

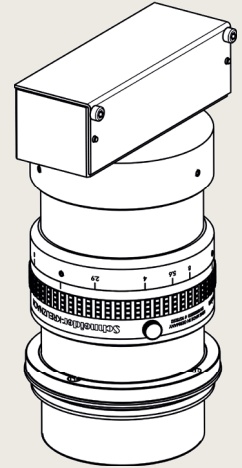
Xenon-Diamond 2.9/106

With beam splitter



This high resolution 2.6x line scan lens with beam splitter is optimized for the use with 12k (62.5 mm) line scan sensors with 5 μm pixel, but can also be used with 16k / 5 μm (82 mm) lines.

The attached beam splitter enables on-axis illumination to avoid troublesome reflexes on specular surface as from wafer inspection. This lens resolves 2 μm in object space and plus less than 0.1% distortion secures a homogeneous high MTF over the entire line. This is an important feature for high demanding OLED inspection systems. The lens is broadband AR coated and can be used from 400 nm in VIS up to 1000 nm in NIR spectrum, ideal for PCB inspection. The V-Mount makes it easy to install and rotate into the desired azimuth position for a wide range of line scan applications. The Xenon-Diamond is also available with 3.5x magnification; both lenses are offered with and without beam splitter.



Xenon-Diamond 2.9/106

Key features

- For 12k and 16k line scan sensors with 5 μm pixel sizes
- Resolves 2 μm in object space
- Best azimuth marking
- 400 nm to 1000 nm broadband AR coating
- Lockable distance and aperture settings
- V-Mount connection

Applications

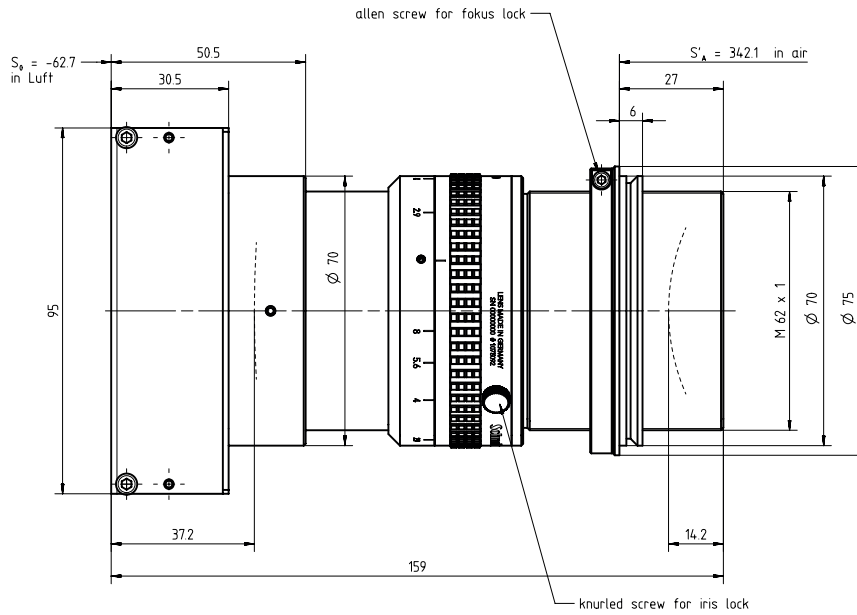
- OLED inspection
- PCB inspection
- Wafer inspection

Name	Xenon-Diamond 2.9/106
Type	-0003
Focal Length [mm]	106
Magnification	-2.6
Image circle [mm]	62
Resolution [μm]	5
F/# range	2.9 ... 8
NA	0.17
Interface	V70-Mount
Working distance [mm]	104
AoV [°]	10
Focus control	manual
Transmission [nm]	400 - 1000
Filter thread [mm]	-
Dimensions L x D [mm]	157.5 x 95.0

