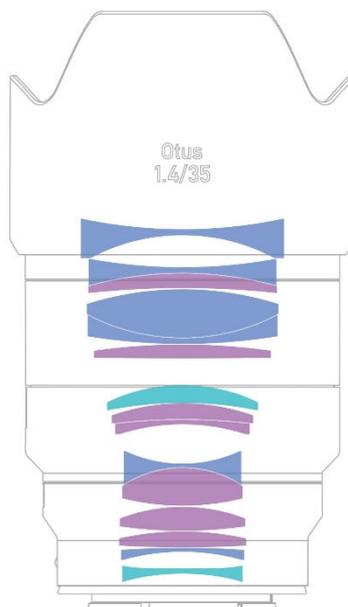




ZEISS Otus ML 1.4/35

Technische Daten/Technical Specifications



Brennweite/Focal length	35 mm (1.38")
Blendenbereich/Aperture range	f/1.4 – f/16
Linse / Gruppen/Lens elements / Groups	15/11
Fokussierbereich/Focusing range	0,3 m (11.81 ") – ∞
Arbeitsabstand/Free working distance	0,2 m (7.87") – ∞
Bildfeld*/Angular field* (diag. / horiz. / vert.)	63°/54°/38°
Bildkreisdurchmesser/Diameter of image field	43 mm (1.69")
Anlagemaß/Flange focal distance	E-Mount: 18 mm (0.7") RF-Mount: 20 mm (0.78") Z-Mount: 16mm (0.62")
Objektfeld bei Naheinstellung*	203 x 135 mm (7.99" x 5.31")
Coverage at close range (MOD)*	
Abbildungsmaßstab bei Naheinstellung	1:5.72
Image ratio at MOD	
Filterdurchmesser/Filter thread	M67 x 0.75
Lage der Eintrittspupille (vor der Bildebene)	80.72 mm (3.18")
Entrance pupil position (in front of image plane)	
Drehwinkel des Fokussierings (inf – MOD)	257°
Rotation angle of focusing ring (inf – MOD)	
Durchmesser max./Diameter max.	77 mm (3.03")
Durchmesser des Fokussierings	77 mm (3.03")
Diameter of focusing ring	
Länge (ohne Objektivdeckel)/Length (without lens caps)	E-Mount: 101 mm (3.98") RF-Mount: 101 mm (3.98") Z-Mount: 103 mm (4.05")
Länge (mit Objektivdeckeln)/Length (with lens caps)	E-Mount: 114 mm (4.49") RF-Mount: 112 mm (4.41") Z-Mount: 116 mm (4.57")
Gewicht/Weight	E-Mount: 698 g (1.539 lbs)
(without lens caps / ohne Streulichtblende)	RF-Mount: 717 g (1.581 lbs) Z-Mount: 737 g (1.625 lbs)

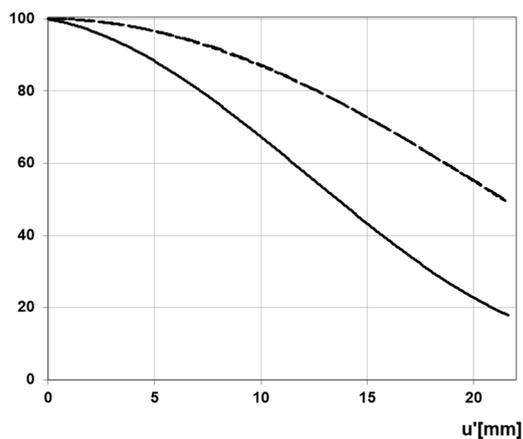
* bezugnehmend auf das 24x36mm Format/referring to 36 mm format



ZEISS Otus ML 1.4/35

Relative Beleuchtungsstärke / Relative Illuminance

E [%]



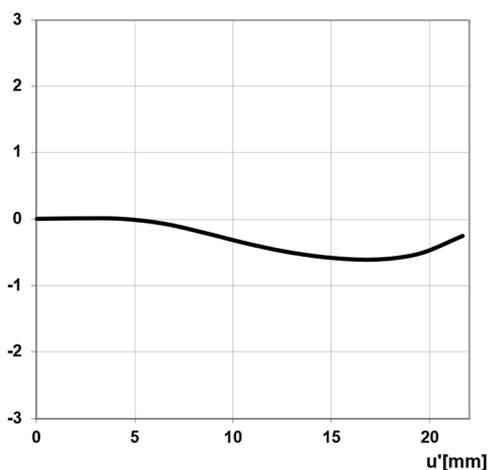
Die relative Beleuchtungsstärke zeigt die Abnahme der Bildhelligkeit von der Mitte des Bildes zu den Ecken. Angabe in Prozent.

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

- Blendenzahl: $k = 1.4$ / f-number = 1.4
- - - Blendenzahl: $k = 4$ / f-number = 4
- · · Blendenzahl: $k = 3.8$ / f-number = 3.8

Relative Verzeichnung / Relative Distortion

V [%]



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.

