



Opticians' Handbook 2005



Opticians' HANDBOOK



Welcome...



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Dear Reader,

Sâfilo USA and Essilor of America are delighted to produce this Opticians' Handbook. For the first time a frame and lens company have come together to compile a resource guide about continuing education. It is our goal with this Handbook to give the optician the tools to grow their professional knowledge.

Continuing Education is a critical factor in the growth of our industry. It allows the optician to keep pace with technology changes in frame and lens materials, treatments and designs. It ensures that each patient can receive the highest level of customer satisfaction. It also provides our commitment to new products.

Use this Handbook to locate the next conference nearest you, web classes available in areas of technical interest or review this text to improve skills and overall expertise. We've also added a listing of states that license Opticianry and the CE requirements for re-licensure. Consider getting ABO and/or JCAPHO certified if you are not already certified. It will give you the background to successfully master Opticianry and a basis for future growth.

This Handbook contains important information presented in an easy to read format. Use it to train your staff. Consider assigning sections for your staff to meet basic knowledge goals.

We will update and add to this book periodically because the ophthalmic community continues to grow with new products and services. We will continue to update this book as it is our commitment to provide you a source for this growth.

We are very interested in your comments and suggestions on this handbook as well as additional topics that you would like to see covered in the future. Please email us at opticianshandbook@jobson.com. We look forward to hearing from you.

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The Patient EXPERIENCE



Making The Appointment

You never get a second chance to make a first impression. Oftentimes this first impression happens over the phone. How you behave on the phone creates a picture in the patient's mind. Is your practice... friendly, technical, clinical, warm, family oriented? Discuss the office image you want to project and then come up with a plan to convey this "picture" over the phone to each and every person you talk to. Mary E. Schmidt, president of EyeSystems, an optical consulting firm in Pleasant Hill, Calif., suggests creating a handbook. "An office can create their own handbook with information on insurance, fees, policies and services and keep the book at the reception desk as an easy reference guide to be used as a study tool or a training manual for new hires," says Schmidt. You'll be prepared to answer any questions the patient might have.

Pre-Appointing

The most preferable method with this system of setting appointments is a system of pre-appointments. The patient's next appointment is set at the end of their current appointment. Have the patient fill out their own reminder postcard or appointment card.

This leaves the reminder phone call, a critical ingredient of pre-appointing, in the hands of the staff. When the appointment was set a year in advance, call at the begin-



ning of the month to make sure the day and time that was set a year ago will still work for the patient. If not, reschedule over the phone at that time, then make a reminder call the day before the appointment.

When making the call say, "I'm calling to confirm your appointment for your annual eye exam." It's okay to leave a message as long as it's as professional as the one-on-one call.

The Office Visit

The office visit begins the moment the patient walks in the door. Try to greet every patient within 10 seconds. If you are with another patient, look up and smile before returning your attention to your current patient.

Fifty-five percent of the initial impression is visual, so looking professional is a must. Dress and behave in a professional manner and don't forget to smile. Try a uniform look, such as black tops and khaki pants or any pants and a shirt with the practice logo. It sets a sense of teamwork in the patient's mind.

Greeting the Patient

Welcome the patient to your practice using their name. Some practices have added a photo to the patient file to help the staff recognize patients. Engage them in conversation. Personal details such as "How's your son doing in the Navy?" or "How did the wedding go last year?" make a patient feel like you remember them. You can keep short notes in the file.

Offer the patient articles on eye care or a lens menu guide to keep them interested while they wait.

The Wait

Turn the waiting period from a negative experience to a positive one. When possible don't make the patient wait. Contact the patient immediately if you know you are running behind schedule. Schmidt recommends contacting the patient via home or cell phone if you are 15 or more minutes behind schedule. This courtesy goes a long way in keeping patients happy, even when they do choose to come in and wait.

Unable to reach the patient? Suggest they begin looking at frames or sunwear while they wait. You can also direct them to any educational materials or to a lens technology center you might have in the waiting area.

Pre-Testing

For the patient, pre-testing is the beginning of their exam. How you conduct this pre-testing is just as important as how the doctor conducts their examination. Start by introducing yourself and explaining your part in the process. "Hi Mrs. Walker. I'm Pat and I will be conducting your tests. Please feel free to ask any questions."

Turn the waiting period from a negative experience to a positive one.

This will put the patient at ease. Introduce each instrument before each test by explaining what it is, why the doctor wants the test run and what information the test will provide the doctor. Schmidt suggests writing out similar scripts for each piece of equipment and mounting them on the optician's side of the instrument. This insures that each person administering the test has the same information. This is also helpful to new staff and provides consistent service.

Update records at pre-testing but NOT at the front desk. Use the privacy of the exam room. Make note of any changes or additions. Then take a few minutes to explain what will happen next and answer any questions. Loyalty improves with well informed patients.

Sometimes patients leave practices. For sixty-eight percent of patients who leave a practice, this is the result of what a staff member did or did not do. "It could be something as simple as an indifferent attitude or impatient demeanor" explains Schmidt. It's more than walking out without buying eyewear, patients leave and don't complain. They just change doctors.

The importance of a friendly, helpful and professional staff cannot be underestimated when creating a successful practice.

WORDS TO COMMUNICATE WITH THE PATIENT

"This is a Visual Field Analyzer. It will indicate to the doctor any possible signs of early stage glaucoma. The doctor will discuss the findings with you during your exam."

"This is our OptoMap camera. It will provide the doctor with a full view of your retina to help in determining the health of your eye."

"This is our Auto Refractor. This instrument provides the doctor with a baseline reading of your prescription for glasses. He/she will fine tune the readings during your exam."

TEN TIPS & TECHNIQUES FOR GOOD PHONE MANNERS

1. Answer the phone before the third ring
2. Smile while you speak—people can "hear" a smile
3. Introduce yourself
4. Clearly state the name of the practice
5. Don't eat, chew gum or drink while answering the phone
6. Listen carefully and be prepared to answer any questions (Handbook mentioned above)
7. Jot down details
8. Use the patient's name
9. Don't interrupt
10. Thank them for calling or for their time

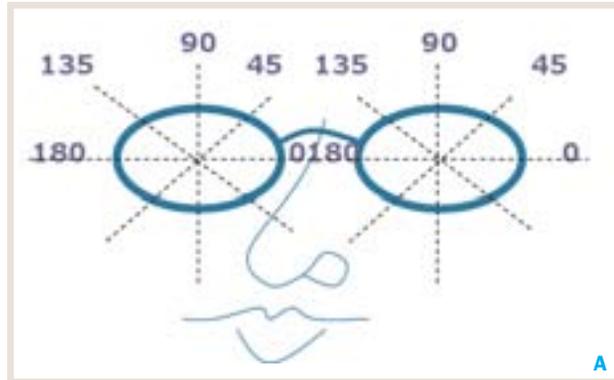
THE Prescription

(adapted from *L&T*, Aug 2004, Palmer Cook O.D.)

A Lens Formula

The prescription, or lens formula, is the starting point for picking the best lens material, frames, eye and bridge size. The right choices will turn that lens formula into comfortable, attractive and well-performing eyewear. Top-notch dispensers see the final eyewear design in every lens formula.

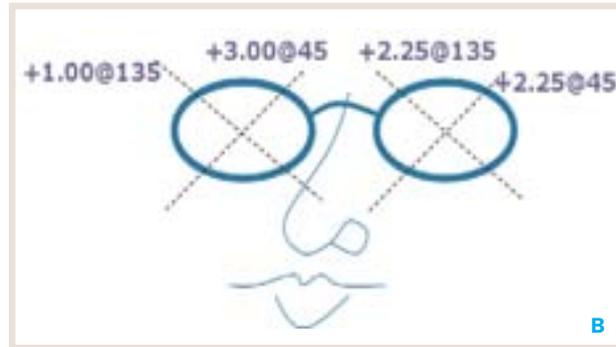
Axis and Eyewear Selection



The lens axis tells where the major meridians are located and the location of the meridian of greatest power; thickest edge of a minus lens and thinnest edge of a plus. Lens powers are separated into two principal meridians; the axis and 90° from the axis. Illustration A shows cylinder axis location when looking at the spectacle wearer. To find the power of the strongest meridian in any cylinder lens, simply compare the sphere power and the combined power of the sphere and cylinder together.

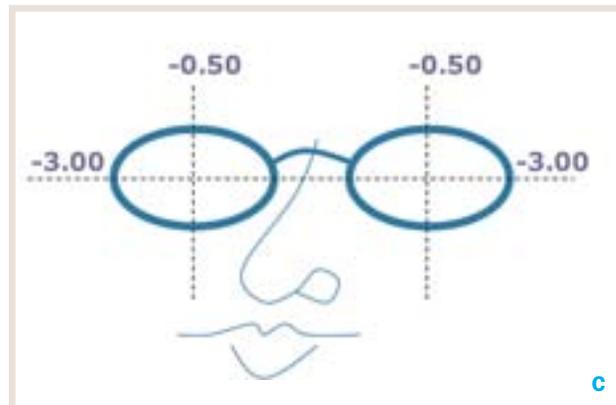
1. Rx: OD +3.00-2.00 x 045, OS +2.25D SPHERE.

For +3.00 -2.00D x 045, the two powers are +3.00D and the combination of +3.00D and -2.00D is +1.00D; so the power in the two meridians is +3.00D@045 and +1.00@135. The +2.25 sphere power is located at all axes on the lens. See Illustration B.



2. Rx: -0.50-2.50 x 090 OU.

In this case the two powers are -0.50D and the combination of -0.50D and -2.50D or -3.00D. This lens would have a -0.50D@090 and -3.00D@180. A new dispenser might think that there is little power because of the -0.50D sphere but due to the axis the lenses are really -3.00D@180. This will significantly impact visible edge thickness.



Top-notch dispensers see the final eyewear design in every lens formula.



