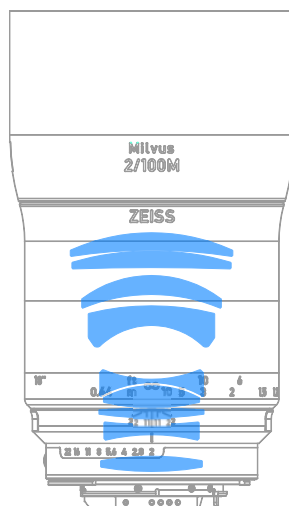




# ZEISS Milvus 2/100M

## Technische Daten/Technical Specifications



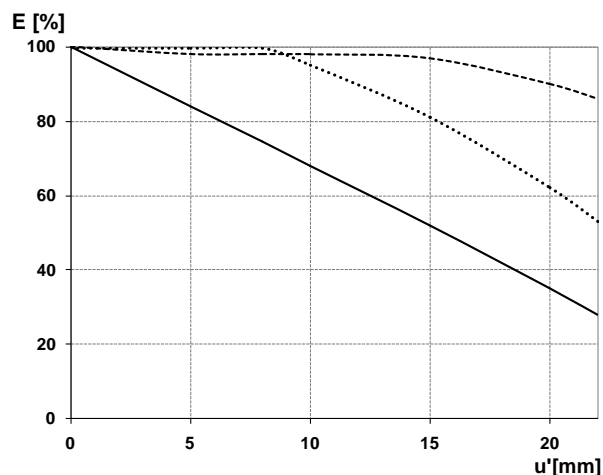
<b>Brennweite/Focal length</b>	100 mm
<b>Blendenbereich/Aperture range</b>	f/2.0 – f/22
<b>Linsen / Gruppen/Lens elements / Groups</b>	9 / 8
<b>Fokussierbereich/Focusing range</b>	0,44 m (1.44 ft) - ∞
<b>Arbeitsabstand/Free working distance</b>	0,25 m (0.8 ft) - ∞
<b>Bildwinkel*/Angular field* (diag. / horiz. / vert.)</b>	25° / 21° / 14°
<b>Bildkreisdurchmesser/Diameter of image field</b>	43 mm (1.69")
<b>Anlagemaß/Flange focal distance</b>	ZF.2: 46,5 mm (1.83") ZE: 44,0 mm (1.73")
<b>Objektfeld bei Naheinstellung* Coverage at close range (MOD)*</b>	48 mm x 72 mm (1.89" x 2.83")
<b>Abbildungsmaßstab bei Naheinstellung Image ratio at MOD</b>	1 : 2
<b>Filterdurchmesser/Filter thread</b>	M67 x 0.75
<b>Lage der Eintrittspupille (vor der Bildebene) Entrance pupil position (in front of image plane)</b>	66,2 mm (2.6")
<b>Drehwinkel des Fokussierings (inf – MOD) Rotation angle of focusing ring (inf – MOD)</b>	352 °
<b>Durchmesser max./Diameter max.</b>	ZF.2: 80,5 mm (3.17") ZE: 80,5 mm (3.17")
<b>Durchmesser des Fokussierings Diameter of focusing ring</b>	ZF.2: 77,2 mm (3.04") ZE: 77,2 mm (3.04")
<b>Länge (ohne Objektivdeckel)/Length (without lens caps)</b>	ZF.2: 103,0 mm (4.06") ZE: 104,0 mm (4.09")
<b>Länge (mit Objektivdeckeln)/Length (with lens caps)</b>	ZF.2: 117,5 mm (4.63") ZE: 119,5 mm (4.70")
<b>Gewicht/Weight</b>	ZF.2: 807 g (28.47 oz) ZE: 843 g (29.74 oz)

\* bezugnehmend auf das 24x36mm Format/referring to 24x36 mm format



# ZEISS Milvus 2/100M

## Relative Beleuchtungsstärke/Relative Illuminance

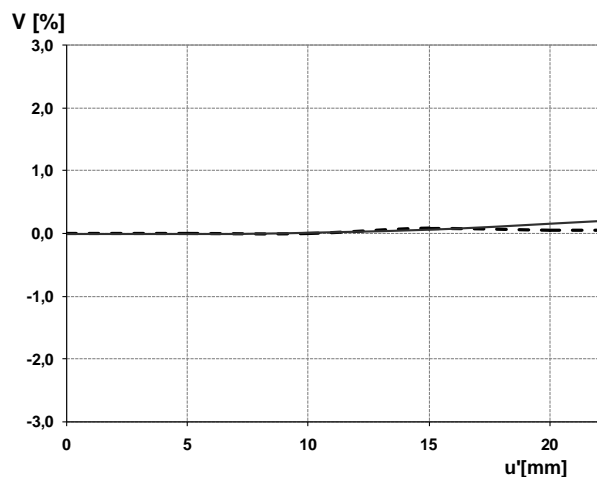


Die relative Beleuchtungsstärke zeigt die Abnahme der Bildhelligkeit von der Mitte des Bildes zu den Ecken. Angabe in Prozent.

The relative illumination shows in percent the decrease in image brightness from the image center to edge.

- Blendenzahl:  $k = 2$  / f-number = 2
- ... Blendenzahl:  $k = 2$  / f-number = 2 M 1:2
- Blendenzahl:  $k = 4$  / f-number = 4

## Relative Verzeichnung/Relative Distortion



Die Relative Verzeichnung zeigt die Abweichung der aktuellen von der idealen Bildhöhe.

The relative distortion shows in percent the deviation of the actual from the ideal image height.

