

QUALITY MANUFACTURING STANDARDS

ALIGNMENT & COSMETIC STANDARDS

GENERAL FRAME ALIGNMENT: ***

Definition, Test Method or Additional Information

Pre-Adjusted Eyewear	Eyewear that has been adjusted by the optician to take the measurements during selection process. The frame should not be bench adjusted after the manufacturing process.
Temples are perpendicular to frame front.	Temple angles are symmetrical to frame front
Non pre-adjusted Eyewear (including the item inspected above)	
Temples are tight.	Test by holding front of frame with temple at 180 degrees, if temple does not move - passes. When opened or closed, temple should move smoothly without binding.
Temples close evenly.	When closed, temples should rest on top of one another. A slight downward angle is acceptable if temples cross at center of bridge.
10° -15° Pantoscopic Tilt.	Place open frame with top of temples on flat surface - examine front for correct amount of tilt.
Four point alignment.	Place open frame with top of temples on flat surface, temple tops should both be in contact with table (within 1.5mm). There should be no twist in frame front. There is no need to check the reverse with the temple tips in the down position.

COSMETIC:

Thoroughly clean lenses.	Eyewear must be free of dirt, debris, ink, watermarks and fingerprints. There should be no swarf on the lens edges.
Verify correct lens material and style.	Lens material, type and treatments must meet specifications of the RX Work Ticket.
Verify tint, roll/polish and anti-reflective color (if requested).	Lens color to visually match sample using tint comparative board. For tint and AR defects, reference Primary Visual Inspection.* Rolled edges should be smooth, consistent and free of swarf.
Inspect for visible chips/stars, scratches, or other cosmetic imperfections in the lens.	Using Primary Visual Inspection process*, check for visible defects in completed eyewear. Any visible defects observed must be compared to the cosmetic paddle to ensure that they meet cosmetic standards.
Eyewire is not rolled, burnt, or discolored.	A mounting that exposes one or both sides of the v bevel or the lens groove is non-conforming. Any irregularities in frame color or finish due to overheating is cause for rejection.
Gaps in the eyewire barrel.	<p>For lenses processed in an in-store lab - Metal eyewire barrels must close completely.</p> <p>For lenses processed in an off-site lab - Exposed barrels must close completely, hidden barrels may have a gap of no more than .5mm.</p> <p>In all cases, barrels must be parallel. There should be no indications of stress on the lens (pinch marks).</p>
No gaps between the lens and eyewire.	Gaps between the frame and lens are non-conforming. A gap is defined as light (from light source) visible between eyewire and lens. Reference the Primary Visual Inspection Method.*
Lenses tight in the frame.	A lens that can be rotated in or removed from the frame by hand is non-conforming. Reference Complete Size Method.**
Lens only size.	Lenses for all frame styles must be within \pm 0.5mm of circumference specification.
Lenses are symmetrical in the eyewire.	Orientation of eyewire openings must be symmetrical. Any deformation of the frame shape to align segments or resolve axis errors is cause for rejection.
Bifocals positioned correctly (straight and symmetrical).	Using a seg aligner, verify the height of the upper corners of D segs or progressive etchings. The variation between the highest and lowest of the 4 points must be within 1.0mm on drilled rimless, 0.5mm on all other mountings
Groove / Bevel Location.	<p>Groove is to be placed no less than .5mm from the front or back of the lens and must run the entire circumference of the lens.</p> <p>Bevel / Groove position relative to the front surface of the lens can deviate no more than 1 mm over any 10mm length of the lens circumference.</p> <p>V Bevel must have two complete sides for the entire circumference of the lens.</p> <p>Safety bevel width must be consistent and no more than .3mm wide. "Rolled" edges and edges that are chamfered to accommodate hinges/nosepad arms are excepted from this requirement.</p>

Notes:

*Primary Visual Inspection - Hold the lens/complete pair at a distance of 12 inches from approved light source, while in motion against the light/dark border, each lens is to be evaluated no more than 5 seconds.

Approved light source - A lamp with an output of at least 400 lumens against a dark background. (40w incandescent, 15w fluorescent tube & 9w CFL are all acceptable). All inspection is to be carried out without the aid of magnifying optics.

**Complete Size Method - Lens held between thumb and fingers with towel / tissue. With slight pressure exerted to lens try to twist or remove lens from mounting.

***General Frame Alignment - Frame alignment parameters are intended to be approximate. They do not need to be exact. These parameters are designed to provide the dispensing optician with good starting point for final adjustments.