Prism

Prism is required when the line of sight must change direction. A prescription or lens formula with prism, specifies the amount and the direction of the base (thickest part) of the prism. The amount of prism is usually, but not always, the same in both eyes.

- Usually, but not always, horizontal prism is either base in (BI) in both eyes or base out (BO) in both eyes.
- Usually, but not always, vertical prism is downward in one eye and upward in the other.
- When the prism part of a lens formula varies from what is “usually” done, a call to the prescribing doctor may help avoid making an error in ordering.
- When BI or BO prism is specified, try to avoid decentration. The optical center of the lens is shifted toward the geometric center of the eyewire by the prism component.
- When base up (BU) or base down (BD) prism is specified, avoid, using a deep (large B measurement) lens shape.

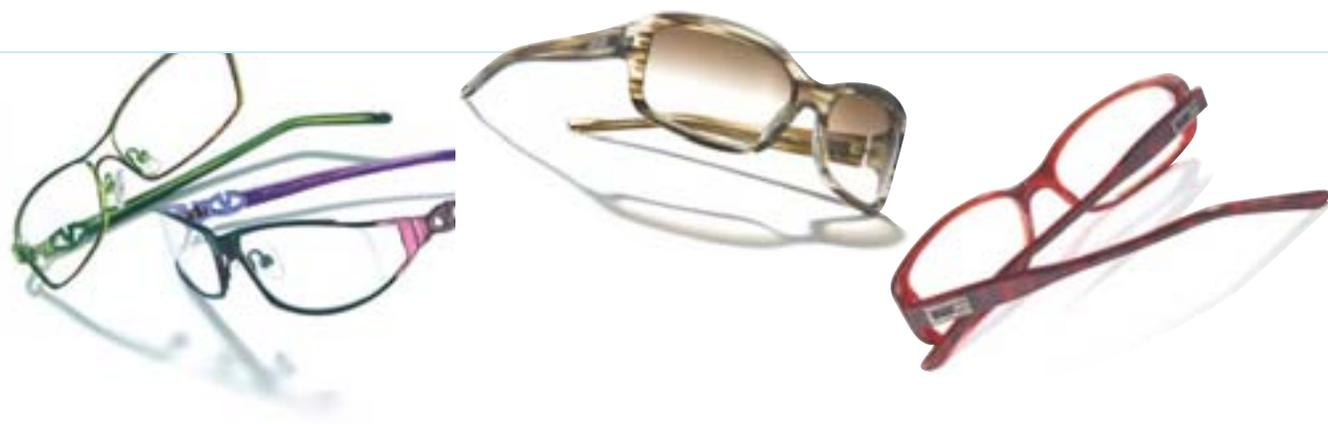
Prism Imbalance

Patients do not easily tolerate vertical prism differences, often called vertical imbalance. Individual tolerance varies, but a difference between the right and left lens of one prism diopter (1Δ) or more of vertical prism can cause asthenopia, (eye strain) adaptation problems, reading difficulties and even diplopia (double vision). Patients with single-vision lenses and vertical prism imbalance usually learn to turn their heads to read through the lenses at a point closer to the optical centers.

Prism imbalance tolerances of 2/3Δ horizontally and 1/3Δ vertically are generally acceptable. For patients with greater vertical prism imbalance who must look down to read, slab-off design or reading lenses should be considered.

LENS FORMULA TIPS

- If the strongest meridian falls close to the 180° line, lens thickness will be more affected by decentration. Select frames where the patient’s pupils are close to the geometric center of the lenses.
- Thicker lens edges in minus lenses are less attractive.
- Increased center thickness in plus lenses means greater magnification. In strong plus powers this means a reduced field of view for the patient and undesirable “magnified eyes.”
- Added thickness means added weight in all lenses.
- For strongest meridians that fall close to 90° or straight up and down, avoid deep (i.e. large B measurement) frames.
- The effective diameter (ED) of a lens shape is defined as twice the longest radius of the shape. The longer the ED, the thicker the finished lens will be.
- For strongest meridians in plus powers, the center must always be thick enough to allow sufficient material at the edge of the lens.



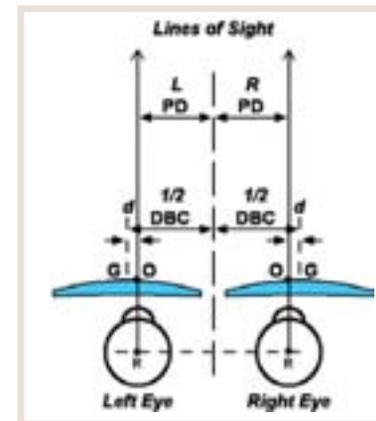
PD and SEGMENT HEIGHT

DEFINITIONS

AXIS NOTATION	Lens power location is specified according to a pattern similar to the face of a clock. Zero degrees is always on the patient's left. The horizontal (180°) meridian would be a line passing through the three and the nine, the vertical (90°) meridian through six and 12. The one to seven line would be the 60° meridian and so on.
BD	"Base down" prism; the thickest part (base) of the prism is directed vertically downward.
BI	"Base in" prism; the thickest part (base) of the prism is directed horizontally inward toward the patient's nose.
BO	"Base out" prism; the thickest part (base) of the prism directed horizontally outward away from the patient's nose.
BU	"Base up" prism; the thickest part (base) of the prism directed vertically upward.
COMBINING POWERS	Combining lens powers is algebraic. For example +1 combined with +1 is +2, and +1 combined with +3 is +4. And +1 combined with -1 is 0, while +2 combined with -3 is -1.
DECENTRATION	The distance in millimeters that the Major Reference Points must be displaced from the eyewire geometric centers.
DBC (FRAME PD)	The distance between the geometric centers of the eyewires. To calculate, add eye size and bridge size.
ED	Twice the longest radius.
MAJOR OR PRINCIPAL MERIDIANS	The axis power meridian and the meridian 90 degrees from the axis.
MINIMUM LENS THICKNESS	Minus lenses are determined by center thickness, material and impact strength. Plus lens thickness is determined by the thinnest edge possible at the farthest lens edge. Consult ANSI Z80.1-1999 and your lab.
MRP	The point in the lens that gives the prescription. Bifocals have two MRPs, distance and near.
PD	The distance between visual axes of the eyes. For far or near vision.
PRENTICE RULE	The calculated prism at any point in a lens; equal to the distance in centimeters from the optical center of the lens times the power of the lens in diopters. The direction of the prism will be in, out, up, down or a combination, $\Delta = d \times f$.

Taking PDs

Measure the distance between the visual axes of the two eyes; manually with a ruler or automatically using a pupillometer. The pupillometer is more accurate as well as more consistent.



Distance PD

Using the Pupillometer

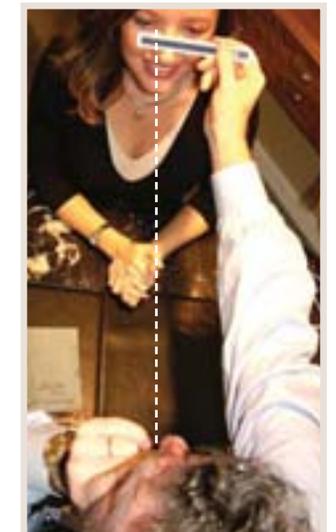
Place the nose pads on the patient's nose with the forehead bar in place helping to center the instrument on the nose. Ask the patient to hold the pupillometer as if they were holding a pair of binoculars and look at the lighted circle.



1. Set distance wheel to infinity (∞) for far PD or the correct near distance 35cm= \sim 14 inches, 40cm= \sim 16 inches, 45cm= \sim 18 inches
2. Always take monocular PDs.
3. Record the findings (take it again to be sure).
4. Use the paddle to occlude either eye if the patient has difficulty with both eyes focusing on the ring target.

PD Distance with a Ruler

1. Sit directly in front of the patient and at the same height as the patient.
2. Place your pointer finger (left hand) in front of your left eye and ask the patient, with both eyes, to look at your finger. The patient's right eye is looking straight ahead.
3. Set the zero point of the rule at the inner pupil margin.
4. Move your pointer finger in front of your right eye and ask the patient to look, with both eyes, at your finger.
5. Measure to the outer pupil margin of the patient's left eye. This is equivalent to the distance from pupil center to pupil center.





Near PD

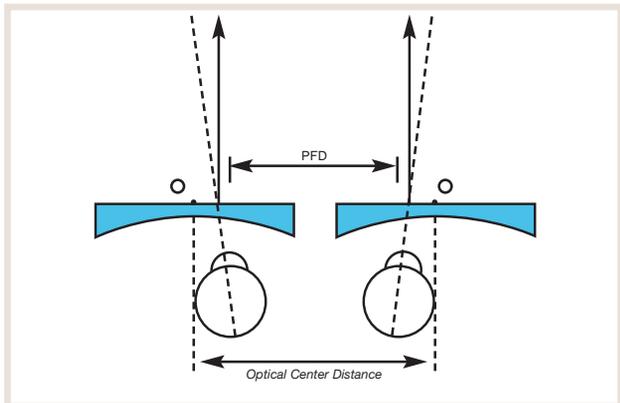
1. Have the patient look at your bridge center
2. Place the zero point of the rule at the inner pupil margin of the right eye and measure near PD to the outer pupil margin of the left eye. A penlight can light the visual PD and improve accuracy and consistency.



Measure from penlight reflex to reflex

The Importance of Good PDs

Good PD measurements are essential for proper optical alignment and excellent binocular vision. Wrong PDs cause the eyes to turn and this is difficult for the patient to sustain. For example, this diagram shows minus lenses with too wide a PD that may create excess base in prism. This causes the eyes to diverge which is uncomfortable, fatiguing and may ultimately cause the patient to return to the office.



