



StockOptics

CATALOG 2023 | Europe

Dear asphericon customer

Within the StockOptics product range, you can choose from an extensive portfolio of precision-polished aspheric lenses, acylinders and axicons. Benefit from outstanding asphericon quality at excellent conditions and fast delivery.

Discover, for example, the various quality levels of our aspheres: Precision, Ultra and BeamTuning. These aspheres are optimized for a wide range of applications, including high laser powers.

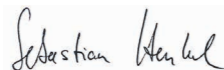
In addition to further diameters, all fused silica aspheres are now available with V-Coatings (355 nm, 532 nm and 1064 nm). Learn more at page 10.

The new StockOptics catalog contains latest technical information and prices. Shop conveniently online or contact the asphericon sales team for professional support.

Sincerely yours



Alexander W. Zschäbitz
CEO
asphericon GmbH



Sebastian Henkel
Head of Sales
asphericon GmbH

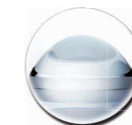


Product Range

asphericon's fine collection of aspheres, axicons, acylinders and mounted optics – profit from the technology leader in manufacturing high precision aspheres.

YOUR BENEFITS:

- = Precision polished StockOptics for remarkable performance
- = CNC grinding & polishing for superior surface roughness
- = High quality level for demanding applications
- = Off-the-shelf delivery for short lead times
- = Files for optical design and drawings available (Zemax, CodeV, OSLO, VirtualLab™, Step)



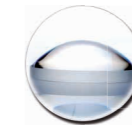
a|High-NA

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a|Low-NA

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a|FusedSilica

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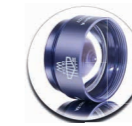
a|Axicons

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a|Acylinders

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a|MountedAspheres/Axicons/Acylinders

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Quick Guide:

WHY TO CHOOSE AN ASPHERIC SOLUTION?

In comparison to spherical lenses our aspheres perform with minimal foci and show outstanding imaging characteristics (see fig. 1).

The quality of all StockOptics is sufficient for high-end applications. Within our BeamTuning line (see p. 13) we also offer diffraction-limited aspheric lenses. They generate an even better spot size (fig. 2).

Finally, both qualities convince with outstanding surface form deviations (fig. 3).

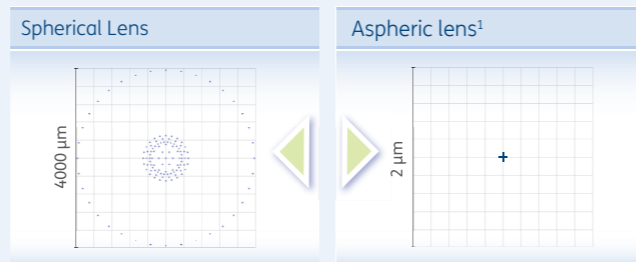
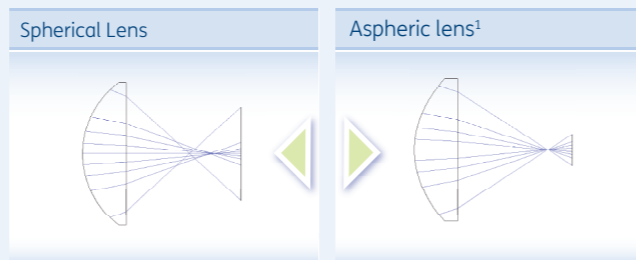
Choose all lenses out of this catalog and order online at asphericon.com/shop. We also offer customized lenses and systems. For your individual solution please contact us!

Contact us:

✉ sales@asphericon.com

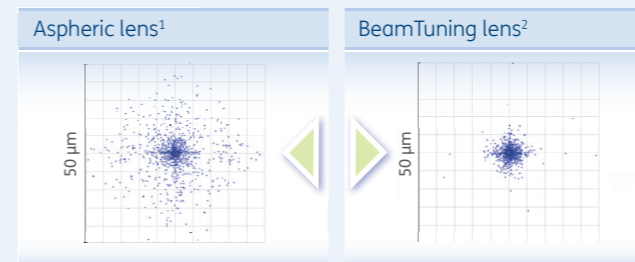
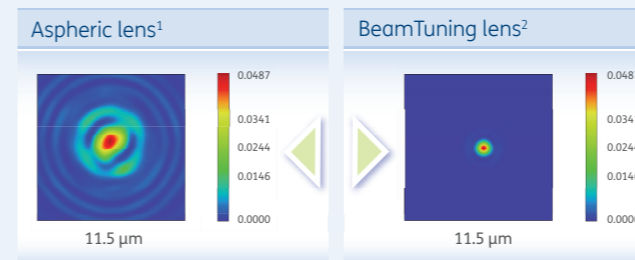
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fig. 1
1 Optical path / Spot size
 Spherical lens vs. Aspheric lens¹
 Dia: 25 mm | EFL: 20 mm | NA: 0.54



