Sourcing Clear UV420 Blue Block Optical Lenses: How Manufacturers Reduce the 'Yellow Tint' Issue | CONVOX

ZHENJIANG, CHINA, September 21, 2026 /EINPresswire.com/ -- For optical distributors, prescription laboratories, and private-label brands, the visual appearance of a blue-block lens matters almost as much as its filtering specification. A lens that looks noticeably yellow can change perceived color, reduce cosmetic appeal, and make a premium product harder to position. The sourcing challenge is therefore not simply to “block more blue light,” but to balance targeted blue-violet filtering with high visible-light transmission and a more neutral lens appearance.

UV420 blue block products are designed to manage selected blue-violet wavelengths around the 400–420nm region. In practice, the final appearance depends on the lens material, absorber formulation, coating structure, refractive index, and production consistency. A reliable supplier should be able to explain how these variables are controlled rather than relying only on broad marketing claims.





1. Why Some Blue-Block Lenses Look Yellow

Many blue-cut lenses use absorptive

compounds in the substrate to reduce selected wavelengths. If absorber concentration is not well balanced with the base resin color, the lens may develop a warm or yellow cast. The effect can become more noticeable in certain high-index materials because each polymer has its own inherent color and optical dispersion characteristics.

For a clearer appearance, manufacturers typically need to control three elements together: the formulation of the lens material, the target filtering range, and the residual reflection created by the anti-reflective coating. The objective is not a completely colorless lens under every condition, but a more neutral appearance with stable optical performance across production batches.

2. Material Formulation and Spectral Control

CONVOX manufactures blue-block protective lenses across multiple resin indices. Its current catalogue lists blue-block configurations in 1.56, 1.59 polycarbonate, 1.60, 1.67, 1.71, and 1.74, with UV specifications varying by index and product configuration. Several mid- and high-index options are offered with 400/420-class specifications, giving distributors flexibility to build different price and performance tiers.

In substrate-based blue block designs, absorbing components are integrated into the resin before polymerization. This can provide durable filtering throughout the lens body. The formulation must then be adjusted for each index so that filtering performance, visible-light transmission, lens color, and mechanical properties remain balanced.

Coating-based spectral management can be used in combination with the substrate. Multi-layer anti-reflective structures can help manage specific reflected wavelengths while improving visible-light transmission. For buyers, the practical question is therefore whether the supplier can maintain consistent color and transmission across different indices, coatings, and repeat orders.

3. B2B Sourcing Checklist for Clear Blue-Block Lenses

When comparing wholesale suppliers, ask for measurable quality-control information instead of relying only on claims such as “ultra clear” or “maximum protection.” A practical evaluation framework is shown below.

4. Why Manufacturing Infrastructure Matters at Scale

For bulk supply, color consistency cannot depend on manual adjustment alone. The coating environment, equipment stability, material preparation, and inspection process all influence repeatability. According to the 2026 CONVOX catalogue, the factory operates 16 Korean NVC vacuum coating machines together with two automatic production lines, with broader resin-lens capacity of up to 50,000 pairs per day across multiple product categories.

The same catalogue describes product testing that includes anti-abrasion evaluation, edging checks, salt-water testing, and a five-procedure inspection process before shipment. These controls are more useful to a buyer than a generic “premium quality” claim because they show which production risks the factory is trying to manage.

5. Coating and Functional Options

A blue-block product is rarely purchased as a substrate alone. Distributors often combine the base lens with anti-reflective coatings, hydrophobic top coats, anti-fog functions, photochromic options, or RX processing. CONVOX lists a range of finishing choices across its single-vision and blue-block protective lens series, including UC, hard coating, HMC and SHMC configurations, with

additional functional options depending on product type.
For private-label programs, the important point is to confirm the exact combination by index. A function that is available in 1.56 may not use exactly the same material or coating construction in 1.67 or 1.74. The final specification should therefore be approved by sample before bulk production.
6. RX and Freeform Compatibility
Blue-block technology can also be incorporated into prescription and freeform programs. The CONVOX catalogue shows an RX department equipped for customized prescription production, and the company promotes fast RX processing for suitable orders. For customized blue-block lenses, digital surfacing is used to optimize the back-surface prescription and thickness profile while the selected substrate and coating configuration provide the required functional performance.
For optical labs and chains, it is useful to confirm whether the same blue-block specification can be supplied in single vision, progressive, photochromic, and freeform formats. This reduces the number of suppliers required for a complete product portfolio and helps maintain more consistent branding across different prescription categories.
7. What a Wholesale Buyer Should Request Before Ordering
• A sample set showing the visual difference between standard blue-cut and clearer blue-block options.
• Spectral or transmission data for the exact index and coating combination being purchased.
• Confirmation of available indices, stock power ranges, RX availability, and lead time.
• Coating and surface-treatment specifications, including the selected AR and hydrophobic options.
• OEM packaging proof, barcode requirements, and sample approval before mass production.
• A clear remake or quality-claim process for repeat wholesale orders.
8. FAQ: Sourcing UV420 Blue Block Lenses
Q1: Does a clearer lens mean weaker blue-violet filtering?
Not necessarily. Lens appearance and spectral performance are related but not identical. The result depends on the substrate formulation, target filtering range, coating design, and visible-light transmission. Buyers should compare actual samples and test data for the selected specification.
Q2: Is CONVOX blue-block technology built into the lens material or applied by coating?
Both approaches can be used depending on the product. CONVOX offers substrate-based blue-block configurations and can combine them with vacuum-deposited anti-reflective coatings for additional spectral and surface-performance requirements.
Q3: Which refractive indices are available?
The 2026 CONVOX catalogue lists blue-block protective lens options across 1.56, 1.59, 1.60, 1.67, 1.71 and 1.74, with specific UV and coating configurations varying by product.
Q4: Can blue block be combined with photochromic or progressive lenses?
Yes, selected combinations are available. The final index, prescription range, coating and functional configuration should be confirmed before ordering.
Q5: Can CONVOX support private-label wholesale programs?
Yes. OEM support can include customized envelopes, branding, barcode layouts and product

specifications, subject to project requirements and order quantity.
Request a Wholesale Quote or Sample Test
If you are evaluating clearer UV420 blue block lenses for stock, RX, progressive, photochromic, or private-label programs, contact CONVOX to request current product specifications, sample lenses, coating options, and B2B pricing.
Corporate Website: https://www.convox-optical.com/
Contact Email: sales@convox.cn

JIANGSU CONVOX OPTICAL CO.,LTD.
JIANGSU CONVOX OPTICAL CO.,LTD.
email us here

This press release can be viewed online at: https://www.einpresswire.com/article/943858304

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.
© 1995-2026 Newsmatics Inc. All Right Reserved.