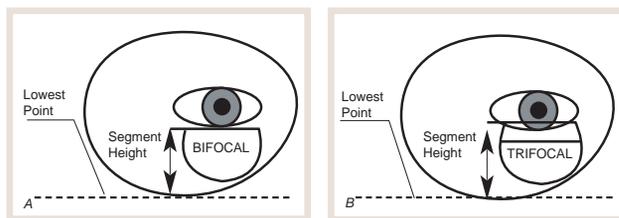
Segment Fitting Height

Multifocals and progressives have specified fitting heights. Remember:

1. Choose sufficient segment heights and minimum fitting height for progressives.
2. Adjust the frame to the patient. Include some faceform and pantoscopic tilt (7-10°).
3. Fit with short vertex distance—this maximizes the field of view in progressives.

In bifocals and trifocals, measure the fitting height to the top of the segment from the bottom most edge of the lens. For bifocals that is the top of the lower lid, for trifocals it is the lower edge of the pupil. Consider this a starting point.

- Consider the segment height of the previous glasses and patient satisfaction.
- If the patient is tall and uses their eyewear while standing, then 1-2mm lower might be better.
- If only for reading then higher.
- As a second pair for golf, then much lower so as not to be in the way while putting.



Bifocal and Trifocal Recommendation Fitting.

Progressives are fit to pupil center. This is important since manufacturers design lens attributes with this positioning in mind. Place the frame on the patient, adjust, add faceform and tilt.



1. Position yourself at equal eye height directly in of the patient.
2. Dot pupil center.
3. Remove the glasses and draw a horizontal line over the dot (about 10mm long).
4. Ask the patient to put the glasses back on and stand and look at something far away.
5. Stand next to the patient and view an imaginary line of sight from the front of the eye through the lens; it should pass through the fitting height line marked on the lens.
6. If not, adjust it.
7. Practice this for speed. It improves patient confidence.

PD, OC & SEG HEIGHT TIPS

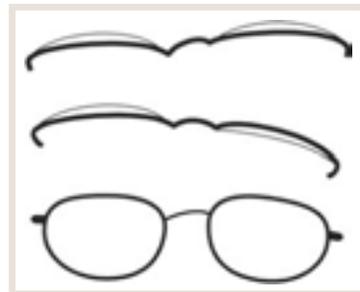
LENS STYLE	PD	OPTICAL CENTER, SEGMENT AND FITTING CROSS HEIGHT
SINGLE VISION <ul style="list-style-type: none"> • Spherical or aspheric design 	<ul style="list-style-type: none"> • Distance or Near Monocular PD as required • Monocular PDs are especially important for aspherics 	<ul style="list-style-type: none"> • OC or PRP along frame midline • If eye very high in a large B measurement frame, consider vertical decentration placing the OC 5mm below pupil center
PROGRESSIVES	<ul style="list-style-type: none"> • Monocular Distance PDs 	<ul style="list-style-type: none"> • Fitting Cross (FC) fit at pupil center • The PRP is located 2, 4 or 6mm below the FC as specified by the manufacturer • PRP is the OC if no prescribed prism or the point of prescribed prism • Prism thinning is considered prescribed prism
NEAR VARIABLE FOCUS OR COMPUTER LENSES	<ul style="list-style-type: none"> • Monocular Near PDs 	<ul style="list-style-type: none"> • Use the manufacturer's recommendation
BIFOCALS <ul style="list-style-type: none"> • Flat Tops, Round Segs 	<ul style="list-style-type: none"> • Binocular PDs • Unequal decentration look wrong cosmetically • Use Monocular PDs only in extreme cases 	<ul style="list-style-type: none"> • Segment height as measured • Usually equal seg heights R/L eye • OC or PRP along frame midline
TRIFOCALS <ul style="list-style-type: none"> • Flat Tops 	<ul style="list-style-type: none"> • Binocular PDs • Unequal decentration looks wrong cosmetically • Use Monocular PDs only in extreme cases 	<ul style="list-style-type: none"> • Segment height as measured • Usually equal seg heights R/L eye • OC or PRP along frame midline

Techniques & Technology OF FRAMES

Before Delivery

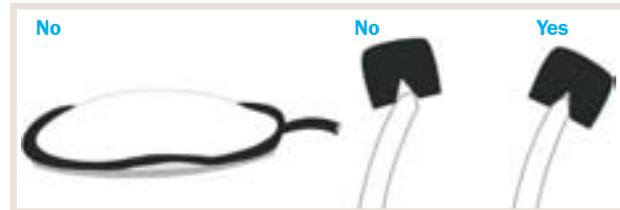
Delivering a frame to a patient that sparkles is key to enhancing the office image. Be sure that the frame is straight, symmetrical and clean, clean, clean.

1. Straighten the bridge so the curves are uniform and the eyewires are aligned.



2. Give the frame a slight face form bend.

3. Next, be sure that none of the eyewires are rolled (happens on an overly heated plastic frame during glazing)—if they are, heat the eyewire, remove the lens, heat the eyewire again and roll the eyewire back into shape and insert the lens.



4. Make sure temples are near parallel and eyewires are not propellered.



5. Test for tilt with the frame upsidedown. Both temple tops touch the table at the same time, “four point touch.”

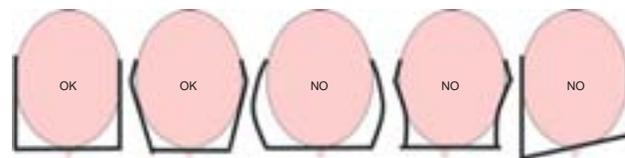


6. Next, place frame right side up. Temple ends are the same angle when both touch the table at the same time. This checks that the frame is completely symmetrical.



Frame Delivery – Basic Adjusting

1. Place the frame on the patient and adjust for slight temple tension without indenting the head.

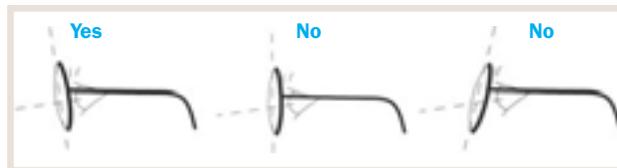


Delivering a frame to a patient that sparkles is key to enhancing the office image

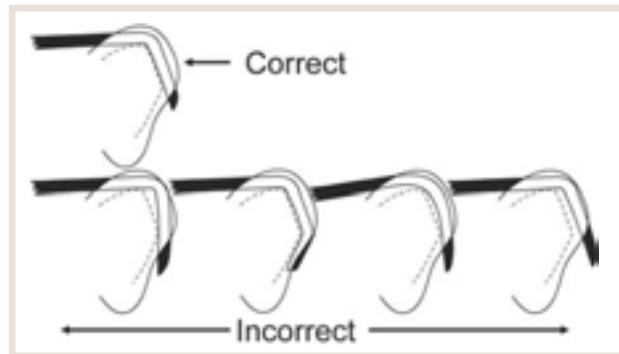
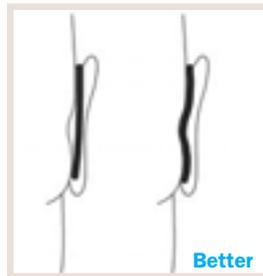


2. To raise the right side of the frame, lower the right temple (lowering the temple raises the front of the frame on that side).

3. Raise or lower the temples to adjust pantoscopic angle. Use a wide angling plier or parallel jaw pliers. For some frames pliers may be required to stabilize the front while the temples are bent up or down.



4. Always look behind the ear and contour the temple for angle and touch. The more temple in contact the more secure the fit. Lastly, angle the temple so that its bend occurs at the crest of the ear.



INSERTING LENSES—ZYL FRAMES

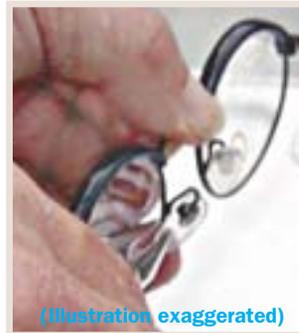
- Heat the eyewire until soft.
- Insert through the front.
- Place the temporal side in first, to the depth of the bevel.
- Place top bevel into the eyewire.
- Insert the nasal side.
- Pull the rest of the eyewire around the lens.

ADJUSTING NOSE PADS

Pads should rest halfway between the crest of the nose and the inner canthus. Find the spot with the most support, make the pads flush with the nose surface and use the pads to raise or lower the frame or increase or decrease vertex distance.

LOOPED PAD ARMS

- Raise the pads to lower the frame, lower the pads to raise the frame.
- Straighten the loop, Make a sharp bend near the attachment point.
- Angle the pad to sit flush on the nose.



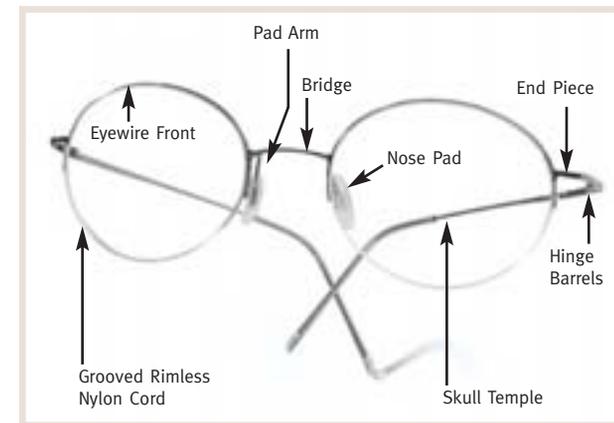
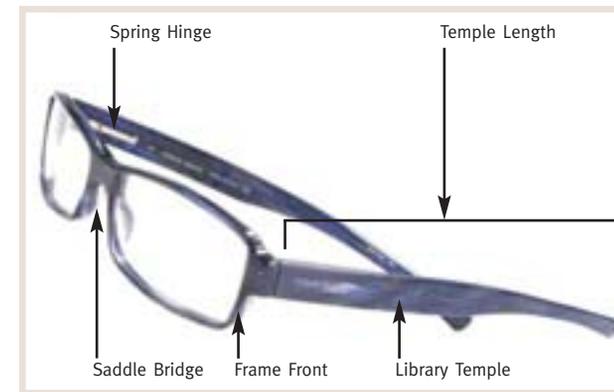
(Illustration exaggerated)

AMERICAN PAD ARMS

- Grasp the pad and bend the arm down at the frame front attachment.
- Straighten the pad arm so the pad is angled to fit flat against the nose.