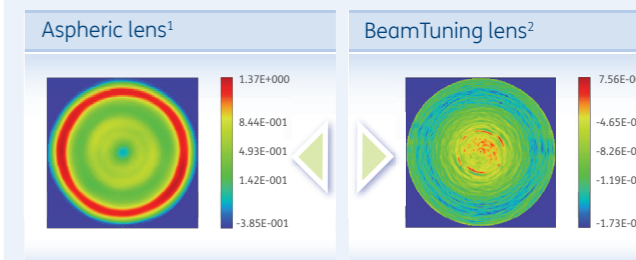
- = Spot sizes from both lenses differ significantly: 4000 µm (Sphere) vs. 2 µm (Asphere)
- = Spherical lenses produce improper foci and spherical aberrations
- = StockOptic lenses stand out with minimal foci to maximize intensity

fig. 2
2 Point spread function / Spot size
 Aspheric lens¹ vs. BeamTuning lens²
 Dia: 25 mm | EFL: 20 mm | NA: 0.54



- = Wavefront RMS shows great result for both lenses (aspheric lens = 0.361 waves, BeamTuning lens = 0.065 waves)
- = BeamTuning lens performs with an excellent spot size and diffraction-limited focus (Strehl ratio: 0.85)

fig. 3
3 Surface form deviation
 Aspheric lens¹ vs. BeamTuning lens²
 Dia: 25 mm | EFL: 20 mm | NA: 0.54



- = asphericon lens convinces with a $RMS_s \leq 0.5 \mu\text{m}$
- = Full-surface interferometric measurement shows an outstanding RMS_s of up to $0.02 \mu\text{m}$ for BeamTuning quality

¹ asphericon AHL25-20 (see p. 06/07), design wavelength: 780 nm
² BeamTuning lens (see p. 13), design wavelength: 355 nm

Mounted & unmounted lenses

a|High-NA

Precision polished aspheres for a superior beam energy distribution. Especially suitable for your demanding laser applications. Also available as mounted lenses.

KEY BENEFITS

- = Outstanding surface form deviation of RMS, up to $\leq 0.1 \mu\text{m}$
- = Decrease of chromatic aberrations by use of low dispersion material
- = Available with 3 standard coatings (customized coatings on request)
- = Laser induced damage threshold: 12 J/cm^2 , 100 Hz, 6 ns, 532 nm
For higher laser power applications please request a V-Coating. Contact us for an individual offer.
- = Off-the-shelf delivery
- = RoHS compliance

LENS DESCRIPTION

EFL Tolerance	[%]	≤ 0.1
Surface Imperfections	[Scratch-Dig]	60-40
Diameter Tolerance	[mm]	+0/-0.05
Center Thickness Tolerance ²	[mm]	± 0.05
Clear Aperture	[%]	≥ 90

AR-Coatings³

- A: $R_{\text{MAX}} < 1.0\%$, $R_{\text{AVG}} \leq 0.4\%$, 400-600 nm, AOI=0°
- B: $R_{\text{MAX}} < 1.0\%$, $R_{\text{AVG}} \leq 0.4\%$, 600-1050 nm, AOI=0°
- C: $R_{\text{MAX}} < 1.0\%$, $R_{\text{AVG}} \leq 0.4\%$, 1000-1600 nm, AOI=0°

PRECISION

Surface Form Deviation (RMS) ² [μm] ≤ 0.5					Wavefront RMS [nm] ≤ 390								
Product Code	\emptyset	EFL	NA	f/d	WD	λ_{Design}	Material	Prices 1pc ⁴		Prices 5pc ⁴		Prices Mounted 1pc ⁴	
	[mm]	[mm]			[mm]	[nm]		uncoated	coated	uncoated	coated	uncoated	coated
AHL10-08-P ⁶	10	8	0.55	0.80	6.0	780	S-LAH64	140 €	164 €	136 €	159 €	-	-
AHL12-10-P	12.5	10	0.55	0.80	7.6	780	S-LAH64	163 €	187 €	158 €	181 €	254 €	277 €
AHL15-12-P	15	12	0.55	0.80	9.0	780	S-LAH64	175 €	199 €	169 €	193 €	265 €	289 €
AHL18-15-P	18	15	0.53	0.83	11.5	780	S-LAH64	187 €	220 €	181 €	213 €	277 €	309 €
AHL20-18-P	20	18	0.49	0.90	14.0	780	S-LAH64	199 €	229 €	193 €	222 €	289 €	318 €
AHL25-20-P	25	20	0.54	0.80	15.7	780	S-LAH64	210 €	240 €	203 €	233 €	299 €	329 €
AHL30-26-P	30	26	0.52	0.87	20.6	780	S-LAH64	269 €	308 €	261 €	299 €	-	-
AHL45-32-P	45	32	0.61	0.71	24.2	780	S-LAH64	351 €	438 €	340 €	425 €	-	-
AHL50-40-P	50	40	0.55	0.80	31.3	780	S-LAH64	375 €	480 €	363 €	465 €	-	-

