

Prism

Mirror

Window

Beamsplitter

Waveplate

IR Optics

**Lens**

Filter

Micro Optics

Plastic Optics

## Achromatic Doublets

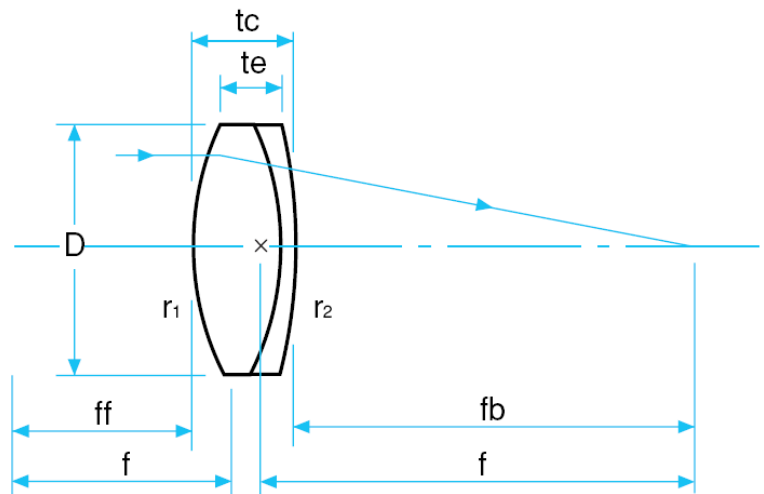
### Introductions



Achromatic doublets are cemented by two kinds of lenses, low dispersion positive (crown glass) and high dispersion negative (flint glass). The differences of dispersions and shapes of both lenses are designed to minimize the chromatic aberrations at blue (486.1nm), green

(546.1nm) and red (656.3 nm). Therefore these lenses perform throughout the visible spectrum. The differences of dispersions and shapes of both elements are effective to decrease spherical aberration. Spherical aberrations of them are much improved than spherical singlets. Spherical aberrations of these lenses are minimized at infinite conjugate ratios.

### Beam Path



### Standard Specifications

Items	Specifications
Material	Crown Glass and Flint Glass
Focal length	±2%
Designed Wavelength	486.1nm, 546.1 nm, 656.3nm
Designed Index	1.5183 ±0.0005
Dimension Tolerance	+0.0/-0.2 mm
Thickness Tolerance	± 0.2 mm
Paraxial Focal Length	± 2%
Clear Aperture	> 85%
Centration	3 arc minutes
Flatness	λ/4 at 632.8 nm
Surface Quality	scratch and dig 60-40
Adhesive	Ultraviolet Hardened Adhesive
Bevel	0.5 (0/-0.3) mm

#### Notes:

1. Surface Quality could reach 40-20, 20-10
2. Parallelism such as 30", 10", 5" is available.
3. Please show us the size and the coating specification.

P/N	φ (mm)	f (mm)	t <sub>c</sub> (mm)	t <sub>e</sub> (mm)	R1 (mm)	R2 (mm)	ff (mm)	f <sub>b</sub> (mm)
LAD0101	10.0	20.0	6.7	5.1	12.1	-26.0	18.8	16.6
LAD0102	10.0	25.0	6.1	4.9	15.6	-31.1	23.8	22.1
LAD0103	10.0	30.1	5.7	4.7	18.5	-39.0	29.0	27.4
LAD0104	12.7	25.1	7.3	5.3	15.6	-32.2	23.7	21.5
LAD0105	12.7	30.0	6.8	5.2	18.5	-39.4	28.8	26.7
LAD0106	12.7	40.1	6.1	4.9	23.4	-60.3	39.2	36.9
LAD0107	15.0	25.2	8.8	6.0	15.4	-33.8	23.7	20.7

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Optical Components

LAD 01