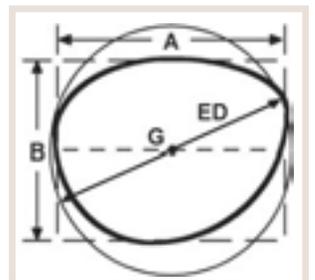


(Pad removed for visibility)

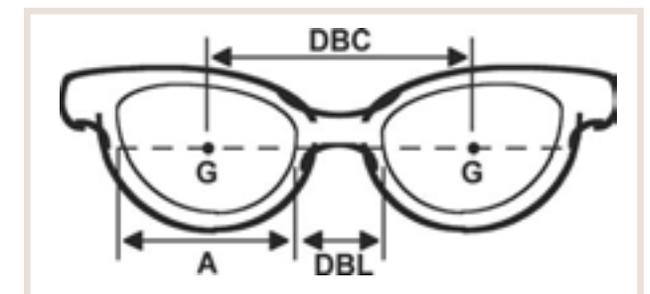


The Boxing System

Boxing System



Boxing 2



- A Horizontal Eye Size. Width between two vertical lines tangent to the edges of the lens.
- B Vertical height between two horizontal lines tangent to lens edges.
- G The geometric center of the imaginary box enclosing the edges of the finished lens.
- DBC Distance Between Centers. The separation between the geometric centers of right and left lenses.
- DBL Bridge size. The minimum distance between the two lenses.
- ED Effective Diameter. Twice the longest radius; the smallest circle that will completely enclose the lens.

MATERIAL FEATURES & BENEFITS

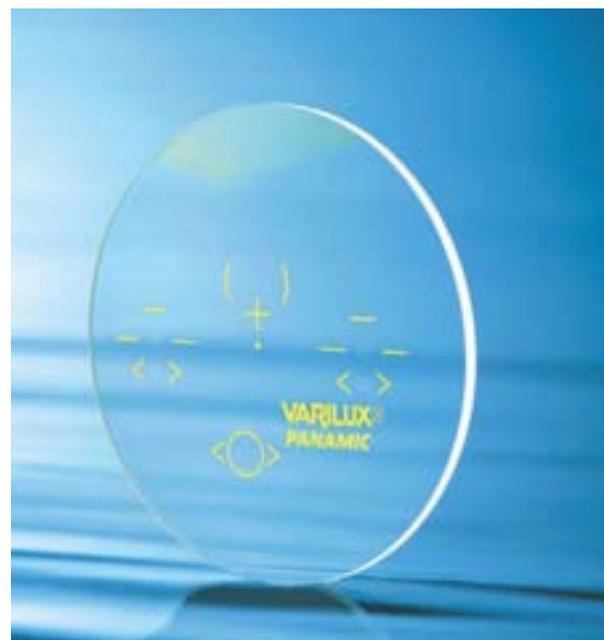
■ INDICATES METALS ■ INDICATES PLASTICS

MATERIALS	INFO	BENEFIT
Aluminum and Anodized Aluminum	<ul style="list-style-type: none"> • Light & strong (50% lighter than titanium) • Little flexibility, adjusting riveted hinges difficult • Anodized, Stronger, less scratch resistant than Aluminum • Imbedded spring hinges available 	<ul style="list-style-type: none"> • Thick frame parts extremely light • Good variety of finishes, creates a sleek “look” • Hypoallergenic • Light eyewear • Painted with beautiful finishes and colors
Argeste	<ul style="list-style-type: none"> • Latest generation Surgical Stainless Steel • Nickel free • Flexible 	<ul style="list-style-type: none"> • Bright shiny frames • Snug temple fit for active wearers • Hypoallergenic • Used on temples instead of spring hinges
Beta Titanium	<ul style="list-style-type: none"> • Strong & lightweight alloy of titanium, vanadium • No nickel • More flexible than pure Titanium 	<ul style="list-style-type: none"> • Light, comfortable, durable, flexible • Used on temples instead of spring hinges for comfort and fit • Hypoallergenic
Monel	<ul style="list-style-type: none"> • Most used frame metal, easy to shape • Copper & nickel in a 2:1 ratio • Strong solders and finishes • Highly ductile, shapeable and corrosion resistant 	<ul style="list-style-type: none"> • Strong • Easy to adjust • Metal adapts easily to lens and frame shapes • Adds frame stability
Scandium	<ul style="list-style-type: none"> • 40% Lighter than titanium, ultra lightweight • Unique ultra durable alloy • Great designs without soldering or welding 	<ul style="list-style-type: none"> • Ultra comfortable and durable • Unique designs • Easy to work with/adjust (like Monel metal)
Safitex®	<ul style="list-style-type: none"> • Flat metal cut from one sheet • Lighter than regular metal frames 	<ul style="list-style-type: none"> • Gives the look of plastic in a metal frame • Hypoallergenic • Used for thicker parts allowing design accents
Surgical Stainless Steel	<ul style="list-style-type: none"> • Sàfilo provides the highest quality available, 100% Nickel Free • Corrosion resistant combines lightweight with strength for comfort and durability 	<ul style="list-style-type: none"> • Hypoallergenic • Easy to work with/adjust
Titanium (T100 = 90% titanium)	<ul style="list-style-type: none"> • Extremely lightweight • Highly durable • Corrosion resistant • Polishes well, electrolytic color finishes • Casting adds design features • Adjusts well 	<ul style="list-style-type: none"> • Enhanced comfort, extended wear • Minimalist look • Hypoallergenic • Long life, superior strength
Zyl, Plastic Acetate (zylonite or "zyl")	<ul style="list-style-type: none"> • Most common, all colors, patterns • Made from cotton seed fiber, wood flakes and plasticizers • Softens over time requires readjustment, too much heat can melt or burn the frame • Metal temple core is required for rigidity • Frame can dry out or become brittle, acetone will dissolve the frame heat to 120°C to adjust 	<ul style="list-style-type: none"> • Endless color, pattern and texture possibilities • Easy to insert lenses and adjust • Can stretch or shrink with heat or cooling (careful hinges may loosen in a hidden hinge) • Can be laminated for great effects
Cellulose Propionate (propionate)	<ul style="list-style-type: none"> • Injection molded, lighter than plastic acetate • Lightweight, strong and flexible, color is added by an over-coating • Excess heat bubbles the frame, beads will pock the surface • NO acetone or alcohol 	<ul style="list-style-type: none"> • Large stable sizes possible, even as wrap frames • Comfortable and lightweight • Less sensitive to warm weather and will hold their adjustments
Grilamid	<ul style="list-style-type: none"> • Thermoplastic molded frame • Lightweight, 20% lighter than zyl • No plasticizers to dry out • Cold glazing for thin lenses, slight heat for high powers, <50°C 	<ul style="list-style-type: none"> • Flexible, thin designs • Highly durable and resistant to aging • Hypoallergenic • Molds well for wrap frames
Optyl®	<ul style="list-style-type: none"> • 30% Lighter than plastic acetate, no plasticizers to dryout • High memory, exceptional durability heat to 80-100°C • Molded frame, available in unique colors, patterns and textures 	<ul style="list-style-type: none"> • Comfortable and highly durable • No need for frequent adjustments • Hypoallergenic • Beautiful, multi-tonal colorations
Trogamid	<ul style="list-style-type: none"> • Flexible and durable • Injected nylon • Crystal clear 	<ul style="list-style-type: none"> • Allows for thin designs • No core wire required for good stability • Created in a wide variety of color combinations • Hypoallergenic

LENSES

Materials, Treatments & Design

The interrelationship of lens materials, treatments and design allows the best selection of options for every wearer. Be sure to describe material characteristics in patient relevant terms. Not “higher index and lower density” but “thinner and lighter lenses.” Not “Abbe” but “Improved peripheral clarity in higher powered lenses.” Materials with “increased impact strength” can make minus lenses with thinner centers and provide improved protection. “UV absorptive” lenses protect the eye from UV’s damaging effects. “Photochromics” provide increased comfort and UV protection while significantly reducing glare. “Anti-reflective lenses” allows the wearer to see and be seen more clearly. “Polarized sun lenses” improve safety and provide comfort by eliminating blinding glare.



Thinner and Lighter

Higher index lenses require less material to produce the same lens powers. As a result, the edges of minus lenses and the centers of plus lenses are thinner. Less lens volume also makes lenses lighter. Lower density creates an even lighter lens. For example the table to the right describes how polycarbonate makes a thinner and lighter lens.

	POLY	HARD RESIN	POLY BENEFITS
INDEX	1.59	1.50	The higher index means that less material is needed for the same power; the result is thinner edges in minus, thinner centers in plus and lenses weigh less.
DENSITY	1.21 g/cm ³	1.32 g/cc ³	The material is inherently lighter so lenses are lighter as a result.
IMPACT	Excellent	Good	Increased impact strength allows thinner centers, as thin as 1.0mm in minus lenses (2.0mm for hard resin lenses).

Ultraviolet Absorption

Plastic lens materials include UV absorbers to protect the eye from UVB (280-315nm), which causes sunburn and UVA (315-380nm), which has been linked to the formation of cataracts, macular edema and age related macular degeneration (AMD). So, all lenses should be UV protective. Moreover, since most damage occurs before age of 30 (Queensland Institute of Medical Research), consider UV attenuating lenses and sunglasses for all kids and young adults.