ULTRA

Surface Form Deviation (RMS) ² [μm] ≤ 0.1					Wavefront RMS [nm] ≤ 78								
Product Code	\emptyset	EFL	NA	f/d	WD	λ_{Design}	Material	Prices 1pc ⁴		Prices 5pc ⁴		Prices Mounted 1pc ⁴	
	[mm]	[mm]			[mm]	[nm]		uncoated	coated	uncoated	coated	uncoated	coated
AHL10-08-U ⁶	10	8	0.55	0.80	6.0	780	S-LAH64	280 €	326 €	271 €	316 €	-	-
AHL12-10-U	12.5	10	0.55	0.80	7.6	780	S-LAH64	327 €	373 €	317 €	361 €	416 €	458 €
AHL15-12-U	15	12	0.55	0.80	9.0	780	S-LAH64	350 €	398 €	339 €	385 €	437 €	490 €
AHL18-15-U	18	15	0.53	0.83	11.5	780	S-LAH64	374 €	439 €	362 €	426 €	463 €	529 €
AHL20-18-U	20	18	0.49	0.90	14.0	780	S-LAH64	397 €	458 €	384 €	444 €	486 €	545 €
AHL25-20-U	25	20	0.54	0.80	15.7	780	S-LAH64	421 €	482 €	408 €	467 €	510 €	571 €
AHL30-26-U	30	26	0.52	0.87	20.6	780	S-LAH64	538 €	618 €	521 €	599 €	-	-
AHL45-32-U	45	32	0.61	0.71	24.2	780	S-LAH64	703 €	875 €	681 €	848 €	-	-
AHL50-40-U	50	40	0.55	0.80	31.3	780	S-LAH64	750 €	962 €	726 €	932 €	-	-

1 RMS, corresponds to ISO 10110-5. | 2 For lenses AHL45-32, AHL50-40 please consider a center thickness tolerance of ± 0.1 . | 3 Custom coatings available upon request. | 4 Prices valid per piece. More volumes and discounts of coated and uncoated lenses at www.osphericon.com. | 6 Calculated for 250 μm cover glass thickness. | General: Technical parameters and prices are subject to change without prior notice.

a|Low-NA

Available in a focal length-diameter-ratio (f/d) of 2.0 and ideally suited for light collection and laser applications. Some diameters are also available with high-precision mountings.

Mounted & unmounted lenses

KEY BENEFITS

- = Outstanding surface form deviation up to $RMS \leq 0.1 \mu m$
- = Long focal length (f/d 2.0)
- = Available with 3 standard coatings (customized coatings on request)
- = Laser induced damage threshold: $12 J/cm^2$, 100 Hz, 6 ns, 532 nm
For higher laser power applications please request a V-Coating. Contact us for an individual offer.
- = Off-the-shelf delivery
- = RoHS compliance

LENS DESCRIPTION

EFL Tolerance	[%]	≤ 0.1
Surface Imperfections	[Scratch-Dig]	60-40
Diameter Tolerance	[mm]	+0/-0.05
Center Thickness Tolerance ²	[mm]	± 0.05
Clear Aperture	[%]	≥ 90

AR-Coatings³

A: $R_{MAX} < 1.0\%$, $R_{AVG} \leq 0.4\%$, 400-600 nm, AOI=0°

B: $R_{MAX} < 1.0\%$, $R_{AVG} \leq 0.4\%$, 600-1050 nm, AOI=0°

C: $R_{MAX} < 1.0\%$, $R_{AVG} \leq 0.4\%$, 1000-1600 nm, AOI=0°

PRECISION

Product Code	Surface Form Deviation (RMS) ² [μm] ≤ 0.5				Wavefront RMS [nm] ≤ 255				Prices 1pc ⁴		Prices 5pc ⁴		Prices Mounted 1pc ⁵	
	\emptyset [mm]	EFL [mm]	NA	f/d	WD [mm]	λ_{Design} [nm]	Material	uncoated	coated	uncoated	coated	uncoated	coated	
ALL12-25-P	12.5	25	0.23	2.0	22.4	780	N-BK7	163 €	187 €	158 €	181 €	254 €	277 €	
ALL25-50-P	25	50	0.23	2.0	46.0	780	N-BK7	210 €	240 €	203 €	233 €	299 €	329 €	
ALL50-100-P	50	100	0.24	2.0	93.4	780	N-BK7	375 €	495 €	363 €	480 €	-	-	
ALL75-60-P	75	60	0.62	0.8	36.5	780	N-BK7	640 €	825 €	620 €	800 €	-	-	
ALL75-150-P	75	150	0.23	2.0	140.1	780	N-BK7	640 €	825 €	620 €	800 €	-	-	
ALL100-100-P	100	100	0.48	1.0	76.2	780	N-BK7	916 €	1.250 €	888 €	1211 €	-	-	
ALL100-200-P	100	200	0.23	2.0	187.4	780	N-BK7	916 €	1.250 €	888 €	1211 €	-	-	