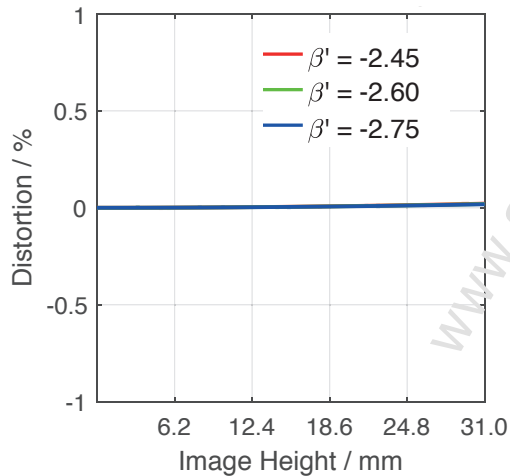
Name	Xenon-Diamond 2.9/106
Weight [g]	1170
Storage temperature [°C]	-25 ... +70
f'_{eff} [mm]	105.30
S_F [mm]	-57.68
$S'_{F'}$ [mm]	58.80
HH' [mm]	13.02
β'_p	1.033
S_{EP} [mm]	73.22
S'_{AP} [mm]	-50.06
Σd [mm]	107.14
ID	1076949

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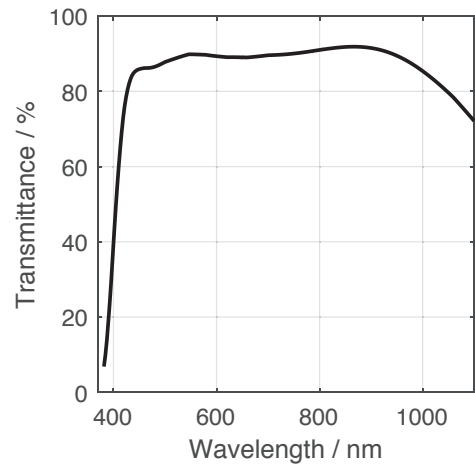
With beam splitter