MATERIAL	CUT-OFF	% UV ABSORPTION
Crown glass	~285nm	39%
1.60 glass	~330nm	84%
Hard resin	~360nm	90%
Hard resin w/uv dye	~380nm	100%
Mid Index	~370-375nm	95-98%
Polycarbonate	~380nm	100%
1.60 High Index	~380nm	100%
1.67 High Index	~400nm	100%
Transitions	~380nm	100%
Polarized	~380nm	100%
1.70	~380nm	100%
1.74	~400nm	100%

Glare and Anti-Glare Lenses

“Anti-glare” lenses effectively reduce or eliminate glare, increase patient comfort, acuity, safety and cosmetic appearance. There are four kinds of glare in eyewear.

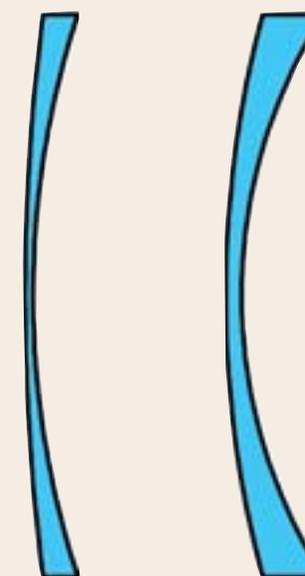


TYPES OF GLARE	CAUSE AND EFFECT	TREATMENTS THAT REDUCE OR ELIMINATE
Distracting Glare	<ul style="list-style-type: none"> Caused by reflections from the lens surface Causes eye fatigue 	AR Lenses
Discomforting Glare	<ul style="list-style-type: none"> Caused by everyday bright light Can occur even when cloudy Causes squinting and eye fatigue 	Photochromics (such as Transitions), light tints, light density polarized lenses
Disabling Glare	<ul style="list-style-type: none"> Caused by excessive intense light Blocks vision 	Photochromics (such as Transitions), dark tints, polarized lenses
Blinding Glare	<ul style="list-style-type: none"> Caused by light reflected off smooth, shiny surfaces Blocks vision 	Only polarized lenses remove blinding glare

HOW MUCH THINNER AND LIGHTER? USE THE TABLE BELOW.

WEARING NOW...	NEW LENSES...	YOU CAN EXPECT...
Glass	Hard resin	About 10% thicker, but half the weight
Hard resin	Polycarbonate	Up to 25% thinner and lighter
Hard resin	High Index	Up to 25% thinner and lighter
Hard resin	Ultra High Index	Up to 40% thinner and lighter
Poly or High Index	Ultra High Index	Up to 15% thinner and lighter

ULTRA HI-INDEX VS. HARD RESIN



MATERIAL DETAILS	INDEX (ROUNDED)	ABBE	DENSITY (G/CM ³)
Hard resin	1.50	58	1.32
Crown glass	1.523	58	2.54
Trivex (Trilogy, Phoenix)	1.53	45	1.11
Spectralite	1.54	47	1.21
Mid Index plastic	1.55-1.56	36-40	1.28
Polycarbonate	1.59	30	1.21
High Index plastic	1.60	42	1.30
High Index glass	1.60	40	2.62
Ultra High Index plastic	1.67	32	1.36
Ultra High Index glass	1.70	30	3.65
Ultra High Index plastic	1.70	36	1.35
Ultra High Index plastic	1.74	33	1.46

Choose & Use Sunwear More Effectively

Sunwear sales satisfy patient needs and build business. Prescription sunwear is essential for eye health and comfort in all outdoor activities. Remember, multiple pair sales will grow your business.

Consumers Are Better Informed

You should be knowledgeable about all sunglass options because your patient is well informed. The web, retail stores, advertising, movies—even your competition are influencing your patients. You need to be well informed.



Growing Sunwear Sales

Here are simple suggestions to make any office successful at selling sunwear.

- Make sunwear important by dedicating sunwear retail space. It shows patients you are committed to the category.
- Have up-to-date selections; fashion trend frames and the newest lens colors and coatings.
Suggestion—Contact your Sâfilo representative for the latest advice on the best sunwear, hottest sellers and fashion trends in the variety of Sâfilo collections.
- Review the sections of this Handbook to ensure that dispensers and doctors understand the benefits of tints, polarized and photochromics. Discuss the advantages and benefits of frame materials to the wearer. Use the tint, photochromic and glare demonstrators to ensure that patients know the benefits of your recommendations. If your's is a doctor's office, discuss sunwear in the exam room.

Tints can effectively reduce sunlight for wearer comfort and also provide a visual experience!

- Identify and use branded or customized sun Rx programs that can differentiate the business.
- Identify opportunities, set goals and measure response. Is the office more successful than last month, quarter, year? Are all contact lens patients shown sunwear? Do you sell sunwear all year?
- All dispensers should wear contemporary sunwear; selling from personal experience is smart.

Color in lenses adds individuality, fashion, and protects from glare. Tinting is an effective way to bring customization and benefit to any patient.

Tints can effectively reduce sunlight for wearer comfort and also provide a visual experience that can improve visibility of golf balls in the air or on the green or identify patches of ice in the snow while skiing. It is important to match color to fashion and performance. For fashion suggestions, look at the tinted lens colors used in the Sâfilo and Essilor sunglass collections. For specific applications use the opposite table as a guide. The results give you the ability to marry fashion and performance to meet every patient's needs.

Polarized sunwear, especially in prescription is beneficial. Most dispensers agree, as the majority of prescription sunwear sold is polarized. Patients who have worn polarized lenses will buy them again. For general use consider Grey or Brown; For window shopping, photochromics provide flexibility in and out of doors. Use the table opposite to match color and need, then combine it with polarized for high performance.

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WHICH LENS IS BEST?

ACTIVITY	RECOMMENDED COLOR(S)	COMMENTS
BASEBALL ● ●	Gray or Green Polarized	<ul style="list-style-type: none"> • Green or Gray is the better choice to highlight the ball against the sky or grass. • Mirrors can help enhance contrast. • Back surface AR blocks reflections at critical times.
CYCLING ● ● ●	Most Browns Some Greens Gray or Brown Photochromics Polarized	<ul style="list-style-type: none"> • Bright sunlight—High contrast Brown and Greens also polarized in Brown or Contrast tint Brown enhance contrast. • Low light—Yellow, Red or Orange. • Photochromic lenses are increasing in popularity due to UV and the variable density feature. • Back surface AR.
DRIVING ● ●	Gray or Brown Polarized	<ul style="list-style-type: none"> • In general use Gray or Brown as dark as needed for driving comfort. • Polarized lenses are a must.
FISHING ● ● ●	Brown, Amber and Gray Polarized	<ul style="list-style-type: none"> • Polarized is important depending on the type of fishing. Both Gray and Brown work well, as does Contrast Brown. • For flats, lake and stream, Brown is recommended. For open water or deep sea, Gray is recommended.
GOLF ● ●	Green and Brown	<ul style="list-style-type: none"> • The ball needs to be highlighted against the sky and the grass. • The background and the specifics of driving vs. putting have varied and opposite color requirements. • Brown is preferred and density can be tuned to personal preference. Polarized with back surface AR is a plus.
HUNTING ● ● ● ●	Yellow, Orange, Red and Contrast Browns Polarized	<ul style="list-style-type: none"> • Most hunters require multiple lens choices. • Yellow, Amber, Orange and Red or light lenses work great in low light conditions. • Contrast Browns or darker lenses work better in bright conditions. • Suggest frames with interchangeable lenses or multiple pairs.
MOTORCYCLING ● ● ●	Most Browns Some Gray and Green Lenses Photochromics Polarized	<ul style="list-style-type: none"> • Contrast Brown since contrast enhancement is key at high speed plus backside AR can improve safety. • Polarized is good for road vision but some instrument clusters are LCDs and polarized lenses could cause problems. • Photochromic is increasing in popularity in large frames or in wraps where a UV absorbing face shield is not used.
RACQUETBALL ● ● ○	Yellow and Orange, Clear	<ul style="list-style-type: none"> • Primarily indoors—Yellow or Orange heightens ball visibility. • Clear with AR is also a good choice.
SKIING ● ● ●	Yellow, Orange and Brown Polarized	<ul style="list-style-type: none"> • Brown, Amber or Brown-yellow lenses are excellent choices. • Yellow or Orange and Contrast Brown (high VLT) for low light conditions
SWIMMING ● ● ○	Clear, Light Blue, Light Yellow	<ul style="list-style-type: none"> • AR and flash mirrors are good to diminish the reflection of water. • For competitive swimming use clear lenses, flash mirrors, back AR.
TENNIS ● ● ○	Yellow and Orange, Clear Polarized	<ul style="list-style-type: none"> • General purpose—Yellow tinted lens will pick up the yellow ball better. • Outdoors, yellow will be too bright and allow in too much light. Use Orange or Brown.
WATER SPORTS ● ●	All Polarized Brown or Gray Polarized	<ul style="list-style-type: none"> • Polarized lenses reduce blue light and light scatter off water. • Choose Gray family colors for general water activities.



AR Lenses

Anti-Reflective Lenses are essential for every patient. They make eyewear premium and custom for wearers while improving vision and looks. If 8-12% of light is lost due to surface reflections, there is a loss of acuity and clarity due to the visual noise created by lens reflections. Add the effects of dirty lenses and a part of every patient's world is a blur. This causes eyestrain and fatigue and may also create a safety hazard by hiding important things that need to be seen.

Today's premium AR allows more than 99% of the light reaching the lens to get to the eye. This reduces eyestrain and fatigue providing clearer, more comfortable and productive vision. And, while the wearer sees more clearly, the world sees the wearer's eyes more clearly also improving communication and looks. Better acuity can improve safety, especially at night by eliminating ghost images and halos.

New AR topcoats make lenses even easier to clean by being hydrophobic and oleophobic i.e., even oils can be easily wiped off with a cleaning cloth. Surface dirt is less likely to scratch the lens during cleaning. Chemical resistance, repellency, abrasion-resistance and ease of cleaning is significantly improved. The end result is an added patient benefit as most AR coatings produced today are as easy to clean as normal lenses.