ULTRA

Product Code	Surface Form Deviation (RMS) ² [μm] ≤ 0.1				Wavefront RMS [nm] ≤ 51				Prices 1pc ⁴		Prices 5pc ⁴		Prices Mounted 1pc ⁵	
	\emptyset^6 [mm]	EFL [mm]	NA	f/d	WD [mm]	λ_{Design} [nm]	Material	uncoated	coated	uncoated	coated	uncoated	coated	
ALL12-25-U	12.5	25	0.23	2.0	22.4	780	N-BK7	327 €	373 €	317 €	181 €	416 €	458 €	
ALL25-50-U	25	50	0.23	2.0	46.0	780	N-BK7	421 €	482 €	408 €	361 €	510 €	571 €	
ALL50-100-U	50	100	0.24	2.0	93.4	780	N-BK7	750 €	990 €	726 €	467 €	-	-	

1 For lenses ALL75-60, ALL75-150, ALL100-100, ALL100-200 please consider a maximum value of 0.75. RMS, corresponding to ISO 10110-5 (surface form tolerances). | 2 For lenses ALL50-100, ALL100-200 please consider a center thickness tolerance of ± 0.1 . For lenses ALL75-60, ALL100-100 please consider a center thickness tolerance of ± 0.15 . | 3 Custom coatings available upon request. | 4 Prices valid per piece. More volume discounts at www.asphericon.com. | 5 Prices of mounted lenses valid per piece. More volumes and discounts of coated and uncoated mounted lenses at www.asphericon.com. | 6 Other diameters on request. | General: Technical parameters and prices are subject to change without prior notice.

a|FusedSilica

Fused silica lenses are optimized for several high-power laser applications, as prototypes in test devices or as standard components for beam focusing or collimation. Available in three different quality levels, with superior roughness values, as mounted optics and with 7 different coatings.

KEY BENEFITS

- = Outstanding surface form deviation (RMS_f up to ≤ 0.02 μm)
- = High-end finished optics with lowest roughness (Rq ≤ 0.5 nm) for reduced scattering
- = Available with 7 coatings (customized coatings on request)
- = Laser induced damage threshold: 12 J/cm², 100 Hz, 6 ns, 532 nm
- = Off-the-shelf delivery

LENS DESCRIPTION

EFL Tolerance	[%]	≤0.1
Surface Imperfections	[Scratch-Dig]	20-20
Diameter Tolerance	[mm]	+0/-0.05
Center Thickness Tolerance ¹	[mm]	±0.05
Clear Aperture	[%]	≥90

AR-Coatings

- A: R_{MAX} < 1.0%, R_{AVG} ≤ 0.4%, 400-600 nm, AOI=0°
- B: R_{MAX} < 1.0%, R_{AVG} ≤ 0.4%, 600-1050 nm, AOI=0°
- C: R_{MAX} < 1.0%, R_{AVG} ≤ 0.4%, 1000-1600 nm, AOI=0°
- X: R_{MAX} < 1.0%, R_{AVG} ≤ 0.4%, 240-380 nm, AOI=0°
- Y: R_{MAX} < 1.0%, R_{AVG} ≤ 0.4%, 320-450 nm, AOI=0°

V-Coatings

- K: R < 0.25%, 355 nm, AOI=0°
- L: R < 0.25%, 532 nm, AOI=0°
- M: R < 0.25%, 1064 nm, AOI=0°



Aspheres with optimized design wavelengths, perfectly matching your UV application!

PRECISION

Surface Form Deviation (RMS) _f ²	[μm]	≤0.5
Wavefront RMS	[nm]	≤235

Product Code	Ø	EFL	NA	f/d	WD	λ _{Design}	Prices 1pc ³		Prices Mounted 1pc ⁴	
	[mm]	[mm]			[mm]	[nm]	uncoated	coated	uncoated	coated
AFL12-10-P	12.5	10	0.58	0.833	5.7	355	345 €	387 €	-	-
AFL12-15-P	12.5	15	0.39	1.2	12.3	285	317 €	362 €	403 €	446 €
AFL12-20-P	12.5	20	0.29	1.6	17.3	285	317 €	362 €	403 €	446 €
AFL25-17-P	25	17	0.64	0.7	10.0	355	515 €	578 €	-	-
AFL25-20-P	25	20	0.56	0.8	12.6	355	493 €	568 €	-	-
AFL25-25-P	25	25	0.48	1.0	17.0	285	472 €	546 €	568 €	642 €
AFL25-30-P	25	30	0.39	1.2	23.3	285	393 €	456 €	477 €	559 €
AFL25-40-P	25	40	0.29	1.6	34.6	285	393 €	456 €	477 €	559 €
AFL25-50-P	25	50	0.23	2.0	45.1	355	393 €	456 €	477 €	559 €
AFL25-75-P	25	75	0.15	3.0	70.9	355	393 €	456 €	477 €	559 €
AFL25-100-P	25	100	0.11	4.0	96.3	355	393 €	456 €	477 €	559 €
AFL50-40-P	50	40	0.56	0.8	25.2	355	764 €	849 €	-	-
AFL50-50-P	50	50	0.48	1.0	37.0	355	742 €	829 €	-	-
AFL50-60-P	50	60	0.39	1.2	48.3	285	742 €	829 €	-	-
AFL50-80-P	50	80	0.29	1.6	70.6	285	742 €	829 €	-	-
AFL50-100-P	50	100	0.23	2.0	91.5	355	689 €	797 €	-	-

