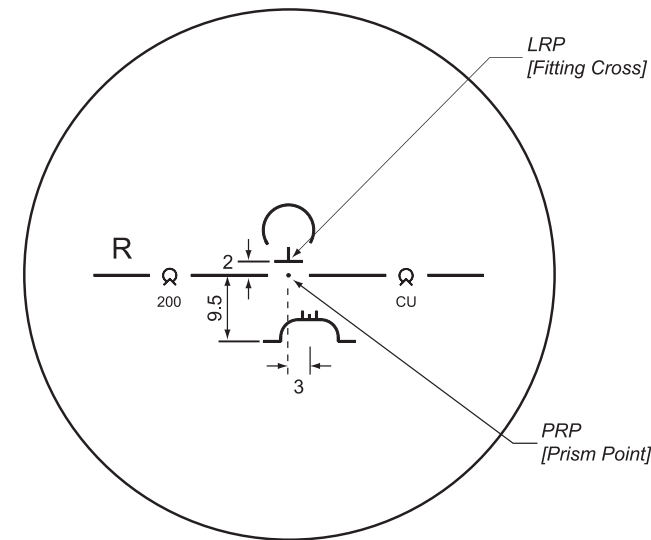


## Compact ULTRA™ — Lab Processing

### What are the layout markings and locations for Compact ULTRA?



results in a degree of automatic prism-thinning when blocked on most blocking systems, depending on the Add power and the blocking method used. Additional prism may be introduced in order to optimize thinning, if desired. However, optimum results will be achieved with a quality surfacing calculation program.

### What are the lens thickness recommendations for Compact ULTRA?

The table below provides the minimum recommended center thickness guidelines for Compact ULTRA:

LENS MATERIAL	POWER RANGE	CENTER
1.67 High Index	-10.00 D to -2.00 D	1.5 mm
Polycarbonate	-9.00 D to -2.00 D	1.5 mm
Hard Resin	-9.00 D to -2.00 D	2.0 mm

Progressive lenses of this type that satisfy the thickness guidelines provided above have demonstrated the minimum level of impact resistance during performance testing. However, the ultimate impact strength of a lens depends upon several factors, including the particular combination of coatings and treatments applied to it, and conformance to the FDA regulation is the responsibility of subsequent processors.

### Can Compact ULTRA be hard coated or AR coated?

Yes. Compact ULTRA is compatible with most Rx laboratory hard coating and AR coating processes. Please consult your laboratory for specific material compatibility details.

### Are there any special processing requirements for Compact ULTRA?

No. Compact ULTRA can be processed like traditional premium progressive lenses.

### Should prism-thinning be used with Compact ULTRA?

Yes. Prism-thinning reduces the overall weight and thickness of progressive lenses, particularly in Plus prescriptions and high Add powers. The surface geometry of the Compact ULTRA lens design

## Availability

SEMI-FINISHED MATERIAL	BASE CURVES	Rx RANGE	ADD POWERS
1.67 High Index	1.00, 3.00, 5.00, 6.00, 7.00	-10.00 to +6.00 D, cyl up to -6.00	0.75 to 3.50
1.67 Transitions® V Gray	1.00, 3.00, 5.00, 6.00, 7.00	-10.00 to +6.00 D, cyl up to -6.00	0.75 to 3.50
Polycarbonate	1.50, 3.50, 5.50, 7.50	-9.00 to +5.00 D, cyl up to -6.00	1.00 to 3.00
Polycarbonate Transitions® V Gray	1.50, 3.50, 5.50, 7.50	-9.00 to +5.00 D, cyl up to -6.00	1.00 to 3.00
Hard Resin	1.50, 3.50, 5.50, 7.50	-9.00 to +5.00 D, cyl up to -6.00	0.75 to 3.50
Hard Resin Transitions® Gray	1.50, 3.50, 5.50, 7.50	-9.00 to +5.00 D, cyl up to -6.00	0.75 to 3.50

COMPACT ULTRA HD (free-form)	Rx RANGE	ADD POWERS
Compact ULTRA HD 1.67 High Index	Available Rx AR coated only	-12.00 to +8.00 D, cyl up to -6.00
Compact ULTRA HD 1.67 Transitions® V Gray	Available Rx AR coated only	-12.00 to +8.00 D, cyl up to -6.00

Carl Zeiss Vision  
USA 1-800-358-8258  
www.vision.zeiss.com



## Compact ULTRA™ — Frequently Asked Questions

### What is Compact ULTRA?

SOLA Compact ULTRA is a next-generation progressive lens for small frames that offers one of the shortest corridor lengths and highest reading zones available. This allows progressive wearers to get excellent vision at all distances in very small frames. Compact ULTRA provides a significantly larger full-power reading area at low fitting heights than other leading short-corridor progressive lenses.