HERE ARE SOME ANSWERS TO COMMON QUESTIONS THAT PATIENTS ASK.

DO AR LENSES GET DIRTIER THAN NORMAL LENSES?

They don't. With normal lenses, reflections tend to hide the dirt whereas with AR lenses, because they are so much clearer, it is easier to see the dirt. It is like an early detection system. With AR lenses, the dirt is noticeable and causes the patient to clean their lenses more often resulting in better and safer vision.

WHAT IS THE BEST WAY TO CARE FOR AR LENSES?

Recommend a regular lens cleaning regimen, complete with easy-to-use AR specific products that fit the active lifestyles of your patients. Ask your AR provider what lens cleaning products they currently have available:

- Lens spray cleaner, specially designed for anti-reflective lenses
- Microfiber lens cleaning cloth
- Patients will typically experience the best results when using cleaners specifically designed for AR lenses.

AR DISPENSING TIPS

Every patient can benefit from more light to the eye. And every patient should be given that opportunity.

PRACTICAL BENEFITS

- Night driving
- Computer use
- Sunglass wear
- Sports activities
- Visually demanding occupations such as police officers, firefighters and pilots

FUNCTIONAL BENEFITS

- Clearer vision
- Better acuity
- Reduced eyestrain

COSMETIC BENEFITS

- People see you, not your lenses.
- Attention focuses on your eyes, not the distracting glare.
- AR on photochromic lenses look clearer indoors and eliminate the glare that can occur in the dark.

Photochromics & Polarized LENSES

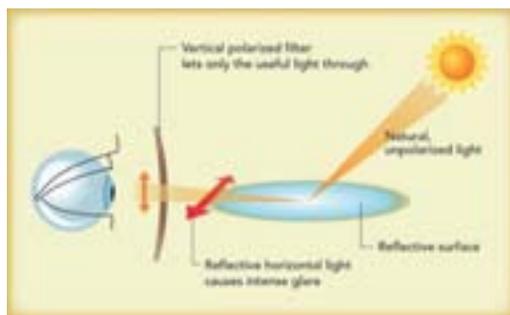
Photochromics are one of the most effective methods of ensuring patient eye health and comfort. These lenses change density depending on outdoor conditions so that, as Transitions says, they're "Right in any Light." UV makes them dark and when UV is present, the lens absorbs UV, this changes lens density and two benefits are realized. The eye is protected from UV damage and the darkening provides comfort in a variable tint lens.

Lenses get as dark as sunglasses and yet are clear indoors. The chart below shows the range of transmission for new Transitions V lenses, with and without AR. AR coated poly or high index lenses are 93% transparent while being able to quickly get 84% dark. In fact the speed of darkening easily meets patient's expectations for performance and cost. With new Transitions V lenses, all premium materials have the same fast darkening and clearing characteristics of hard resin Transitions.

AR coated photochromic lenses effectively reduce or completely eliminate distracting, discomforting and disabling glare. Premium AR does not interfere with photochromic performance.

Blinding glare results when bright light is reflected off a surface like wet pavement early in the morning. The reflected light is polarized i.e., reflected only horizontally and is increased in brightness 10-100 times. The result is blinding.

Polarized lenses absorb horizontal glare using a polarizing filter suspended within the lens. The filter is made up of iodine crystals arranged to block light but let light in all other directions through. The result is clear comfortable vision.



Selling polarized lenses is easier than you think. Simply demonstrate them. Dispensing table displays show how reflections block images on the display in the same way reflections block vision when driving. A polarized lens lorgnette allows the patient to look at the display and the reflected light obscuring the display is blocked. Only the display photo is visible. It's that easy. Once the patient has worn polarized lenses, they'll usually purchase them again.

Without polarized lenses a patient's vision in bright, direct or reflected sunshine can be impaired outdoors. Colors are distorted, there's poor depth perception and there can be extreme discomfort. Have this happen just as you drive through a crosswalk a child in the crosswalk might not be seen. Polarized sunglasses totally eliminate blinding glare for safer vision.



Patients appreciate lenses that are 100% automatic UV and glare protective. Be sure they understand photochromics are UV activated and car windshields also absorb UV, therefore photochromics do not have the same performance for driving. Of course, clear lenses don't get dark inside the car either, so recommend a dark tint or a polarized pair of sunglasses. Variable tint or photochromics are one of the best general purpose lens choices for everyday wear; add a polarized clip for driving or a second pair of polarized sunglasses.

Polarized sun lenses are the preferred sunlens and they are available in colors to meet almost all patients' needs. Polarized lenses improve visual acuity, eliminate blinding glare for better vision in all daytime conditions.

Lens Design

There is a small range of spherical curve combinations that provide good vision for a range of prescriptions. That is why minus Rx's typically have flatter front curves than plus Rx's. The front curve chosen by the laboratory or the front curve on a finished stock lens for any particular Rx is specified by the lens manufacturer. This front curve is called the Base Curve. As a result, it is better to allow the lab to choose the appropriate base curve for the Rx than requesting that the patient's base curve stay the same.

This is especially important when ordering aspherics, atorics and progressives. The asphericity used in lenses is optimized to the Rx and the base curve. Changing it can affect the patient's vision.

A progressive lens front surface changes to allow an increase in plus power for the addition. The corridor length, inset of the near and management of the lens periphery is designed by the manufacturer. Modern progressives include variable corridor lengths and inset, flattened for better looks and designed to meet the specific needs of presbyopes.

Single Vision

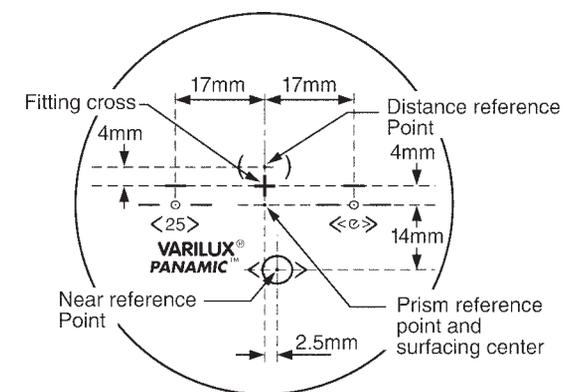
Single vision lenses have one focus or power. The Rx may be for distance or near and so the correct PD for distance or near vision should be used when ordering lenses.

Bifocals and Trifocals

Bifocal lenses have two foci or powers—(distance and near) Trifocals have three. The Rx is typically for distance and near or may be for intermediate and near. The near PD is used for the placement of the segments.

Progressive Lenses

Progressive lenses typically have all powers from distance to near. The distance monocular PD is used for the placement of the fitting cross. Distance and near power are checked using the distance and near power checking circles. The manufacturer's inked center dot notes the optical center if there is no prescribed prism or if there is, it is the point of prescribed prism.



LENS CURVES USED:

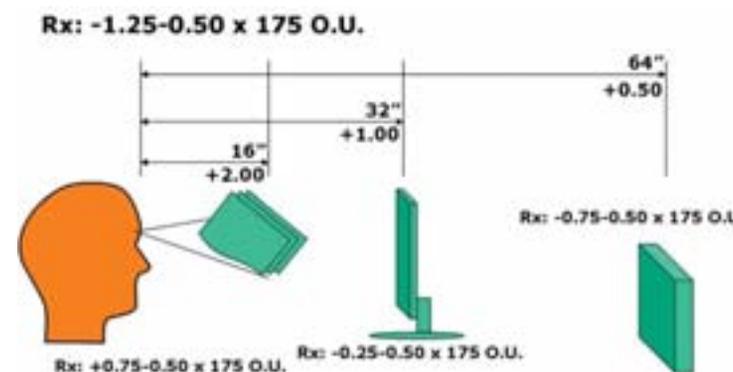
LENSES	SPHERE ONLY LENSES		LENS WITH CYLINDER	
	FRONT	BACK	FRONT	BACK
SV, FT, FTTrifocals	Spherical	Spherical	Spherical	Toric
Aspheric SV	Aspheric	Spherical	Aspheric	Toric
Atoric SV	Spherical	Aspheric	Spherical	Atoric
Progressive	Progressive	Spherical	Progressive	Toric

Progressive lenses are marked in two ways so they can be identified. The semi-visible engravings allow restoration of the fitting marks. Locate them in plus Rx lenses by looking through the lens. Hold the lens about 12 inches away while moving the lens across a dark/light border. For minus lenses, locate them by reflection. Hold the lens so an overhead light is reflected onto the front surface and tilt the lens so the reflection floods the front making the engraving visible. Mark them using a felt tip marker. A PAL ID device is worth buying. It lights up the engravings.

Near Variable Focus Lenses

To understand NVF lenses, add power is the key. The doctor determines the add power at a specific reading distance. With reading distance and add, adjust the add for midrange distances. In the example below a +2.00 add was prescribed for a 16 inch reading distance. The patient would need a +1.00 at 32 inches (1/2 the add at twice the distance using D=1/f). From that relationship, the following table can be developed for a variety of adds and working distances. See the Rx changes at various distances.