- $\infty$
- ... M= 1:2

Angaben für unendlich.  
Data for infinity.

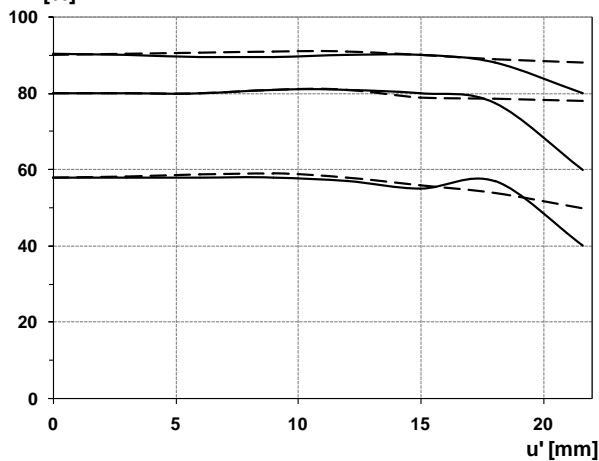


# ZEISS Milvus 2/100M

## MTF Charts

Unendlich / Infinity

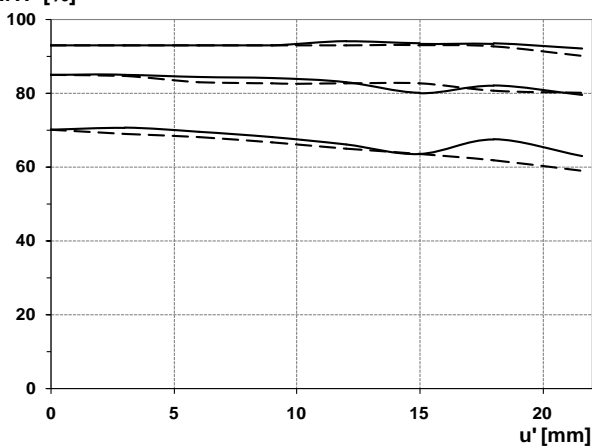
MTF [%]



Blendenzahl:  $k = 2$  / f-number = 2

— Sagittal  
... Tangential

MTF [%]



Blendenzahl:  $k = 4$  / f-number = 4

— Sagittal  
... Tangential

Modulationsübertragung MTF als Funktion der Bildhöhe ( $u'$ ) und Spaltorientierung. Weißes Licht. Ortsfrequenzen  $R=10, 20$  und  $40$  Perioden/mm. // Modulation transfer MTF as a function of the image height ( $u'$ ) and slit orientation. White light. Spatial frequencies  $R=10, 20$  and  $40$  cycles/mm.



# ZEISS Milvus 2/100M

## Schärfentiefe/Depth of Field (DOF)\*

Engraved Distance	f/2		f/2.8		f/4		f/5.6		f/8		f/11		f/16		f/22		
	From	to	From	To	from	To	From	To	From	To	From	To	From	To	from	To	
<b>Meter</b>																	
<b>INF</b>	167	INF	119	INF	83	INF	60	INF	42	INF	30	INF	21	INF	15.3	INF	
<b>10 m</b>	9.456	10.6	9.255	10.9	8.969	11.3	8.615	11.9	8.135	13.0	7.606	14.7	6.866	18.7	6.152	28	
<b>5 m</b>	4.866	5.142	4.814	5.201	4.739	5.293	4.642	5.420	4.505	5.624	4.345	5.902	4.102	6.435	3.847	7.223	
<b>3 m</b>	2.954	3.048	2.936	3.067	2.909	3.097	2.875	3.138	2.824	3.201	2.764	3.284	2.670	3.433	2.565	3.632	
<b>2 m</b>	1.981	2.019	1.973	2.027	1.962	2.039	1.948	2.056	1.926	2.081	1.900	2.113	1.858	2.169	1.811	2.240	
<b>1.5 m</b>	1.490	1.510	1.486	1.514	1.480	1.520	1.473	1.529	1.461	1.541	1.447	1.557	1.425	1.585	1.399	1.620	
<b>1.2 m</b>	1.194	1.206	1.192	1.208	1.188	1.212	1.184	1.217	1.177	1.224	1.169	1.233	1.156	1.249	1.140	1.269	
<b>1 m</b>	0.996	1.004	0.995	1.005	0.993	1.007	0.990	1.010	0.986	1.015	0.980	1.021	0.972	1.030	0.962	1.042	
<b>0.8 m</b>	0.798	0.802	0.797	0.803	0.796	0.804	0.795	0.806	0.792	0.808	0.789	0.811	0.785	0.816	0.779	0.823	
<b>0.7 m</b>	0.699	0.701	0.698	0.702	0.697	0.703	0.696	0.704	0.694	0.706	0.692	0.708	0.689	0.711	0.685	0.715	
<b>0.6 m</b>	0.599	0.601	0.599	0.601	0.598	0.602	0.598	0.602	0.597	0.603	0.595	0.605	0.593	0.607	0.591	0.609	
<b>0.5 m</b>	0.500	0.500	0.499	0.501	0.499	0.501	0.499	0.501	0.498	0.502	0.498	0.502	0.497	0.503	0.495	0.505	
<b>0.44 m</b>	0.440	0.440	0.440	0.440	0.440	0.440	0.439	0.441	0.439	0.441	0.439	0.441	0.438	0.442	0.438	0.442	

\* Schärfentiefetabelle für das 24x36mm Format, Zerstreuungskreis 0.033mm (D/1500), gerundet auf 0.01m //  
 Depth-of-field table for sensor format 24x36mm, circle of confusion 0.033mm (D/1500), rounded to 0.01m