### Why is there a need for a new short-corridor lens design?

As the trend toward even smaller fashion frames has continued, eye care professionals are demanding progressive lens designs that perform well in smaller and smaller frame styles—often requiring fitting heights as low as 13 mm. They also insist that low fitting heights be achieved without unduly compromising the optical characteristics of the lens. Many of the newer “short-corridor” progressive lens designs fail to deliver adequate near utility at such low fitting heights, or else they compromise optics in order to do so, particularly in the higher additions.

### What is the full-power reading area?

Full-power reading area is defined as the region of surface power within  $\pm 0.25$  D of the specified addition in a given frame. A difference of 0.25 D represents the “just noticeable difference” and the approximate depth of focus for a typical spectacle wearer. This makes it a clinically meaningful measure of visual performance relative to the intended near vision prescription.

### Why does corridor length matter?

The length of the progressive corridor dictates the amount of the near zone that will remain within the actual frame after the lens has been edged to a specified fitting height. This is a concern for smaller fashion frames, which often require relatively short fitting heights; using a traditional progressive lens with these frames may cause the wearer to receive little or no full-power reading area.



### Why aren't all progressive lenses designed with short corridors?

The optics of progressive lenses are intrinsically related to the length of the progressive corridor. As the progressive corridor becomes shorter, the power and unwanted astigmatism must increase more rapidly near the corridor. There is no need for this in frames that allow longer fitting heights. For small frame wearers, Compact ULTRA has been designed to provide the best optical performance possible with the least amount of compromise.

### How does Compact ULTRA differ from the original Compact?

The Compact ULTRA lens design builds upon the highly successful design foundation developed for the original Compact® lens, winner of the Optical Laboratory Association's *Award of Excellence in Lens Design*. Compact ULTRA delivers a significantly shorter corridor than the original Compact, allowing lower fitting heights, while actually providing a softer near periphery, reduced skew distortion, and lower levels of unwanted astigmatism.



## Compact ULTRA™ — Lens Design

### What is the corridor length of Compact ULTRA?

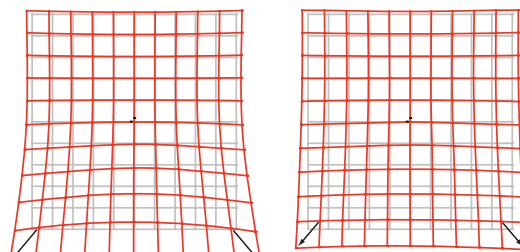
The corridor length from the fitting cross to 85% of the specified Add power is approximately 9 mm for the +2.00 Add.

### Is Compact ULTRA a hard or soft design?

As with all modern SOLA progressive lenses, Compact ULTRA incorporates the best features of both hard and soft designs. Compact ULTRA is a *superposition* design that uses a patented *bipolar layout* in conjunction with a mathematical optimization procedure known as *Dirichlet smoothing* to produce an exceptionally smooth distribution of power and unwanted astigmatism. This patented superposition strategy combines the distance and near utility of a hard design with the comfort of a soft design. This design approach results in easy adaptation, excellent binocular vision, and low levels of skew distortion.

### What is skew distortion?

“Skew distortion” is the result of unwanted cylinder power in the periphery of a progressive lens. It causes the diagonal corners of objects to appear stretched, curved or tilted, resulting in visual discomfort and more difficult adaptation. Skew distortion also contributes to image swim in the periphery of the lens, which can produce a sensation of vertigo or motion sickness. Because it has relatively low levels of skew distortion, Compact ULTRA gives wearers a more comfortable all-around wearing experience.