¹ For lenses AFL50-60, AFL50-80, please consider a center thickness tolerance of ±0.1. | ² RMS_f corresponds to ISO 10110-5 (surface form tolerances). | ³ Prices valid per piece. More volume discounts at www.asphericon.com. | ⁴ Prices valid per piece. More volumes and discounts of coated and uncoated mounted lenses at www.asphericon.com. | General: Technical parameters and prices are subject to change without prior notice.



Ultra-precise lenses with outstanding surface form deviation and wavefront RMS.

ULTRA

Surface Form Deviation (RMS) ¹	[μm]	≤0.3
Wavefront RMS	[nm]	≤140

Product Code	Ø [mm]	EFL [mm]	NA	f/d	WD [mm]	λ _{Design} [nm]	Prices 1pc ²		Prices Mounted 1pc ³	
							uncoated	coated	uncoated	coated
AFL12-10-U	12.5	10	0.58	0.833	5.7	355	366 €	408 €	-	-
AFL12-15-U	12.5	15	0.39	1.2	12.3	285	361 €	403 €	446 €	488 €
AFL12-20-U	12.5	20	0.29	1.6	17.3	285	361 €	403 €	446 €	488 €
AFL25-17-U	25	17	0.64	0.7	10.0	355	552 €	615 €	-	-
AFL25-20-U	25	20	0.56	0.8	12.6	355	520 €	615 €	-	-
AFL25-25-U	25	25	0.48	1.0	17.0	285	499 €	594 €	594 €	690 €
AFL25-30-U	25	30	0.39	1.2	23.3	285	456 €	520 €	552 €	615 €
AFL25-40-U	25	40	0.29	1.6	34.6	285	456 €	520 €	552 €	615 €
AFL25-50-U	25	50	0.23	2.0	45.1	355	456 €	520 €	552 €	615 €
AFL25-75-U	25	75	0.15	3.0	70.9	355	456 €	520 €	552 €	615 €
AFL25-100-U	25	100	0.11	4.0	96.3	355	456 €	520 €	552 €	615 €
AFL50-40-U	50	40	0.56	0.8	25.2	355	806 €	891 €	-	-
AFL50-50-U	50	50	0.48	1.0	37.0	355	785 €	870 €	-	-
AFL50-60-U	50	60	0.39	1.2	48.3	285	785 €	870 €	-	-
AFL50-80-U	50	80	0.29	1.6	70.6	285	785 €	870 €	-	-
AFL50-100-U	50	100	0.23	2.0	91.5	355	742 €	871 €	-	-

For lenses AFL50-60, AFL50-80, please consider a center thickness tolerance of ±0.1. | 1 RMS_s corresponds to ISO 10110-5. | 2 Prices valid per piece. More volume discounts at www.asphericon.com. | 3 Prices valid per piece. More volumes and discounts of coated and uncoated mounted lenses at www.asphericon.com. | General: Technical parameters and prices are subject to change without prior notice.



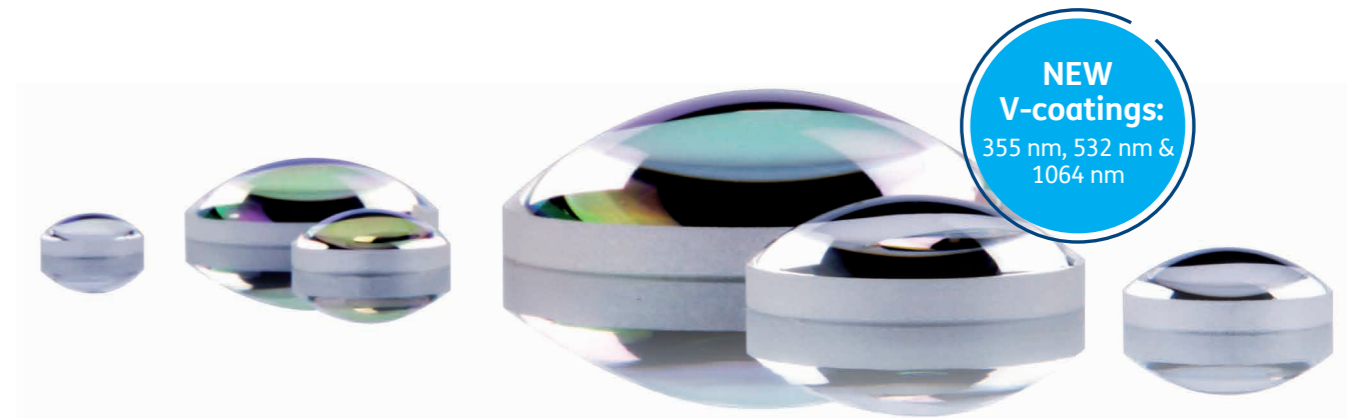
High-end finished optics with lowest roughness of Rq ≤ 0.5 nm.

