

Microscope Objectives for μ PIV

Objectives for usage with Epi-fluorescent Microscopes

(e.g. Type Zeiss Axio Observer.A1 part no. 1108551, FlowMaster MITAS part no. 1108630)
Among the wide range of microscope objectives there are 2 model series which are appropriate for Micro-PIV purposes. In order to give guidelines for selecting objectives for certain applications this information points out the differences.
The two model families are :

- ▶ **Series Plan-Neofluar LD**
- ▶ **Series Plan-Neofluar**

Series Plan-Neofluar LD

Within the huge product range these are the objectives with all the positive properties of the series Plan-Neofluar and a correction for thick cover glasses.
The name suffix 'LD' is for the 'long distance' version which enables a long working distance.
This is the reason why these models become interesting for μ -PIV mainly when micro channels are buried deep in a substrate.

- ▶ long working distance
- ▶ good field flatness and color correction
- ▶ corrected for thick cover glass

Plan-Neofluar LD **20x/0.4** - corrected for cover glass D = 0 - 1.5 mm
working distance 8.4 ~ 7.4 mm (proportional to cover glass thickness)

Plan-Neofluar LD **40x/0.6** - corrected for cover glass D = 0 - 1.5 mm
working distance 3.3 ~ 2.5 mm (proportional to cover glass thickness)

Plan-Neofluar LD **63x/0.75** - corrected for cover glass D = 0 - 1.5 mm
working distance 2.2 ~ 1.2 mm (proportional to cover glass thickness)

Series Plan-Neofluar

Good universal objectives with good correction and field flatness. They are enhanced for fluorescence applications which makes them highly recommendable for μ -PIV and should be considered as standard for lower manufacturing.

- ▶ enhanced for fluorescence
- ▶ good field flatness and color correction

Plan-Neofluar **5x/0.15**
working distance 18.5 mm

Plan-Neofluar **10x/0.3**
working distance 5.5 mm

Plan-Neofluar **20x/0.5**
working distance 2.0 mm

Following table gives a rough idea of fields of view for a selected magnification and is valid for all series objectives:

Magnification	Field of View (h x v) [μ m]
x 5	1720 x 1370
x 10	860 x 690
x 20	430 x 340
x 40	215 x 170
x 63	140 x 110

Ordering information

part number	Description
1108553	Plan-Neofluar LD 20x/0.4
1108552	Plan-Neofluar LD 40x/0.6
1108558	Plan-Neofluar LD 63x/0.75
1108537	Plan-Neofluar 5x/0.15
1108538	Plan-Neofluar 10x/0.3
1108539	Plan-Neofluar 20x/0.5

Data provided by LaVision is believed to be true. However, no responsibility is assumed for possible inaccuracies or omissions. All data are subject to change without notice.

Feb-07

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