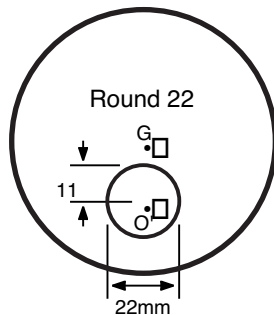
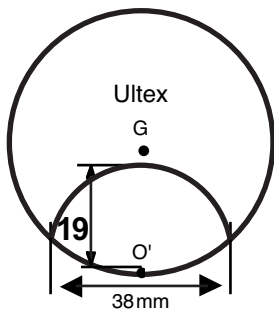


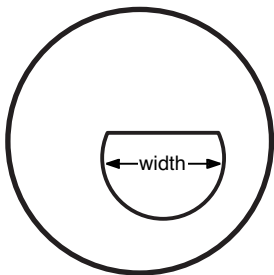
Specialty Lenses



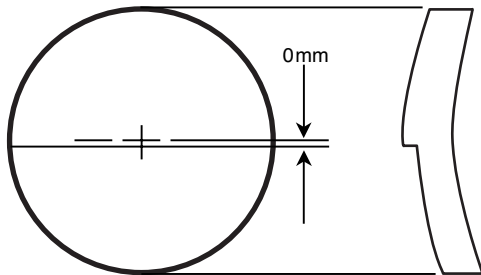
Kryptok bifocals are very inconspicuous, inexpensive but have a higher chromatic aberration in glass. CR-39 plastic lens of this style are called “round” segments. This lens is normally available in 22 or 25 mm widths and is a good choice for a patient who does very little near viewing.



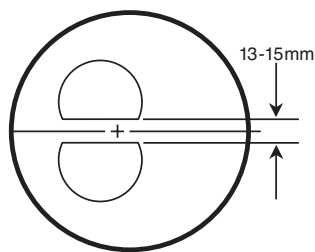
The **Ultex A** is a one-piece bifocal with a 38-40 mm segment which can be fit to a height of 19 mm. A popular choice at one time, it is seldom recommended now.



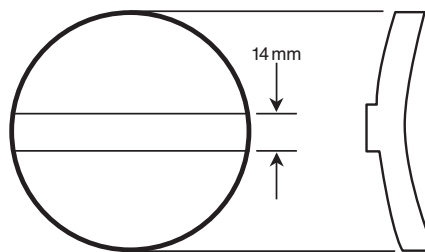
The **flat-top** has less image jump than a round segment and is the most popular bifocal in the United States. There are several widths available including 22, 25, 28, 35 and 40 mm. Barium in the glass reduces chromatic aberration. The width is measured at the widest part of the segment, not at the segment line.



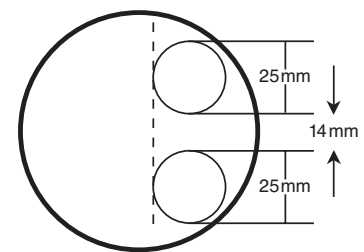
The **Executive (Franklin) bifocal** is a one-piece construction with an obvious line. There is very little chromatic aberration and little image jump. This bifocal provides a wide reading field but is very thick and heavy in many prescriptions.



Double-D Segment



Double Executive

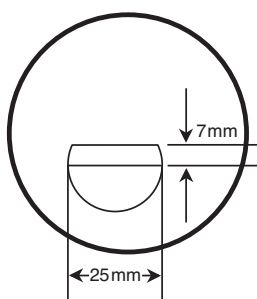


Double Seg RD-25

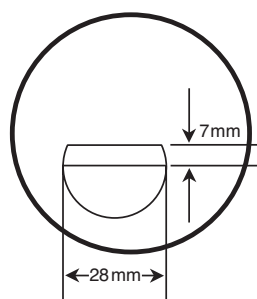
Vocational bifocals or occupational segments include near viewing areas in both the top and bottom portions of the lens. They are recommended for wearers in occupations who require near vision above eye level. For example: plumbers, electricians, librarians or pilots. The top segment may have 50-100% of the bottom add power.

Normally there is a 13-15 mm separation between the top and bottom segments. When selecting a frame, it is necessary to insure at least 10 mm for the top portion. To compute the depth of the top segment, add the bifocal height to 14 mm and subtract from the "B" measurement of the frame.

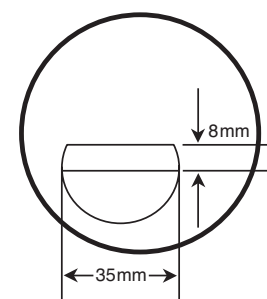
Example: Given a bifocal height of 22 mm, add 14 to 22 for a total of 36 mm. The frame "B" measurement is 48 mm. Subtract 36 from 48 to get a top segment depth of 12mm.