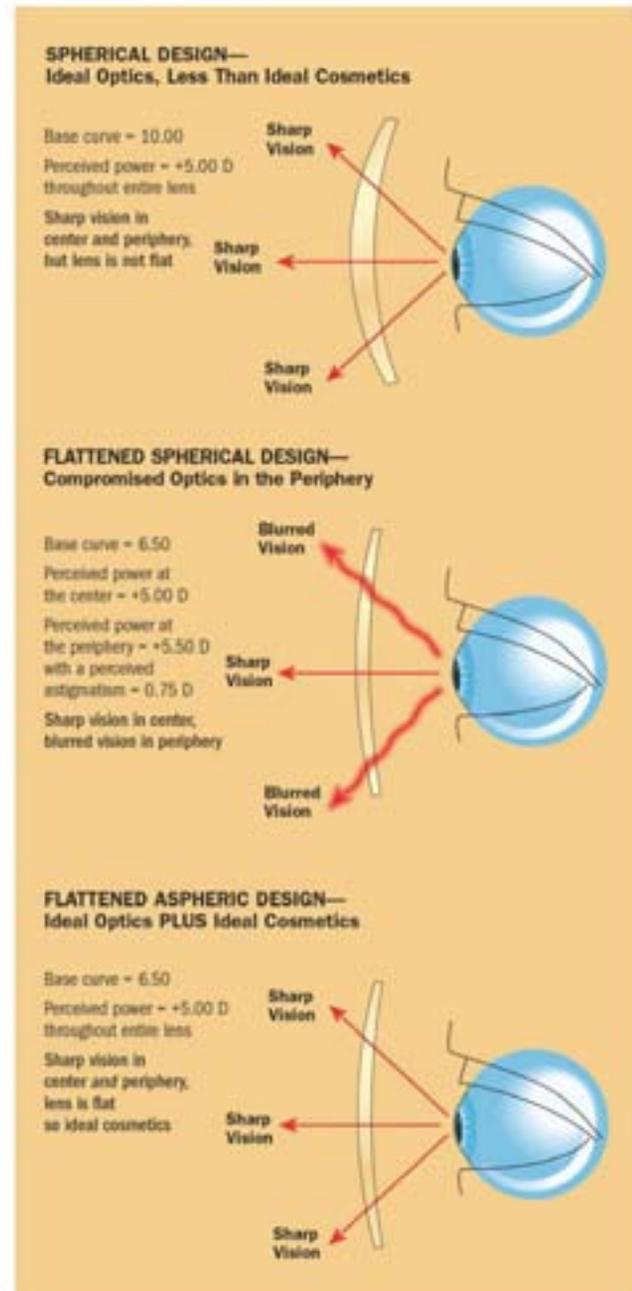
		ADD		
8"	12"	16"	32"	48"
+3.00	+2.25	+1.50	+0.75	+0.50
+4.00	+3.00	+2.00	+1.00	+0.67
+6.00	+4.50	+3.00	+1.50	+1.00



Asphericity

Spherical design plus lenses have steep front curves, and magnify the eye. For better looking lenses with flatter front curves, use aspheric lenses. The patients eyes (and the world they see) will appear more natural. Aspherics are available in plus and minus lenses. Aspheric plus lenses get flatter from center to edge, aspheric minus lenses gradually steepen toward the lens edge. Let the lab supply the correct base curve.

Optical Asphericity Principle



With aspheric technology, the power of the lens is changed as the eye rotates away from the optical axis, maintaining superb optical performance and minimizing aberrations. Plus, less lens material is required, resulting in a lighter-weight, more comfortable lens.

Presbyopes Have Special Needs

These patients visited your office this week:

- Current bifocal wearers
- New presbyopes
- Varilux Comfort wearers
- Patients preferring small frames

No patient needs a plain vanilla progressive; all presbyopes benefit from progressives designed for their specific needs. Varilux offers a series of top-performing products that are differentiated by patient need. When dispensing Varilux, the question is not; “which Varilux design is best?” but rather “which Varilux design is best for this patient?”

VARILUX LIBERTY™

FOR CURRENT BIFOCAL WEARERS

The first and only progressive lens designed for bifocal conversion. Varilux Liberty provides a Varilux exclusive, Instant Reading Power™—a balanced combination of near vision width, near vision softness and near vision binocularity.

VARILUX® PANAMIC®

FOR NEW PRESBYOPES AND NON-VARILUX WEARERS

As the world’s most technologically advanced progressive lens, Varilux Panamic is perfectly balanced for optimal performance at all distances. Varilux Panamic vision—dynamic and panoramic—is unsurpassed by any other progressive addition lens.

VARILUX COMFORT®

FOR SATISFIED VARILUX COMFORT WEARERS

Varilux Comfort is the most prescribed progressive lens in the market. Varilux Comfort, with its multi-design technology, is a time-tested solution that permits smooth visual transition from one field of focus to the next

VARILUX® ELLIPSE™

FOR PRESBYOPES WHO PREFER SMALL FRAMES

Varilux Ellipse makes it easy to deliver true Varilux lens performance in small frames. The shortest fitting height and widest distance available today enable wearers to enjoy the best in fashion, combined with uncompromising vision.

Using an arsenal of designs with clear patient needs simplifies the design choice for your staff and ensures that patients get the vision they deserve.

Recommended minimum fitting height of Varilux Liberty, Comfort and Panamic is 18mm, Ellipse is 14mm.

Putting it all Together

Final Inspection Checklist

The hard work that went into recommending and fitting is captured in the glasses produced by the lab. Be sure that everything is correct and acceptable before the patient is called to pick up their glasses. With the patients record card and the lab invoice, carefully review the following checklists:

☑ 1. COMPLETE THE VISUAL CHECKS.

- a. Lens style, material and treatment
- b. Frame name, size, color
- c. Surface and edging, grooving, drilling quality
- d. Note the Base Curve and lens manufacturer used on the record card or chart (important for later troubleshooting)

☑ 2. MEASURE AND CONFIRM THE MECHANICAL REQUIREMENTS.

- a. Seg height (top of segment or Fitting Cross to lowest edge of lens)
- b. Seg PD (near PD for RS, FT, FTT or Occupationals)
- c. Distance Monocular PD for inked progressives
- d. Center or edge thickness if specified SV, Bifocal or Trifocals

☑ 3. CONFIRM THE OPTICAL COMPONENTS.

☑ 4. RECORD ANY VARIATION FROM THE ORDER IN THE PATIENT RECORD OR CHART FOR LATER REFERENCE.

☑ 5. ALIGNMENT – IF THE VISUAL, MECHANICAL AND OPTICAL CHECKS ARE ACCEPTABLE, COMPLETE BENCH ALIGNMENT. CONFIRM THAT THE FRAME LOOKS GOOD, STRAIGHT AND SYMMETRICAL.

☑ 6. CLEAN-UP – REMOVE ANY INK MARKS, SPRAY THE LENSES WITH A LENS CLEANER AND TOWEL DRY. REMOVE ANY TAGS OR LABELS NOT NEEDED. SELECT THE RIGHT SÀFILO COLLECTION CASE AND YOU ARE READY TO CALL THE PATIENT.

SV, BIFOCAL OR TRIFOCAL

- a. Measure the strongest lens first, it’s easiest to center. The other lower powered lens is then less prism sensitive.
- b. Clamp the lens and center the target (OC) or prescribed prism in the center of the reticle, adjust the stage to be equally touching the bottom of both eyewires
- c. Verify Rx as ordered and dot the lens.
- d. Unclamp the lens and measure the other lens; do not change the stage position.
- e. Center the OC or prescribed prism horizontally, verify the Rx, dot the center and note any vertical imbalance
- f. Measure and record PD; are the OCs in the correct position vertically?
- g. If multifocal, verify add as a front vertex measurement.

PROGRESSIVE OR NEAR VARIABLE FOCUS LENSES

- a. For the right lens, verify the distance power in the Distance Checking Circle. Adjust the stage to be equally touching the bottom of both eyewires so the lens is oriented correctly.
- b. Verify the power of the left lens.
- c. Clamp the right lens with the manufacturer’s PRP ink dot centered in the opening or stop of the Lensmeter. In Varilux progressives, this is 4mm below the Fitting Cross. Adjust the stage to be equally touching the bottom of both eyewires. Note the amount prism. This is the OC or point of prescribed prism. Prism thinning is considered prescribed prism.
- d. Center the left lens PRP in the stop and record any vertical imbalance. Remember the FC may be of different heights so the imbalance is the difference between the values at the PRP.
- e. Confirm add power using the engravings. The engravings also confirm right and left lenses, material and manufacturer. To confirm add on the Lensmeter, verify add as a front vertex measurement or use a automated Lensmeter that has a back vertex compensation factor built in.

USE THIS TABLE TO CONFIRM LICENSED STATES, CE REQUIREMENTS AND SOURCES.

STATE	SPECTACLES, CONTACT LENSES, OTHER CE	YEARS TO COMPLETE	INTERNET COURSE OK?*
ALASKA	If licensed before 7/01 - 15 If licensed between 7/01 - 15	2	YES
ARIZONA	12	3	YES
ARKANSAS	9	2	YES
CALIFORNIA	12 ABO requirements	3	YES
CONNECTICUT	7	1	NO
FLORIDA	20		YES
GEORGIA	10	2	NO
KENTUCKY	6	1	NO
MASSACHUSETTS	6	2	YES
NEVADA	12/14	1	YES
NEW HAMPSHIRE	8	2	NO
NEW JERSEY	12	2	NO
NEW YORK	18/20	3	YES
NO. CAROLINA	8	1	NO
OHIO	4/8/12	1	NO
RHODE ISLAND	12	2	YES
SO. CAROLINA	4/5	1	YES
TENNESSEE	4+4	1	NO
TEXAS	Licensed, no CE required		
VERMONT	10	2	YES
VIRGINIA	Licensed, no CE required		
WASHINGTON	30	3	YES
ABO	12	3	YES
NCLE	18	3	YES
ABO+NCLE	21	3	YES

LICENSURE REQUIREMENTS BY STATE

The following table lists states that license dispensing opticians and their Continuing Education requirements, if any, required for re-licensure. CE is offered by many states and organizations that become approved providers. One organization that provides approved courses is the ABO/NCLE.

ABO and NCLE are national not-for-profit organizations for the voluntary certification of ophthalmic dispensers. ABO, the American Board of Opticianry, certifies opticians—those who dispense and work with spectacles. NCLE, the National Contact Lens Examiners, certifies those ophthalmic dispensers who fit and work with contact lenses.

Both organizations have the same purpose: to identify qualified ophthalmic dispensers for the public and for the ophthalmic community by certifying those who pass the professionally developed examinations. They also encourage growth of optical skills with continuing education and approve continuing education programs for recertification.

