

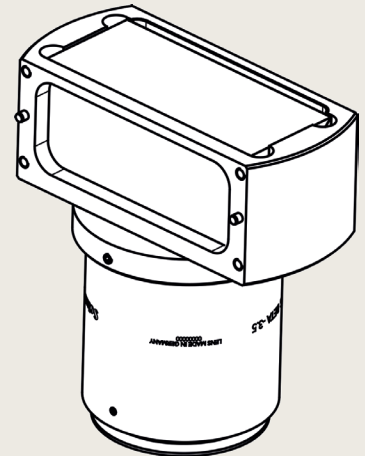
# Macro Varon 4.5/85

With beam splitter



The Macro Varon 4.5/85 with beam splitter is designed to be used in line scan applications where coaxial illumination is required. The 60 mm beam splitter cube offers the opportunity to create an in-line illumination for high reflective objects. Coaxial illumination is ideal for demanding circuit boards and other high resolution applications where a bright, diffuse uniform illumination is needed. This lens offers a high optical performance at a 3.5x magnification over the entire field.

The lens design considers the optical glass path of the high quality beam splitter to achieve a top performance. Lens and beam splitter assembly are precisely aligned to each other, so that a maximum of light is captured and directed to the image plane of 12 k cameras with 5µm pixel size, with almost no loss at the image edges. Also available without beam splitter with 0.5x to 2.0x variable magnification.



Macro Varon 4.5/85

## Key features

- Optimized for 12 k cameras with 5 µm pixel sizes
- 3.5x magnification
- Separate azimuth alignment of beam splitter and lens
- V-Mount connection

## Applications

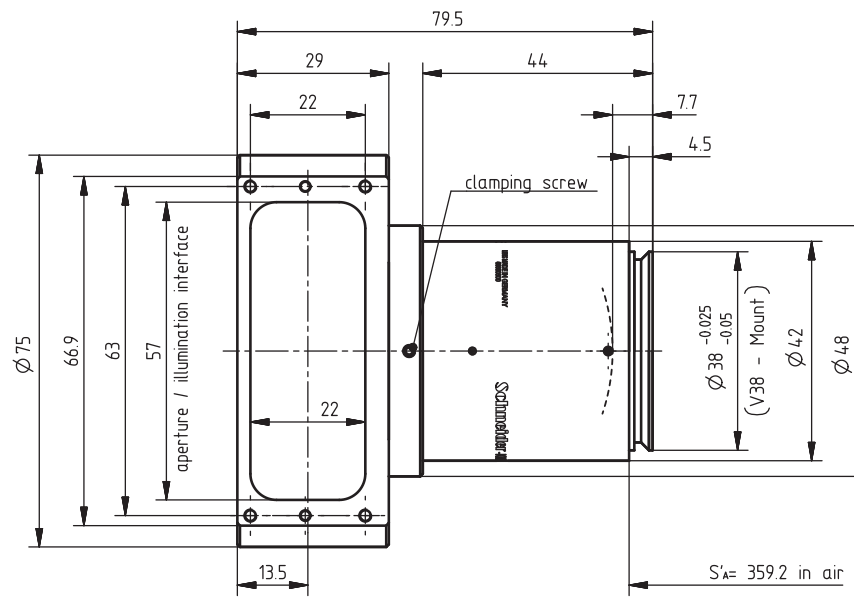
- BCB inspection
- Flat glass inspection
- Wafer inspection
- Line scan applications

Name	Macro Varon 4.5/85
Type	-0017
Focal Length [mm]	85
Magnification	-3.5
Image circle [mm]	62
Resolution [µm]	-
F/# range	4.5 ... 8
NA	0.03
Interface	V38-Mount
Working distance [mm]	95
AoV [°]	9
Focus control	manual
Transmission [nm]	400 - 1000
Filter thread [mm]	-
Dimensions L x D [mm]	79.5 x 75.0

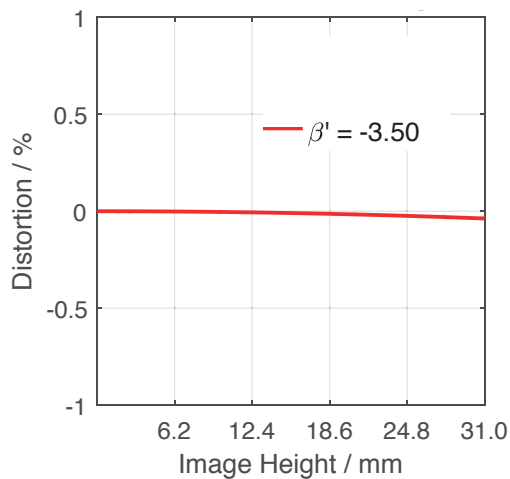
Name	Macro Varon 4.5/85
Weight [g]	410
Storage temperature [°C]	-25 ... +70
$f'_{\text{eff}}$ [mm]	85.18
$S_F$ [mm]	-68.85
$S'_{F'}$ [mm]	64.36
HH' [mm]	3.13
$\beta'_p$	1.037
$S_{EP}$ [mm]	48.28
$S'_{AP}$ [mm]	-24.20
$\Sigma d$ [mm]	40.28
ID	1069837

