

## KODAK Unique Thickness Guidelines

Accurate frame information is critical for a finished edged lens that is as thin as possible, while maintaining compatibility with the KODAK Unique Lens Direct Surfacing Techniques. The following information explains the difficulty in predicting the minimum center thickness required for the edged lens before making the necessary calculations. It is for the reasons explained in this document, that we are unable to comply with a requested lens thickness by our customer.

Much effort is made to provide the thinnest lens possible for all KODAK Unique Progressive Lenses. Since many factors go into determining the center thickness of each KODAK Unique lens before it can be surfaced, we must require detailed frame information. It is not possible to determine in advance which of the following minimum thickness values will apply to a given Rx until the complete calculation is made. Beyond designing the lens for the finished size and shape, Signetek™ must design a lens that can be successfully made in uncut form. At least seven possible minimum thickness limits exist so each lens must be evaluated to provide the thinnest finished lens.

This document lists the variables and minimum thickness values used for surfacing all KODAK Unique Lenses.

1. Frame Type - A minimum edge thickness, which will occur in the perimeter of the finished lens, is specified based on the required minimum edge thickness for a given frame type. This thickness will likely occur in only one position on the lens perimeter. The remainder of the lens perimeter will generally be thicker. For example, a plus lens with a high degree of decentration usually has a thick edge on the nasal side while a thin edge on the opposite side.

Thickness Settings by Frame Classification	
Frame Material	Minimum E/T
Plastic or Zyl	1.0
Metal	1.0
Grooved edge or nylon line	2.1
Drilled or 3 pc	1.8

2. Lens Material – These minimum values must be met to ensure the lens will have the thickness required for sufficient rigidity, impact resistance and to contain any layers, such as polarized or photochromic, to the full diameter.

3. Lens Powers – Because the power of the lens greatly affects its geometry, all lenses must meet the minimum values for center, edge and average minimum thickness listed in the chart on page 2.

Minus lenses of medium to higher power will have a center thickness similar to the chart on page 2.

Low power lenses will be adjusted in thickness to meet a minimum average thickness so that they are rigid enough for metal and plastic frames. Their center thicknesses could be affected by prism thinning as well as when the adjustment of their required minimum diameter is slightly increased to ensure not less than the required edge thickness is maintained at an uncut diameter of our lens coating fixtures. Knife edges or missing portions of the lens due to curve variations are not compatible with direct surfacing polishing.

Please note: It is likely neither the listed minimum edge thickness nor center thickness will match the chart below for low power lenses.

Medium to higher power plus lenses are prone to knife edges or missing areas of the lens while still in the uncut form. In such cases, either a round or oval uncut shape is selected to meet our coating fixture sizes.

4. Prism Thinning – While prism “thinning” reduces the average thickness of the lens, the center thickness will be increased at the prism reference point where the center thickness is specified.

<b>Thickness Settings by Lens Material Classification</b>			
<b>Material and Configuration</b>	<b>C/T min</b>	<b>E/T min</b>	<b>Average min</b>
<b>Standard Non-Layered Lenses</b>			
Standard Resin <i>(Coated and Uncoated)</i>	2.0	1.0	2.0
Trivex®	1.2	1.0	2.0
Polycarbonate	1.2	1.0	2.0
EvoClear® 1.56	1.8	1.0	2.0
EvoClear 1.60	1.6	1.0	2.0
TLX 1.6™	1.5	1.0	2.0
1.67 High Index	1.5	1.0	2.0
1.74 High Index	1.4	1.0	2.0
InstaShades® 1.50 Gray	1.4	1.0	2.2
Corning® SunSensors® 1.56 Gray and Brown	2.0	1.0	2.0
Corning SunSensors HPC 1.67 Gray and Brown	1.6	1.0	2.1
Transitions® 1.50 Gray and Brown	2.0	1.0	2.0
Transitions Trivex™ Gray and Brown	1.6	1.0	2.0
Transitions Polycarbonate Gray and Brown	1.6	1.0	2.0
Transitions 1.60 Gray and Brown	1.6	1.0	2.0
Transitions 1.67 Gray	1.6	1.0	2.0
<b>Layered Lenses</b>			
Kodak InstaShades 1.56 Gray and Brown	1.8	1.8	2.0
Kodak InstaShades Polycarbonate Gray and Brown	1.6	1.8	2.0
Kodak InstaShades EvoClear 1.6 Gray and Brown	1.8	1.8	2.0
Polarized* 1.50 Gray and Brown	2.0	1.8	2.2
Polarized Polycarbonate Gray and Brown	1.6	1.8	2.0
Polarized 1.60 Gray and Brown	1.8	1.8	2.0
Polarized 1.67 Gray and Brown	1.6	1.8	2.2
NXT® Polarized Gray and Brown	1.6	1.4	2
NXT Photochromic Gray, Brown and Amber DayNite	1.6	1.4	2
NXT Photochromic Polarized Gray and Brown	1.6	1.4	2
NXT Mirror Silver and Gold	1.6	1.4	2
NXT Fixed Tint Gray, Brown and Green	1.6	1.4	2
Drivewear® Standard Resin Polarized and Photochromic	2.0	1.8	2.0
Life Rx™ Polycarbonate Gray and Brown	1.6	1.4	2.0

\*Polarized formerly known as SA PolarShades®

5. Coating Fixture Diameters – Either an oval or round uncut shape will be chosen for the thinnest edged lens for the frame. Then the nearest larger fixture size is selected from the list below.

<b>Round Lens - Uncut Diameter Choices</b>	<b>Oval Lens - Uncut Diameter Choices</b>
50.0	50.0 high x 60.0 wide
52.5	52.5 high x 62.5 wide
55.0	55.0 high x 65.0 wide
57.5	57.5 high x 65.0 wide
60.0	60.0 high x 67.5 wide
62.5	62.5 high x 72.5 wide
65.0	65.0 high x 75.0 wide
67.5	
70.0	
72.5	
75.0	
77.5	
80.0	

6. The minimum edge thickness of the uncut diameters listed above is specified by the following:

Standard lens forms = 0.1 mm

Layered Lenses = 0.3 mm (such as polarized or certain photochromic lenses)

7. The calculated and specified center thickness of the lens is measured for acceptance with a tolerance of -0.2 mm up to +0.3 mm.

If you have further questions regarding lens thickness, please contact our Technical Services Department at 1-800-759-4630.

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