Angaben für unendlich.
Data for infinity.

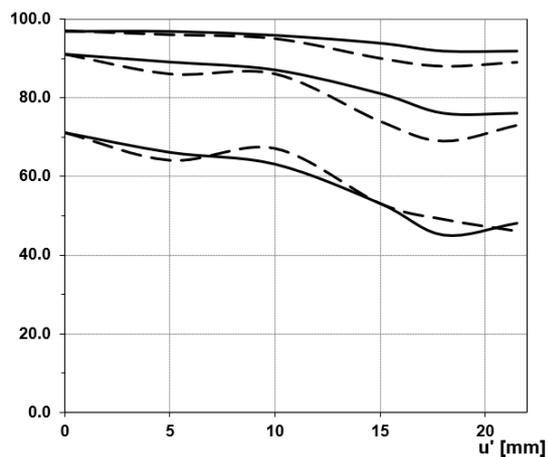


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MTF Charts

Unendlich / Infinity

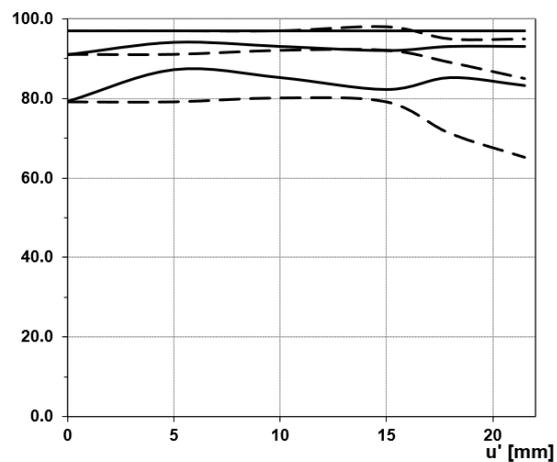
MTF [%]



Blendenzahl: $k = 1.4$ / f-number = 1.4

— 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.

The MTF charts above are revealing the real measurement result in the professional lab environment.



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Schärfentiefe / Depth of Field (DOF)*

Engraved Distance	f/1.4		f/2		f/2.8		f/4		f/5.6		f/8		f/11		f/16	
	from	to	from	to	from	to	from	to	from	to	from	to	from	to	from	to
INF	30.010	INF	21.747	INF	15.377	INF	10.873	INF	7.689	INF	5.437	INF	3.844	INF	2.718	INF
5	4.281	6.009	4.059	6.508	3.766	7.437	3.417	9.317	3.021	14.505	2.595	68.226	2.164	INF	1.752	INF
3	2.724	3.339	2.632	3.487	2.505	3.739	2.345	4.164	2.150	4.961	1.924	6.802	1.676	14.317	1.417	INF
2	1.872	2.146	1.828	2.207	1.766	2.306	1.684	2.462	1.581	2.722	1.454	3.201	1.307	4.260	1.143	8.009
1.5	1.426	1.582	1.401	1.614	1.363	1.667	1.314	1.748	1.250	1.876	1.169	2.093	1.071	2.503	0.957	3.461
1	0.966	1.036	0.954	1.050	0.937	1.073	0.913	1.106	0.881	1.157	0.839	1.237	0.787	1.372	0.723	1.622
0.8	0.778	0.823	0.770	0.832	0.758	0.846	0.742	0.867	0.721	0.899	0.693	0.947	0.656	1.025	0.611	1.160
0.6	0.587	0.613	0.583	0.618	0.576	0.626	0.566	0.638	0.554	0.655	0.536	0.681	0.514	0.721	0.485	0.787
0.5	0.491	0.509	0.488	0.513	0.483	0.518	0.476	0.527	0.467	0.538	0.454	0.556	0.438	0.583	0.416	0.626
0.45	0.442	0.458	0.440	0.461	0.436	0.465	0.430	0.472	0.423	0.481	0.412	0.496	0.398	0.517	0.380	0.551
0.4	0.394	0.406	0.392	0.408	0.389	0.412	0.384	0.417	0.378	0.425	0.369	0.436	0.358	0.453	0.343	0.480
0.35	0.345	0.355	0.344	0.357	0.341	0.359	0.337	0.364	0.333	0.369	0.326	0.378	0.317	0.391	0.305	0.411
0.32	0.316	0.324	0.315	0.326	0.312	0.328	0.309	0.331	0.305	0.336	0.299	0.344	0.291	0.355	0.281	0.372
0.3	0.296	0.304	0.295	0.305	0.293	0.307	0.290	0.310	0.287	0.315	0.281	0.321	0.274	0.331	0.265	0.346

* Schärfentiefetabelle für das 24x36mm Format, Zerstreungskreis 0.028mm (D/1500), gerundet auf 0.01m // Depth-of-field table for sensor format 24x36mm, circle of confusion 0.028mm (D/1500), rounded to 0.01m