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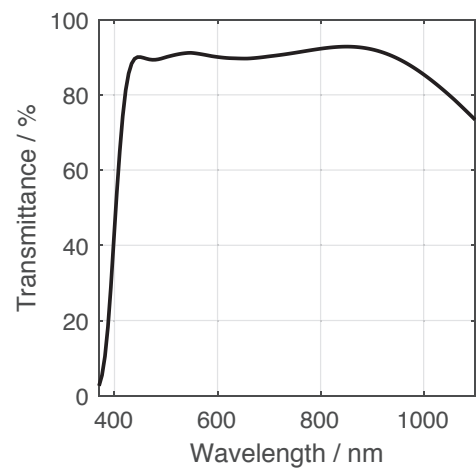
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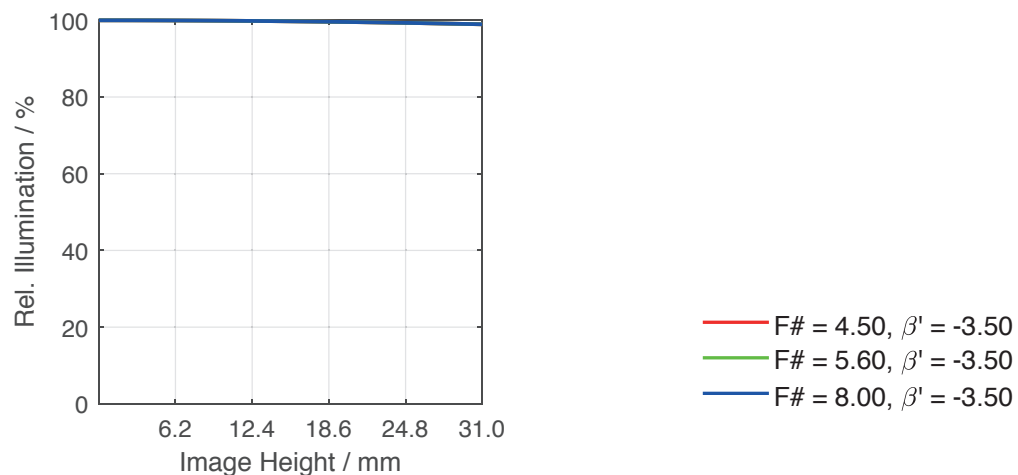
## Distortion vs. Image Height



## Transmittance vs. Wavelength



## Relative Illumination vs. Image Height

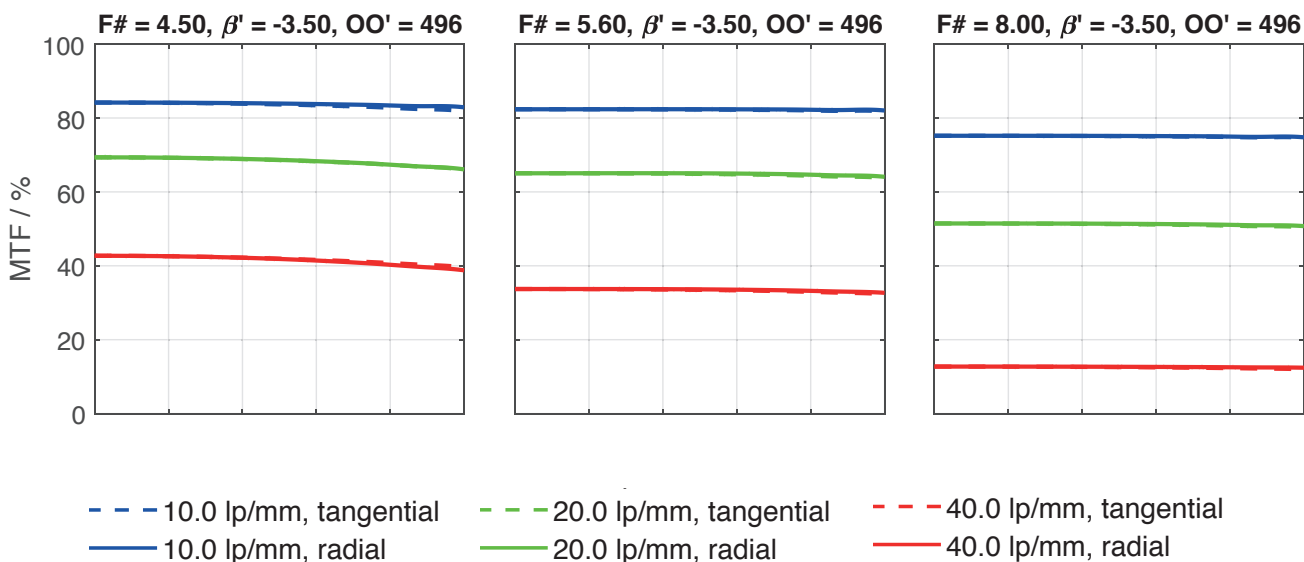


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Spectrum Name	VIS					
Wavelengths [nm]	425	475	525	575	625	675
Weights	8	16	23	22	19	13



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Accessories	Mount	Length	ID
Makro	UNIFOC 12 V38/V38	-	11726
	UNIFOC 7 V38/V38	-	1001041
	UNIFOC 7 (M58 x 0.75)	-	1054532
Ext. Tube	V38 / V38	6 mm	20176
	V38 / V38	8 mm	20177
	V38 / V38	10 mm	20178
	V38 / V38	25 mm	20179
	V38 / V38	50 mm	20154
	V38 / V38	75 mm	20155
Adapter	V38 / C-Mount	-	20052
	V38 / C-Mount Hub 19.2 - 24.2 mm	-	1011634
	V38 / Leica (M39 x 26 Gg.)	-	20054
	V38 / T2 (M42 x 0,75)	-	20053
	V38 / M42 x 1	-	20059
	V38 / M42 x 1 - Length 35 mm	-	1001692
	V38 / M58 x 0,75	-	1018385
	V38 / Nikon F-Mount	-	21610

# Get more information

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