BEAMTUNING

Surface Form Deviation (RMS) ¹	[μm]	≤0.02
Wavefront RMS	[nm]	≤10
Surface Roughness (Rq)	[nm]	≤0.5

Product Code	Ø [mm]	EFL [mm]	NA	f/d	WD [mm]	λ _{Design} [nm]	Prices 1pc ²		Prices Mounted 1pc ³	
							uncoated	coated	uncoated	coated
AFL25-50-D	25	50	0.23	2.0	45.1	355	-	819 €	-	917 €
AFL25-75-D	25	75	0.15	3.0	70.9	355	-	819 €	-	917 €
AFL25-100-D	25	100	0.11	4.0	96.3	355	-	819 €	-	917 €

1 RMS_s corresponds to ISO 10110-5. | 2 Prices valid per piece. More volume discounts at www.asphericon.com. | 3 Prices valid per piece. More volumes and discounts of mounted lenses at www.asphericon.com. | General: Technical parameters and prices are subject to change without prior notice.



a|Axicons

The premium selection of a|Axicons convince with superior surface roughness for high performance applications. Also available as mounted axicons.

Mounted & unmounted axicons

KEY BENEFITS

- = Outstanding surface form deviation of $RMS_s \leq 0.07 \mu\text{m}$
- = Suitable for high-power laser applications and available off-the-shelf
- = Available with 4 standard coatings (customized coatings on request)
- = Laser induced damage threshold: 12 J/cm^2 , 100 Hz, 6 ns, 532 nm
For higher laser power applications please request a V-Coating. Contact us for an individual offer.
- = RoHS compliance

LENS DESCRIPTION

Surface Form Deviation (RMS_s) ¹	[μm]	<0.07
Surface Imperfections	[Scratch-Dig]	40-20
Diameter Tolerance	[mm]	+0/-0.1
Center Thickness Tolerance	[mm]	$\pm 0.1/-0$
Clear Aperture	[%]	>90

AR-Coatings²

A: $R_{MAX} < 1.0\%$, $R_{AVG} \leq 0.4\%$, 400-600 nm, AOI=0°

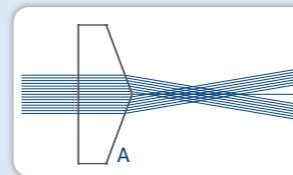
B: $R_{MAX} < 1.0\%$, $R_{AVG} \leq 0.4\%$, 600-1050 nm, AOI=0°

C: $R_{MAX} < 1.0\%$, $R_{AVG} \leq 0.4\%$, 1000-1600 nm, AOI=0°

X: $R_{MAX} < 1.0\%$, $R_{AVG} \leq 0.4\%$, 240-380 nm, AOI=0°

Utilizing Axicons

Axicons are conical lenses that are widely used in different scientific research and laser applications.

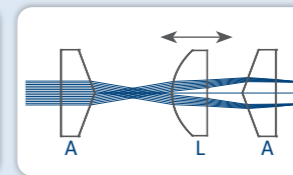


1. Generation of a Bessel beam.

A - Axicon, L - Lens



2. Generation of a ring beam.



3. Generation of variable ring foci.

Fields of Application

- = Laser material processing
- = Measurement & Alignment
- = Research & Science
- = Medical engineering

