choose a well illuminated subject to point to (NOT to the sun).

The bellow images are illustrating what you see through the viewfinder when aiming to a horizontal plane / edge. The dashed line illustrates the optical splitter in the lens. It is visible as unsharp line in the middle.



The lens needs to be turned clockwise

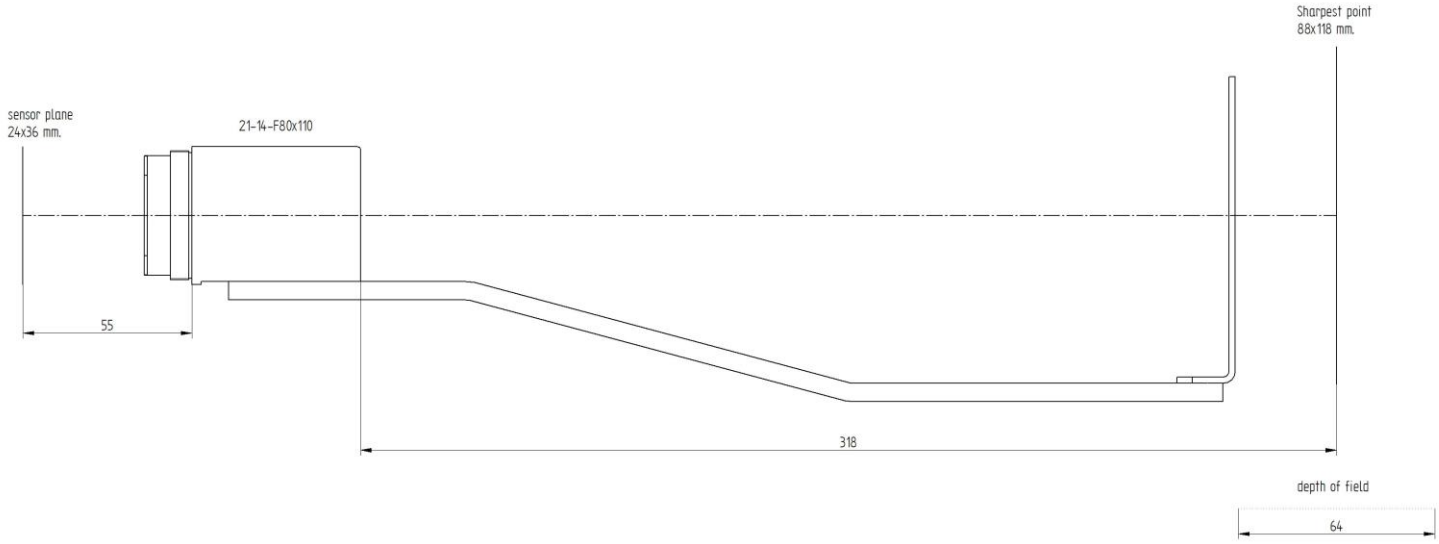


The lens is well aligned

- Turn the lens body towards a position where both left and right image are shown on equal hight. Then fix the three screws tight.
- You might need to repeat and to fine tune the alignment.
- The lens is now ready for use.

