



## 3.2. Gradal® Top 1.5 w/o Hard Coating

### Product Specifications

#### Material

- CR39 hard resin
- $n_d=1.499$
- Abbe 58
- Specific Gravity  $1.32 \text{ }^{\circ}/_{\text{ccm}}$
- >93% UV-A and 100% UV-B Protection

#### Technical Processing Notes

- Gradal® Top 1.5 lenses w/o HC can be processed like any other quality plastic progressive lens. Zeiss recommends a minimum center thickness of 1.8 mm. Gradal® Top 1.5 lenses of this minimum thickness fulfill the FDA standards of impact resistance.
- After blocking wait 15 minutes to allow lenses to cool before generating.
- Zeiss recommends de-blocking by cold knock-off or block ejector, but not by hot water.

#### Scratch Coating

Zeiss Gradal® Top 1.5 semi-finished lens blanks w/o HC do not feature a factory applied, scratch resistant hard coating. Gradal® Top 1.5 w/o HC lenses are developed for the application, after processing, of Zeiss Foundation® super hard coating.

#### Delivery Range

- Sph +6.00D to -10.00D
- Cyl up to -6.00D (total power not to exceed -10.00D)
- Adds 0.75D to 3.50D
- Prism up to 3.00D in addition to equithin





### Lens Data Chart

| Base Curve | Actual/Useable Diameter [mm] | Decentr. [mm] | True Curve [1.53] | CX Radius [mm] | Back Curve [1.53] | Center Thickness [mm] | Edge Thickness [mm] |
|------------|------------------------------|---------------|-------------------|----------------|-------------------|-----------------------|---------------------|
| 2.20       | 72/77 round                  | 2.5           | 2.37              | 223.63         | 4.00              | 12.5                  | 14.0                |
| 3.20       | 72/77 round                  | 2.5           | 3.45              | 153.62         | 4.00              | 14.0                  | 14.0                |
| 4.10       | 72/77 round                  | 2.5           | 4.51              | 117.52         | 4.00              | 11.0                  | 9.6                 |
| 4.80       | 72/77 round                  | 2.5           | 5.22              | 101.53         | 5.00              | 11.0                  | 9.9                 |
| 5.50       | 72/77 round                  | 2.5           | 5.94              | 89.23          | 6.00              | 10.5                  | 9.5                 |
| 6.30       | 72/77 round                  | 2.5           | 6.63              | 79.94          | 6.00              | 12.0                  | 10.1                |
| 6.80       | 72/77 round                  | 2.5           | 7.03              | 75.39          | 6.00              | 12.5                  | 9.9                 |

Zeiss Gradal® lenses are designed to work perfectly with a thickness reducing prism. To achieve the thinnest and lightest lenses possible, Zeiss recommends a base down (270°) prism in the following graduation depending on the power of the addition.

|                     |              |      |              |      |              |      |              |      |
|---------------------|--------------|------|--------------|------|--------------|------|--------------|------|
| <b>Addition [D]</b> | 0.75<br>1.00 | 1.25 | 1.50<br>1.75 | 2.00 | 2.25<br>2.50 | 2.75 | 3.00<br>3.25 | 3.50 |
| <b>Prism [D]</b>    | 0.50         | 0.75 | 1.00         | 1.25 | 1.50         | 1.75 | 2.00         | 2.25 |

### Permanent Engravings

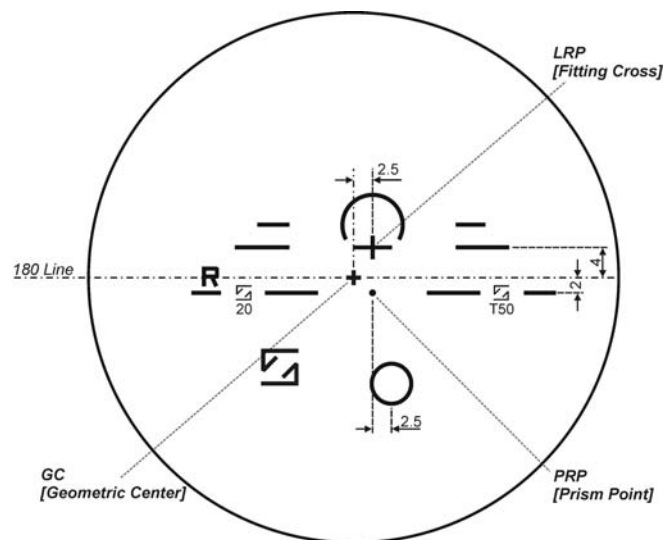
|                        | Nasal Engraving   | Temple Engraving  |
|------------------------|---|---|
| <b>Gradal® Top 1.5</b> |  |  |



## Markings of the Semi-Finished Lens

Gradal<sup>®</sup> Top 1.5 w/o Hard Coating features a round lens blank. For processing purposes the blank is marked with a cross at the geometric center.

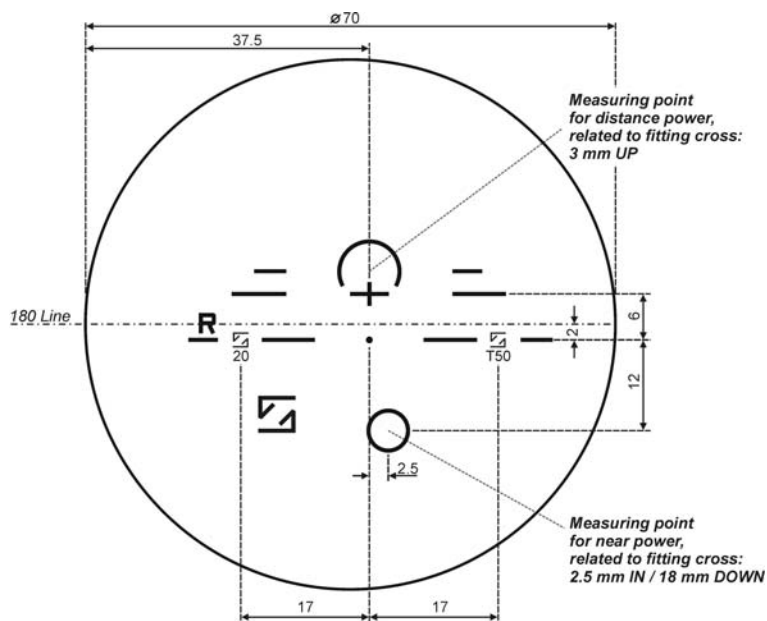
Please note that Zeiss Gradal<sup>®</sup> Top 1.5 lenses, if they are not to be cribbed at the generator, should be blocked on the geometric center to avoid producing unwanted prism during the fining operation.





## Markings and Dimensions of the Finished Lens

Please note that Zeiss Gradal® Top 1.5 w/o Hard Coating finished lens markings differ from the semi-finished lens markings in that the finished lenses are delivered to the customer without the geometric center cross. The markings are to be placed by the Zeiss partner lab using Zeiss Gradal® Top verification labels (Item #0000139.90270).





### Base Curve Chart Gradal® Top 1.5 w/o Hard Coating