Product Code	\varnothing [mm]	Angle [degree]	Edge Thickness [mm]	λ_{Design} [nm]	Material	Prices 1pc ³		Prices 5pc ³		Prices Mounted 1pc ⁴	
						uncoated	coated	uncoated	coated	uncoated	coated
XFL25-005-U ⁵	25.4	0.5	5.0	780	Fused Silica	479 €	577 €	454 €	547 €	572 €	675 €
XFL25-010-U ⁵	25.4	1.0	5.0	780	Fused Silica	479 €	577 €	454 €	547 €	572 €	675 €
XFL25-020-U ⁵	25.4	2.0	5.0	780	Fused Silica	479 €	577 €	454 €	547 €	572 €	675 €
XFL25-050-U ⁵	25.4	5.0	5.0	780	Fused Silica	479 €	577 €	454 €	547 €	572 €	675 €
XFL25-100-U ⁵	25.4	10.0	5.0	780	Fused Silica	479 €	577 €	454 €	547 €	572 €	675 €
XFL25-200-U ⁵	25.4	20.0	5.0	780	Fused Silica	479 €	577 €	454 €	547 €	572 €	675 €
XFL50-005-U ⁶	50.8	0.5	8.0	780	Fused Silica	778 €	907 €	737 €	859 €	-	-
XFL50-010-U ⁶	50.8	1.0	8.0	780	Fused Silica	778 €	907 €	737 €	859 €	-	-
XFL50-020-U ⁶	50.8	2.0	8.0	780	Fused Silica	778 €	907 €	737 €	859 €	-	-
XFL50-050-U ⁶	50.8	5.0	8.0	780	Fused Silica	778 €	907 €	737 €	859 €	-	-
XFL50-100-U ⁶	50.8	10.0	8.0	780	Fused Silica	778 €	907 €	737 €	859 €	-	-
XFL50-200-U ⁶	50.8	20.0	8.0	780	Fused Silica	778 €	907 €	737 €	859 €	-	-

¹ RMS_s corresponds to ISO 10110-5 (surface form tolerances). | ² Custom coatings available upon request. | ³ Prices valid per piece. More volume discounts at www.asphericon.com. | ⁴ Prices of mounted lenses valid per piece. More volumes and discounts of coated and uncoated mounted lenses at www.asphericon.com. | ⁵ Conical tip, Clear Aperture 2.3-23 mm, smaller conical tips on request. | ⁶ Conical tip, Clear Aperture 4.6-46 mm, smaller conical tips on request. | General: Technical parameters and prices are subject to change without prior notice.

a|Acylinders

Benefit from our attractive selection of acylinders with a surface form deviation smaller than 0.5 μm . a|Acylinders are made from high-index-glass and can be especially used for laser applications. They are also obtainable with high-precision mountings.

KEY BENEFITS

- = Outstanding surface form deviation of $\text{RMS} \leq 0.5 \mu\text{m}$
- = Ideal line-focus without spherical aberration and off-the-shelf delivery for short lead times
- = Available with 3 standard coatings (customized coatings on request)
- = Laser induced damage threshold: 12 J/cm^2 , 100 Hz, 6 ns, 532 nm
For higher laser power applications please request a V-Coating. Contact us for an individual offer.
- = RoHS compliance

LENS DESCRIPTION

Surface Form Deviation (RMS) ¹	[μm]	≤ 0.5
EFL Tolerance	[%]	≤ 0.1
Surface Imperfections	[Scratch-Dig]	60-40
Width Tolerance	[mm]	+0/-0.05
Length Tolerance	[mm]	+/-0.1
Center Thickness Tolerance ²	[mm]	± 0.05
Clear Aperture	[%]	≥ 90

AR-Coatings³

- A: $R_{\text{MAX}} < 1.0\%$, $R_{\text{AVG}} \leq 0.4\%$, 400-600 nm, AOI=0°
- B: $R_{\text{MAX}} < 1.0\%$, $R_{\text{AVG}} \leq 0.4\%$, 600-1050 nm, AOI=0°
- C: $R_{\text{MAX}} < 1.0\%$, $R_{\text{AVG}} \leq 0.4\%$, 1000-1600 nm, AOI=0°



Product Code	Size [mm]	EFL [mm]	NA	f/d	WD [mm]	λ_{Design} [nm]	Material	Prices 1pc ⁴		Prices 5pc ⁴		Prices Mounted 1pc ⁵	
								uncoated	coated	uncoated	coated	uncoated	coated
CHL10-08-P	10x10	8	0.54	0.8	6.3	780	S-LAH64	291 €	338 €	282 €	328 €	374 €	420 €
CHL12-10-P	12.5x12.5	10	0.55	0.8	7.2	780	S-LAH64	340 €	387 €	329 €	375 €	421 €	466 €
CHL15-12-P	15x15	12	0.54	0.8	9.2	780	S-LAH64	363 €	413 €	352 €	401 €	443 €	491 €
CHL18-15-P	18x18	15	0.53	0.83	11.6	780	S-LAH64	388 €	457 €	376 €	442 €	467 €	532 €
CHL20-18-P	20x20	18	0.49	0.9	14.3	780	S-LAH64	412 €	480 €	399 €	466 €	-	-
CHL25-20-P	25x25	20	0.54	0.8	15.8	780	S-LAH64	437 €	505 €	424 €	490 €	-	-
CHL30-26-P	30x30	26	0.52	0.87	21.5	780	S-LAH64	559 €	656 €	541 €	636 €	-	-
CHL45-32-P	45x45	32	0.61	0.71	24.7	780	S-LAH64	730 €	950 €	708 €	921 €	-	-
CHL50-40-P	50x50	40	0.55	0.8	32.1	780	S-LAH64	779 €	999 €	755 €	968 €	-	-

¹ RMS corresponds to ISO 10110-5 (surface form tolerances). | ² For lenses CHL45-32, CHL50-40, please consider a center thickness tolerance of ± 0.1 . | ³ Custom coatings available upon request. | ⁴ Prices valid per piece. More volume discounts at www.asphericon.com. | ⁵ Prices of mounted lenses valid per piece. More volumes and discounts of coated and uncoated mounted lenses at www.asphericon.com. | General: Technical parameters and prices are subject to change without prior notice.