Other groups also certify technicians working within professional medical practices. JCAHPO, or the Joint Commission on Allied Health Personnel in Ophthalmology, is an international nonprofit corporation that certifies and provides continuing education opportunities to ophthalmic allied health professionals. They participate in ophthalmic allied health education programs at the COT and COMT levels.

* Contact your licensing board for exact details.

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Resource Guide

SOURCES OF CONTINUING EDUCATION

NATIONAL AND LOCAL TRADE AND ASSOCIATIONS MEETINGS
– see the Calendar on page 30.

TRADE PUBLICATIONS

Jobson Publishing, LLC
20/20 Magazine
www.2020mag.com
Vision Monday
www.visionmonday.com
LabTalk, Frames Data, Inc.
www.framesdata.com
Eyecare Business
www.visioncarece.com
Visioncareproductnews
www.visioncareproductnews.com

ONLINE CE SITES

2020mag.com
Visionmonday.com
Visioncarece.com
Visioncareproductnews.com
Opticaltraining.com
Opticampus.com
Quantumoptical.com
schroederoptical.com
solaeducation.com
marchon.com
onlineceec.com
seikoeyewear.com (CE Link)
clsa.info/index.shtml (CE Link)
nyso.org/ContinuingEd
ecp.acuvue.com/ce/intro.html
laramyk.com/learn/ce.html
jcahpo.org/ceopp.htm



NATIONAL ORGANIZATIONS

ABO/NCLE
www.abo-ncle.org
E-MAIL aboncle@opticians.org
(703) 719-5800

National Federation of Opticianry Schools
www.nfos.org
(703) 691-8357

Contact Lens Society of America
www.clsa.info/index.shtml
E-MAIL clsa@huskynet.com
(703) 437-5100

Opticians Association of America
www.oaa.org • **E-MAIL** oaa@oaa.org
(800) 443-8997 • (703) 437-8780

National Academy of Opticianry
www.nao.org • **E-MAIL** info@nao.org
(301) 577-4828 • (800) 229-4828

Opti Board
www.optiboard.com
Online Community for Eye Care Professionals

STATE ORGANIZATIONS

Florida
Professional Opticians of Florida
www.pof.org • (800) 972-2698

Ohio
Opticians Association of Ohio
www.oao.org
E-MAIL gpkkinginc@aol.com
(800) 661-5367

Georgia
Opticians Association of Georgia
www.oagonline.org
E-MAIL oag@oagonline.org
(770) 562-1114

Oregon
Opticians Association of Oregon
www.oregonopticians.org
E-MAIL optician@oregonoptician.org

Illinois
Opticians Association of Illinois
www.illinoisopticians.org
E-MAIL info@illinoisopticians.org
(800) 437-4476

Tennessee
Tennessee Dispensing Opticians Association
www.tdoa.org
(800) 533-6004 • (423) 681-6773

Kentucky
The Society of Dispensing Opticians of Kentucky
www.gosdok.com
(606) 273-6469

Texas
Registered Opticians Association of Texas (ROATx)
www.roatx.org
E-MAIL samjohnson@roatx.org
(512) 657-2020

Louisiana
Louisiana Association of Dispensing Opticians
www.lado.org
(888) 883-8722 • (504) 838-0312

Virginia
Opticians Association of Virginia
www.vaopticians.org
E-MAIL michelle@vaopticians.org
(804) 282-6310

Mississippi
Mississippi Association of Dispensing Opticians
www.mado.org • (228) 860-1825

Washington
Opticians Association of Washington
www.oaw.org
E-MAIL oawa@comcast.net
(253) 630-3387

New Jersey
Opticians Association of New Jersey
www.oanj.org • **E-MAIL** oanj@oanj.org
(609) 695-0030



2005 Optician Calendar

YEAR ROUND EVENTS 2005

National Academy of Opticianry
(800) 229-4828; Web: www.nao.org

JANUARY 2005

19-23

Contact Lens and Eyecare Symposium (CLES) with CLAO Annual Meeting and CLSA Annual Meeting, Sheraton San Diego Hotel and Marina, San Diego, Calif.

CONTACT Nancy Sheehan
(866) 515-CLES
E-MAIL nancy@thecli.com
<http://www.cles.info>

22-23

Broward County Optometric Association Gold Coast Educational Retreat, Fort Lauderdale Westin, Fort Lauderdale, Fla.

CONTACT Susan Bellitta, Public Relations Coordinator
(800) 803-5018
www.browardeyes.org

FEBRUARY 2005

11-13

Heart of America Contact Lens Society, 44th Annual Contact Lens and Primary Care Congress, Hyatt Regency, Crown Center, Kansas City, Mo.

CONTACT Dr. Roy Roberts
(316) 681-0991
E-MAIL regist2@hoacils.org
www.hoacils.org

19-29

OEP Foundation Northwest Congress, Pacific University, Forest Grove, Ore.

CONTACT Dr. Eric Hussey
(509) 326-2707
E-MAIL spacegoggle@att.net
www.oep.org

23-27

SECO International, Georgia World Conference Center, Atlanta

CONTACT SECO International
(770) 451-8206
E-MAIL technology@secostaff.com
<http://www.secointernational1.com/seco2005/index.cfm>

MARCH 2005

TBA

Opticians Association of Georgia Spring Meeting
(770) 562-1114
www.oagonline.com

2-6

Montana Optometric Association, Big Sky Resort, Big Sky, Mont.

CONTACT Sue Weingartner
(406) 443-1160
E-MAIL suew@mteyes.com

10-13

International Vision Expo East, Jacob K. Javits Convention Center, New York

CONTACT Association Expositions and Service
383 Main Ave., Norwalk, Conn. 06851
(203) 840-5610
E-MAIL inquiry@vision.reedexpo.com
www.visionexpoeast.com

18-19

Vision Canada West, Calgary, Alberta

CONTACT Pat Dobbyn, coordinator (204) 982-6060
E-MAIL convention@vision-canada.ca
www.vision-canada.ca

31 March-2 April

Optowest (California Optometric Association), Anaheim Convention Center, Exhibit Hall E, Anaheim, Calif.

CONTACT Jennifer Root, Senior Meetings Manager
(800) 877-5738, (916) 441-3990
E-MAIL events@coavision.org
www.optowest.com

APRIL 2005

TBA

Louisiana Association of Dispensing Opticians (LADO) 53rd Educational Conference and Trade Show
(888) 883-8722
www.lado.org

8-9

Opticians Association of Oregon Spring Convention, Chinook Winds Casino Resort, Lincoln City, OR (Oregon Coast)

CONTACT Debi Woods
(503) 645-5367
www.oregonoptician.org

APRIL 2005 (cont.)

9-10

Opticians Association of Ohio Annual Convention and Optical Exhibition, Columbus Airport Marriott, Columbus, Ohio

CONTACT Opticians Association of Ohio
(800) 661-5367
E-MAIL tking@craiggroup.com
www.oao.org

20-21

Wisconsin Optometric Association Spring Seminar, Regency Suites, Greenbay, Wis.

CONTACT Joleen Breunig, Director of Member Services
(608) 274-4322
E-MAIL joleenwoaoffice@tds.net
www.woaeyes.org

MAY 2005

12-14

Midwest Vision Congress and Expo, Donald E. Stephens Convention Center, Rosemont, Ill.

CONTACT Association Expositions and Service
383 Main Ave., Norwalk, Conn. 06851
(203) 840-5610
E-MAIL inquiry@vision.reedexpo.com
www.midwestvisioncongress.com

JUNE 2005

22-26

American Optometric Association 108th Annual Congress, Gaylord Texan Resort and Convention Center, Dallas, Texas

CONTACT American Optometric Association
(314) 991-4100
www.aoa.org

JULY 2005

22-24

Mississippi Association of Dispensing Opticians (MADO) Annual Conference, Isle of Capri Casino Resort, Biloxi, Miss.

CONTACT MADO, 16383 South Swan Rd., Gulfport, MS 39503
(228) 860-1825
www.mado.org

SEPTEMBER 2005

14-17

International Vision Expo West Sands Expo and Conference Center, Las Vegas, Nev.

CONTACT Association Expositions and Service, 383 Main Avenue, Norwalk, Conn. 06851
(203) 840-5610
E-MAIL inquiry@vision.reedexpo.com
www.visionexpowest.com

22-25

Wisconsin Optometric Association Annual Meeting and Convention, Radisson Paper Valley Hotel, Appleton, Wis.

CONTACT Joleen Breunig, Director of Member Services
(608) 274-4322
E-MAIL joleenwoaoffice@tds.net
www.woaeyes.org

TBA-End of Sept./early Oct.

Registered Opticians Association of Texas, ROATx Fall Educational Seminar

CONTACT Sam Johnson
(512) 657-2020
E-MAIL samjohnson@roatx.org
www.roatx.org

OCTOBER 2005

16

Opticians Association of Ohio Fall Seminar, Columbus Airport Marriott, Columbus, Ohio

CONTACT Opticians Association of Ohio
(800) 661-5367
E-MAIL tking@craiggroup.com
www.oao.org

20-23

Opticians Association of America National Convention, **CONTACT** Opticians Association of America

(703) 437-8780
E-MAIL aaa@aaa.org
www.aaa.org

NOVEMBER 2005

TBA

Professional Opticians of Florida Opticians Convention (800) 972-2698

www.pof.org

10-13

West Virginia Optometric Association's Annual Congress, Marriott Hotel, Charleston, W.Va.

CONTACT Roger Price
(304) 345-4710
E-MAIL rprice0851@aol.com
www.wvoa.com

11-12

Wisconsin Optometric Association Primary Care Symposium, Holiday Inn, Eau Claire, Wis.

CONTACT Joleen Breunig, Director of Member Services
(608) 274-4322
E-MAIL joleenwoaoffice@tds.net
www.woaeyes.org