3 Technical data

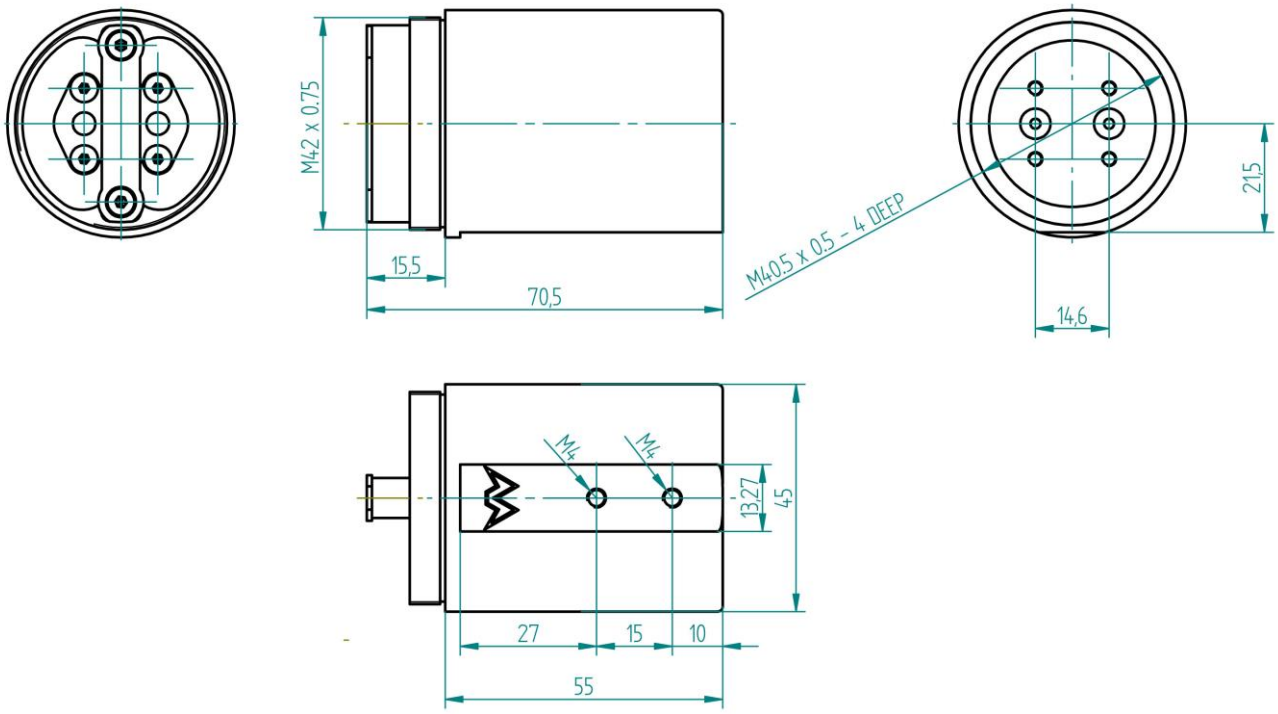
Model 21-14-F80x110



The optimal focus point to the subject is fixed to 318 mm. measured from the front of the 3D lens. The depth of field around this point is around 64 mm.
The object area of 80x110 start around 286 mm.

The 3D lens holds 2 achromatic lenses of 62.5 mm. focal distance.
The aperture is set to 40.

3.1 Physical dimensions



The front of the 3D lens holds a camera filter thread of M40x0,5mm. often used for video cameras.
The bottom or top of the 3D lens provides a plane for fixing all kinds of aids. Two M4 threaded holes allow to fix these aids.

3.6 Maintenance

Cleaning the exterior.
The outside of the lens is black anodized aluminium. It can be cleaned with any non-corrosive cleaner.

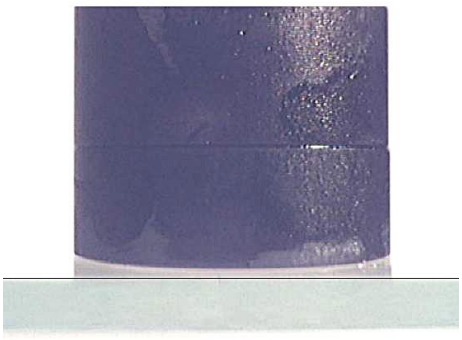
Cleaning the lenses.
When it comes to dust on the lenses.
With a soft brush you are able to clean the lenses through the small lens opening at the front of the lens or the rear.
When it comes to grease or other pollution on the lenses, impossible to remove with a bush. Follow the bellow steps.

- At the rear of the lens you have access to the inner lens chamber. Each lens is fixed with a small metal cover in the shape of a diamond. On the corners 2 screws are holding the lens fixed in its seat.



- You need a Torx screw driver TX10 or hexagon key to unscrew both screws at one lens. When unscrewed, with tweezers or small pair of pliers, take the metal cover away and out of the lens chamber.
- Then with tweezers, remove the small red coloured fibre ring.
- Finally, with tweezers, you position the legs in the space just beside the lens seat and pull the lens out of its seat. It might be stuck a little as the seat is very tight around the lens.
- Cleaning the lens while it is in its seat is a good solution to avoid damage to the lens and scratches.
- With a soft cotton cloth is a good way to wipe dust or other pollution away. Cloth for cleaning glasses are also a good way to clean the lenses.

- Be aware that the lens has a front and rear side!



- First you have to determine what the front and the back of the lens element is. This is rather difficult because the lenses may look symmetrical. In case you did not take notice of their position when you de-assembled the lenses, determine this as follows:

- Find a piece of flat glass. Place the lens gently on it and look from the side at it (see picture at the right).
- One side is curved, the other side flat. Looking at the side of the lens, you should see a very narrow gap between lens and glass plate. When the lens wobbles slightly with a small movement, you have found the curved side.

- **The curved side should be facing the camera body** side; the flat side should be aiming at the photo subject.