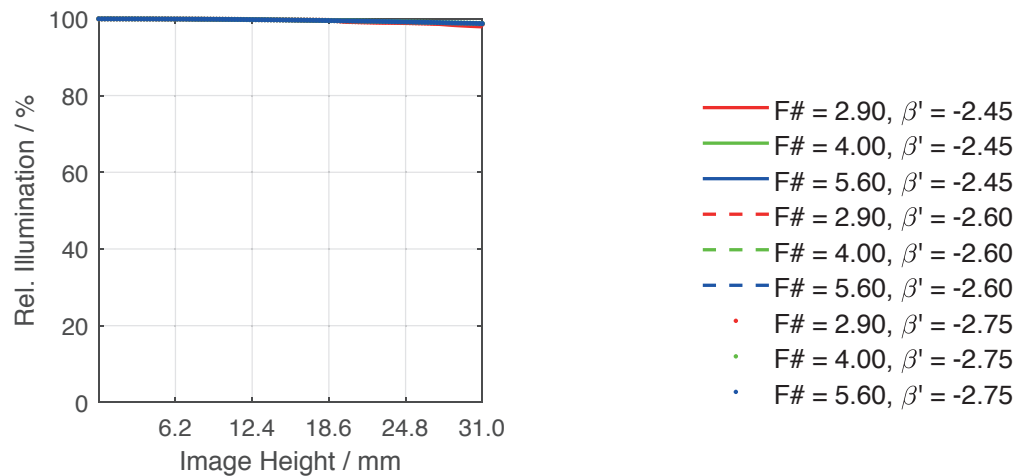
Distortion vs. Image Height



Transmittance vs. Wavelength



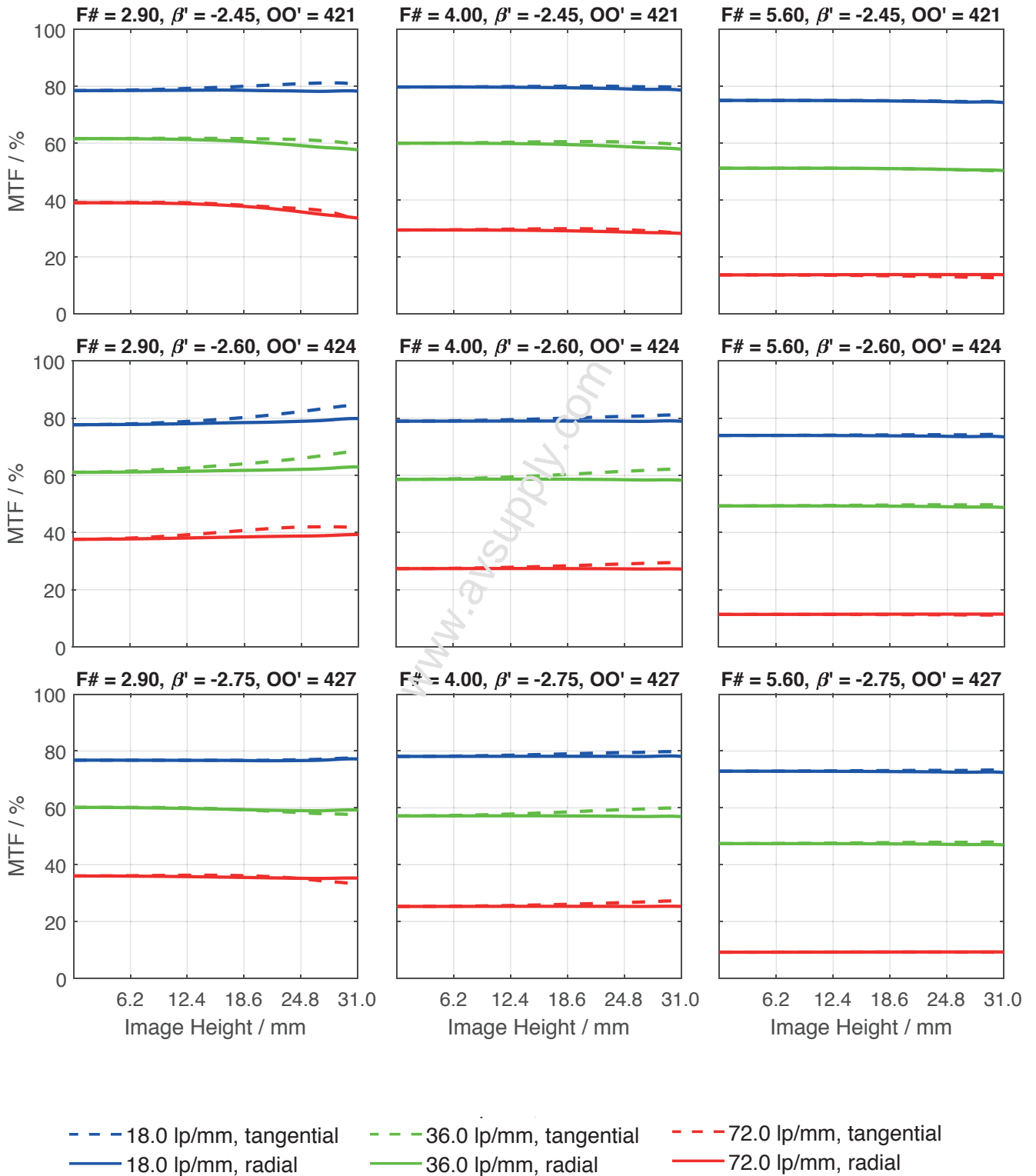
Relative Illumination vs. Image Height



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Spectrum Name	VIS2					
Wavelengths [nm]	436	475	525	575	625	656
Weights	9.76	16	23	22	19	15.28



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Accessories	Mount	Length	ID
Adapter	V90 / M95 x 1	10 mm	1077293
	Tilt M72 / 4 x M3 (M4)	-	1071925
	M72 x 0.75 / M95 x 1	4 mm	1077013
	M72 x 0.75 / M58 x 0.75	6 mm	1075556
	M72 x 0.75 / M42 x 1	6 mm	1079515
	M72 x 0.75 / M90 x 1	-	1084879
	M58 x 0.75 / M90 x 1	-	1084880
	M95 x 1 / M90 x 1	-	1084889
	M95 x 1 / M72 x 0.75	6.6 mm	1077295
Ext. Tube	M90 x 1	10 mm	1084875
	M90 x 1	25 mm	1084876
	M90 x 1	50 mm	1084877
	M90 x 1	100 mm	1084878
	M72 x 0.75	5 mm	1072420
	M72 x 0.75	10 mm	1072421
	M72 x 0.75	25 mm	26406
	M72 x 0.75	50 mm	1054733
	M72 x 0.75	100 mm	1079483
	M95 x 1	10 mm	1077290
	M95 x 1	25 mm	1062892
	M95 x 1	50 mm	1062893
	M95 x 1	100 mm	1062894