



Aspheric Lenses

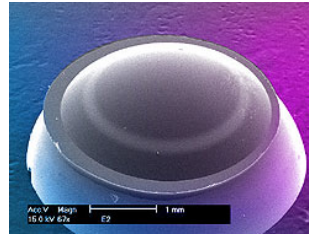
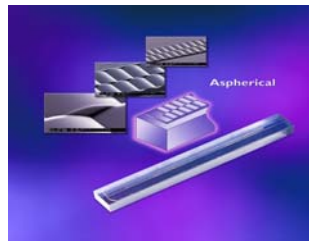
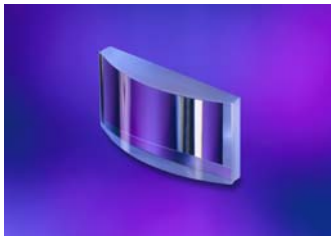
Customized:

Collimators, objectives, circulators,
beam shapers

Single and arrays

Integrated filters and coatings

Free form, e.g. cylindrical, anamorphic



Features:

Customized aspheric surfaces

Elimination of astigmatism

High NA up to 0.95

Diffraction limited quality, also at high NA

Wave Front Aberration < 40 mλ

Tight back focal length control < 5 micron

Low transmission loss < 2%

Application in broad wavelength range

Deep UV resistant

Stable in broad temperature range -40 to +150 °C

Robust to reflow soldering



| Lens Type | f (mm) | SD (mm) | NA (mm) | CA (mm) | D (mm) | CT (mm) | ET (mm) | Weight (g) | FR (mm) | RMS (waves) |
|-----------|--------|---------|---------|---------|--------|---------|---------|------------|---------|-------------|
| AC409 | 40.00 | 38.20 | 0.11 | 9.0 | 10.00 | 3.00 | 2.40 | 0.65 | 0.80 | 0.020 |
| AC407 | 27.00 | 25.50 | 0.11 | 6.0 | 8.00 | 2.50 | 2.10 | 0.34 | 0.70 | 0.020 |
| AC405 | 23.00 | 22.00 | 0.13 | 6.0 | 8.00 | 2.50 | 1.87 | 0.30 | 0.50 | 0.030 |
| AC400 | 22.00 | 20.80 | 0.11 | 4.8 | 6.00 | 2.00 | 1.63 | 0.20 | 0.50 | 0.020 |
| AC403 | 19.00 | 18.00 | 0.16 | 6.0 | 8.00 | 2.50 | 1.74 | 0.30 | 0.40 | 0.030 |
| AC044 | 19.00 | 17.00 | 0.11 | 4.2 | 5.20 | 3.00 | 2.68 | 0.20 | 0.40 | 0.025 |
| AC068 | 15.00 | 13.50 | 0.20 | 6.0 | 8.00 | 2.50 | 1.60 | 0.40 | 0.25 | 0.030 |
| AC072 | 14.80 | 13.30 | 0.22 | 6.4 | 8.00 | 2.50 | 1.60 | 0.40 | 0.30 | 0.004 |
| AC069 | 14.80 | 13.40 | 0.18 | 5.4 | 6.50 | 2.50 | 1.92 | 0.30 | 0.25 | 0.030 |
| AC210 | 11.00 | 9.60 | 0.20 | 4.4 | 6.00 | 2.35 | 1.64 | 0.21 | 0.20 | 0.030 |
| AC212 | 10.90 | 9.70 | 0.30 | 6.6 | 7.20 | 2.20 | 1.40 | 0.30 | 0.10 | 0.050 |
| AC302 | 10.00 | 8.60 | 0.19 | 3.8 | 4.50 | 2.35 | 1.92 | 0.12 | 0.20 | 0.030 |
| AC414 | 10.00 | 7.60 | 0.44 | 8.7 | 10.00 | 4.10 | 2.00 | 0.90 | 0.10 | 0.040 |
| AC050 | 9.00 | 7.60 | 0.25 | 4.6 | 6.50 | 2.33 | 1.39 | 0.26 | 0.18 | 0.030 |
| AC052 | 9.00 | 7.60 | 0.30 | 5.4 | 6.50 | 2.33 | 1.39 | 0.26 | 0.15 | 0.030 |
| AC325 | 7.90 | 6.50 | 0.30 | 4.8 | 6.50 | 2.50 | 1.43 | 0.27 | 0.20 | 0.030 |
| AC320 | 7.50 | 6.10 | 0.30 | 4.5 | 6.50 | 2.50 | 1.35 | 0.27 | 0.18 | 0.030 |
| AC322 | 7.50 | 6.10 | 0.19 | 2.8 | 4.00 | 2.50 | 2.10 | 0.12 | 0.30 | 0.030 |
| AC355 | 6.25 | 4.80 | 0.35 | 4.4 | 6.50 | 2.50 | 1.04 | 0.26 | 0.15 | 0.030 |
| AC416 | 6.20 | 1.60 | 0.85 | 10.5 | 11.60 | 8.90 | - | 2.30 | 0.03 | 0.010 |
| AC260 | 4.60 | 2.90 | 0.53 | 4.9 | 6.00 | 3.10 | 1.50 | 0.30 | 0.06 | 0.060 |
| AC256 | 4.40 | 2.20 | 0.50 | 4.4 | 5.50 | 3.70 | 2.41 | 0.25 | 0.09 | 0.030 |
| AC267 | 4.40 | 2.20 | 0.50 | 4.4 | 5.50 | 3.87 | 2.58 | 0.26 | 0.10 | 0.030 |
| AC330 | 3.30 | 2.30 | 0.45 | 3.0 | 5.20 | 2.00 | - | 0.09 | 0.07 | 0.030 |
| AC331 | 3.30 | 2.30 | 0.45 | 3.0 | 4.00 | 2.00 | 1.10 | 0.07 | 0.07 | 0.030 |
| AC296 | 3.00 | 1.60 | 0.47 | 2.8 | 4.00 | 2.51 | 1.48 | 0.12 | 0.08 | 0.040 |
| AC297 | 3.00 | 1.60 | 0.55 | 3.3 | 4.00 | 2.51 | 1.48 | 0.12 | 0.06 | 0.055 |
| AC550 * | 1.80 | 1.10 | 0.33 | 1.2 | 2.40 | 1.10 | - | 0.01 | 0.10 | 0.030 |
| AC531 | 0.78 | 0.15 | 0.85 | 1.3 | 1.63 | 1.26 | - | 0.70 | 0.02 | 0.065 |

Objectives

| | | | | | | | | | | |
|---------|------|------|------|-----|------|------|------|------|------|-------|
| AO540** | 3.30 | 2.10 | 0.45 | 3.0 | 3.70 | 2.20 | 1.30 | 0.07 | 0.06 | 0.050 |
| AO510* | 3.00 | 1.60 | 0.20 | 1.4 | 2.80 | 2.20 | 1.50 | 0.04 | 0.20 | 0.030 |
| AO533* | 2.43 | 1.30 | 0.30 | 1.6 | 2.30 | 3.90 | 1.60 | 0.04 | 0.09 | 0.050 |
| AO534* | 4.00 | 3.10 | 0.20 | 1.7 | 2.30 | 1.50 | 1.20 | 0.02 | 0.25 | 0.050 |

D: diameter FL: focal length SD: source distance NA: numerical aperture CA: clear aperture CT: edge thickness
FR: field radius RMS: axial wave front quality * means designed for 1530nm ** means designed for 405nm

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