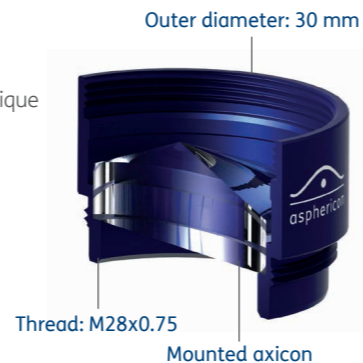
Mounted Aspheres/Axicons/Acylinders

Benefit from a convenient solution for your laser application with the attractive selection of pre-aligned aspheres, axicons and acylinders from our StockOptics product line in high-precision mountings. All lenses with diameters from 12.5 mm to 25.4 mm are ideally aligned with $< 10 \mu\text{m}$ decentration of the optical and mechanical axis. By using one of the available adapters - SM1, C-Mount, 1.2 inch - the lenses can easily be applied in all standard optical systems.

KEY BENEFITS

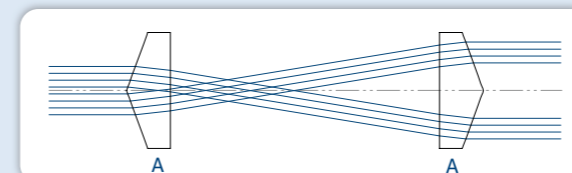
- = Especially designed mounts engraved with lens specifications
- = High-precision mounted through using auto-collimation technique
- = Perfect alignment ($< 10 \mu\text{m}$ decentration)
- = Tilt-reduced for optimal focusing
- = Modular design for high compatibility with all asphericon products and common optical systems
- = Comfortable and timesaving handling
- = Easy and safe storage thanks to protective design and safety caps
- = Off-the-shelf delivery

Contact us for more information: sales@asphericon.com

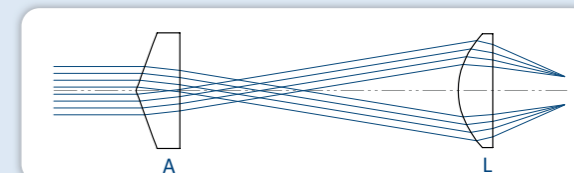


Fields of Application

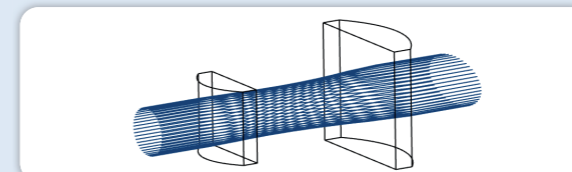
With especially designed mounts for aspheres, axicons and acylinders an optimized use of the lens is guaranteed. Thanks to harmonized metric fine thread all mounted optical components presented by asphericon can be easily combined.



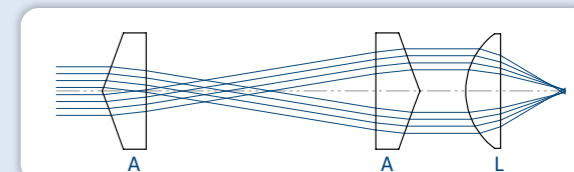
Generation of a collimated ring-shaped beam by altering the distance between two axicons.



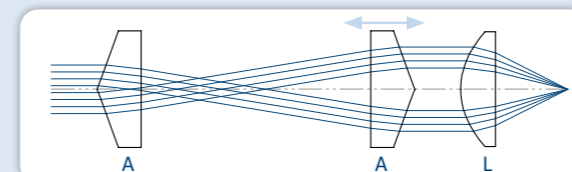
Generation of a ring focus - Distance changing through focal length of the lens, diameter changing through axicon angle.



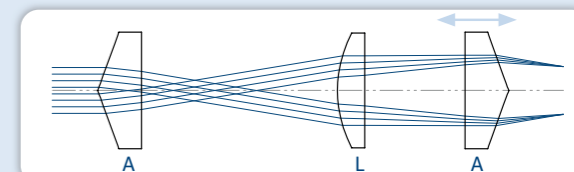
Generate an elliptical beam by using two acylinders in an anamorphic telescope.



Changing the focal length of a sphere by altering the distance between the axicons.



Changing the focus width of an asphere by altering the distance between axicons - Focusing under the diffraction limit.



Generation of adjustable ring foci by shifting the last axicon to vary the ring diameters.

A - Axicon, L - Lens



Visionen leben



**Looking for a
custom solution?**

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