Traditional Progressive

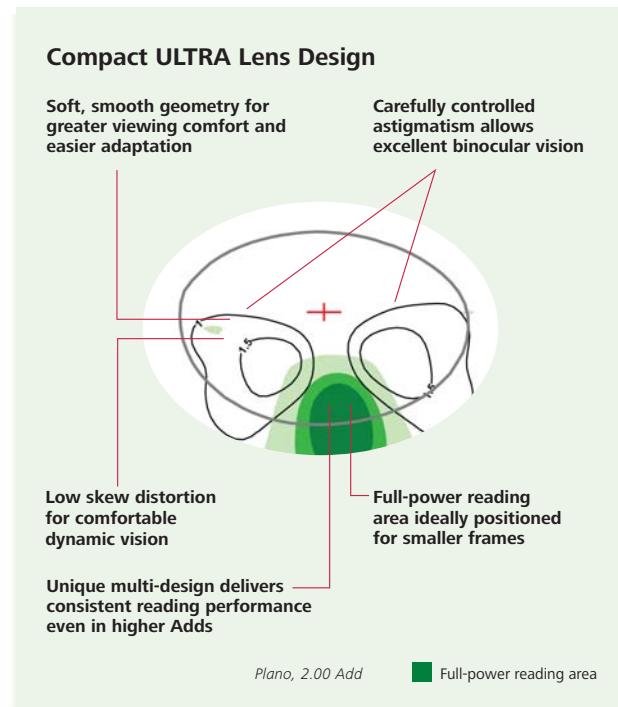
Compact ULTRA

### Does Compact ULTRA use Design by Prescription™ Technology?

Yes. The design of Compact ULTRA varies by both Base curve and Add power in order to ensure consistent optical performance for all wearers, regardless of their prescription or stage of presbyopia. Compact ULTRA utilizes a proprietary multi-design strategy that adjusts the optics of the lens design based on Add power in order to maintain excellent near utility and a consistently large full-power reading area. The lens design is also adjusted by Base curve in order to maximize the optical performance of each prescription range, using features such as a variable near inset and precision optical asphericity.

### Does Compact ULTRA use an aspheric design?

Yes. While all progressive lenses must be aspheric globally across the entire surface in order to produce a progression of Add power, Compact ULTRA has additional asphericity incorporated locally in the



distance zone of certain Base curves to reduce the oblique aberrations associated with the position of wear and peripheral vision. This provides a flatter, slimmer profile, while maintaining excellent peripheral optics, particularly in Plus prescriptions.

### What is the near inset of Compact ULTRA?

The inset of the near zone has been precisely computed for each Base curve and Add power combination in order to compensate for the effect of prism induced by the distance correction, and for the effect of the reading distance on ocular convergence during near vision. This ensures that the centers of the near zones are properly aligned with the lines of sight during near vision. The range of insets varies from 2.0 to 3.8 mm.

### Aside from compatibility with small frames, are there any other optical advantages to using Compact ULTRA?

An additional benefit of the short corridor of Compact ULTRA is the reduced eye declination required to reach the near vision zone. In fact, the full-power reading area of Compact ULTRA is located at roughly the same distance from pupil center as the functional upper boundary of a traditional flat-top bifocal segment when fitted normally.

### What is the recommended minimum fitting height of Compact ULTRA?

A fitting height of 13 mm was found to provide excellent reading utility across its full range of Add powers.

## Compact ULTRA™ — Fitting and Dispensing

### Is there a recommended minimum B measurement for Compact ULTRA?

At a minimum fitting height of 13 mm, a B measurement (or frame depth) of at least 20 mm is recommended in order to provide sufficient distance utility above the fitting cross.

### Is there a recommended maximum fitting height for Compact ULTRA?

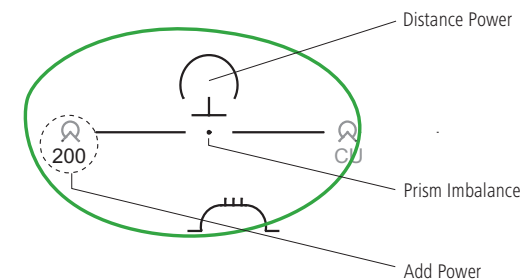
Compact ULTRA was engineered to work well with a broad range of frames sizes and fitting heights. For larger frame styles with fitting heights above 18 mm, a design with a longer corridor length may offer a better balance of properties.

### Do I need to follow any special procedures when fitting and dispensing Compact ULTRA?

No. Compact ULTRA should be fitted and dispensed like all SOLA general-purpose progressive lenses. Always pre-adjust the frame before taking any measurements. Take monocular interpupillary measurements for distance vision and monocular fitting height measurements to pupil center. Fit and adjust the lenses carefully upon dispensing, with a minimal vertex distance and 8° to 12° of pantoscopic tilt. Finally, make sure the wearer is adequately trained in the use of his or her new progressive lenses.

### How do I verify the Add power of Compact ULTRA?

While the specified Add power can be verified normally using a traditional focimeter, SOLA recommends checking the Add power by verifying that the semi-visible Add engraving under the temporal logo matches the first two digits of the prescribed Add.



### What is the adaptation rate for Compact ULTRA?

All SOLA progressive lenses enjoy an exceptionally high adaptation rate among both new and existing progressive lens wearers.

### Can I switch bifocal wearers to Compact ULTRA?

Yes. Bifocal wearers should find Compact ULTRA particularly easy to adapt to, compared to traditional progressive lens designs, since the high near-zone position is comparable to the segment location of flat-top bifocals. Additionally, peripheral astigmatism and distortion, a leading cause of progressive lens non-adapt, has been kept to an absolute minimum.

### Can wearers switch to Compact ULTRA from other short-corridor progressives?

Yes. Developmental wearer trial results suggest that all wearers currently wearing a short-corridor progressive lens design are candidates for Compact ULTRA. Eye care professionals may switch wearers to Compact ULTRA from other short-corridor progressive lens designs without reservation.