7x25 trifocal

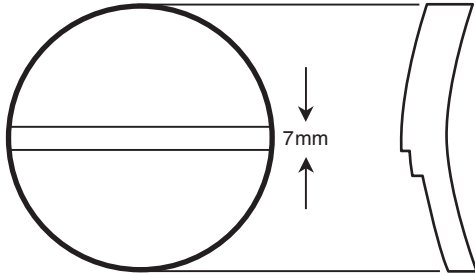


7x28 trifocal

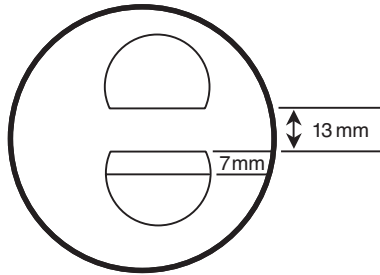


8x35 trifocal

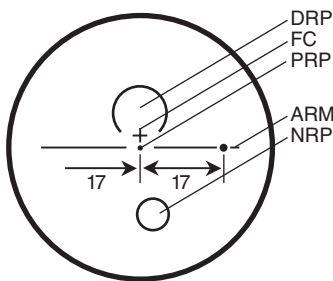
A **trifocal** is a lens with three viewing areas and three focal points. The intermediate portion is normally 50% of the add power and is usually used for advanced presbyopes (+1.75 D add and above). Normally the upper portion is for distance, the lower portion for near (to 14-16") and the middle for intermediate (16" to approximately arm's length). The intermediate area varies from 6 to 8 mm and is available in various widths including 25, 28 and 35 mm. There is a 14x35 trifocal available for intermediate tasks.



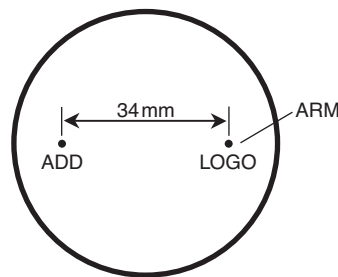
The **executive trifocal** is similar to the executive bifocal but with an intermediate area. Again, care must be exercised in fitting this lens to insure that weight and thickness do not become excessive.



A **quadrifocal** is a lens with four viewing areas and three focal points. Normally the major portion is for distance, the bottom for near, the trifocal portion for intermediate and the top segment used for either overhead or intermediate viewing. The standard quadrifocal has a 13-14 mm separation between the top of the trifocal area and the bottom of the upper segment.



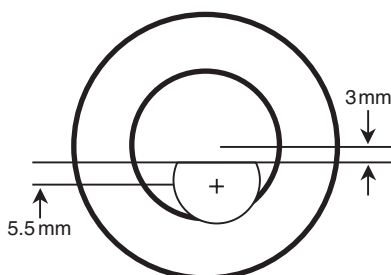
**Verification markings
(temporary ink)**



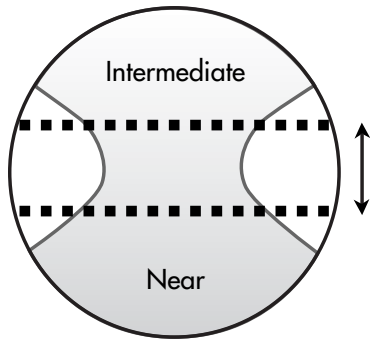
**Manufacturer's markings
(permanent)**

A **progressive** is a lens with powers that vary gradually from distance to near. All progressives should be fit at pupil center. Minimum fitting heights vary by design; always follow the manufacturer's recommendation. Measure monocular fitting heights, and use a reflex pupillometer to take monocular PD measurements. New presbyopes adapt well to progressive lenses and most advanced presbyopes

will benefit from the clear, continuous vision at all ranges. "Prism thinning" is ground in some lenses to equalize edge thickness around the lens. Progressives have permanent manufacturer's markings faintly etched into the front lens surface. The lenses come from the lab with temporary ink markings so that the prescription and fit can be verified. The ink markings must be removed after the fit has been confirmed on the patient.



Lenticular lenses have a distance portion in the center of the lens. The remainder of the lens (called the carrier) is ground to reduce thickness. An **aspheric lenticular** lens has a front surface that flattens towards the edge. Before the use of IOLs in cataract surgery, this lens design was used for the true aphakic patient. Due to the high power in the lens, the wearer experiences very limited clear vision only in the central portion of the lens.



Computer lenses are specialty lenses designed for presbyopes who spend 3 or more hours a day at the computer. It provides wide fields of intermediate and near vision, eliminating many of the symptoms associated with extended computer usage and conventional bifocal, trifocals or progressives (i.e. neck and back pain, eye strain).

A **Myodisc** is a high minus lens that has a central area containing the distance correction and a carrier that is plano. This lens must be decentered both vertically and horizontally by fitting to pupil center.

Iseikonic lenses have their thickness and curves chosen to decrease magnification differences between the right and left eye in anisometropic prescriptions.

Corning CPF lenses are used for patients with developing cataracts, retinitis pigmentosa or other conditions benefiting from the high contrast this lens provides. They are photochromic lenses that come in yellow, orange, or reddish colors.

Polarized lenses allow only the vertical light to pass through, eliminating the harsh glare from reflections off of water, snow or wet roadways. They are excellent lenses for water and snow sports activities.

Sunglass lenses are used for outdoor activities and a transmittance of 8% is recommended.