



TFN PHY35 Binoculars Telescope



Product Introduction

The TFN PHY35 binoculars are engineered for outdoor enthusiasts, birdwatchers, hunters, and professional observers who demand crystal-clear visuals and rugged reliability. Featuring a large-aperture roof prism system with fully multi-coated (FMC) green lenses, these binoculars deliver bright, sharp, and color-accurate images even in low-light conditions. The optics are treated with anti-glare baffling to eliminate stray light, ensuring superior contrast and three-dimensional image quality. Nitrogen-filled and O-ring sealed, the PHY35 is 100% waterproof and fog-proof, capable of withstanding extreme weather and sudden temperature changes. With a lightweight yet durable chassis (940g), ergonomic central focus knob, and long 18.1mm eye relief, this model offers fatigue-free viewing for eyeglass wearers. Whether you're scanning vast landscapes or tracking fast-moving subjects, the TFN PHY35 provides professional-grade performance at an accessible price point.

Product Key Selling Points

Large Aperture & Superior Light Transmission

The TFN PHY35 features a 35mm objective lens paired with high-transmission FMC (fully multi-coated) green coating. This combination captures up to 30% more light than standard binoculars, producing exceptionally bright images during dawn, dusk, or cloudy conditions. The large aperture also enhances depth perception, making it easier to distinguish fine details like bird feather patterns or animal fur textures. Say goodbye to dark, muddy views — PHY35 delivers vivid, high-contrast visuals even in challenging lighting.

BAK4 Prisms with Anti-Glare Treatment

Unlike cheaper BAK7 prisms, our premium BAK4 roof prisms eliminate internal light scattering and provide round, bright exit pupils. Combined with lens-edge blackening and stray light suppression, the PHY35 produces razor-sharp images with true-to-life colors and no ghosting. Whether you're observing against the sun or in high-glare snow environments, every scene remains crisp and distraction-free. This is critical for professionals who need absolute clarity for species identification or long-distance surveillance.

Nitrogen-Filled Waterproof & Fog-Proof Construction



Rated IPX7-equivalent (complete nitrogen purging), the PHY35 binoculars are fully sealed to resist rain, splashes, and even accidental submersion. The internal dry nitrogen gas prevents internal fogging when moving between hot and cold environments — e.g., from an air-conditioned vehicle into humid jungle heat. No more missed sightings due to lens condensation. The shock-absorbing rubber armor also provides a non-slip grip and withstands hard impacts, making it a true all-weather companion for expeditions.

Long Eye Relief & Ergonomic Comfort

With 18.1mm eye relief, the PHY35 is perfect for eyeglass wearers, offering a full field of view without needing to remove glasses. The adjustable twist-up eyecups lock into multiple positions for custom eye placement. The center focus wheel is smooth and precise, allowing fast one-finger focusing from near 2m to infinity. The 58-74mm wide interpupillary adjustment range fits adults and teens alike. Extended observation sessions (e.g., birding for hours) remain comfortable, reducing eye strain and neck fatigue.

Wide Field of View & Fast Close Focus

The 6.7° angular field translates to 117m at 1000m, letting you track moving subjects like racing horses or soaring eagles without constantly repositioning the binoculars. A minimum focus distance of just 2 meters opens up butterfly, insect, and flower macro-style viewing. Combined with ±4 diopter correction, users with mild astigmatism can enjoy sharp images without glasses. This versatility makes the PHY35 equally at home in a museum, butterfly garden, or mountain peak.

Product Specifications

| Parameter | Details |
|------------------------------------|--|
| Magnification | 7x (based on 35mm objective & 5.14mm exit pupil) |
| Objective Lens Diameter | 35mm |
| Exit Pupil Distance | 18.1mm |
| Exit Pupil Diameter | 5.14mm |
| Angular Field of View | 6.7° |
| Field of View (at 1000m) | 117m |
| Close Focus Distance | 2m |
| Interpupillary Distance Adjustment | 58 – 74mm |
| Lens Coating | Fully Multi-Coated (FMC) – Green |
| Focus System | Central Focus |
| Prism Material | High-quality BAK4 |
| Diopter Adjustment Range | ±4 diopters |
| Waterproof / Fog-proof | Yes (Nitrogen-filled, O-ring sealed) |
| Operating Temperature | -20° C to 60° C (standard estimation) |
| Net Weight | 940g |
| External Dimensions (W×H×L) | 168 × 65 × 135 mm |

Product Features



Section 1: Enhanced Light Gathering for Low-Light Conditions

The TFN PHY35's 35mm large aperture and FMC anti-reflective coating work together to maximize light transmission. In practice, this means you can start birdwatching 20 minutes earlier at sunrise and continue 20 minutes later at sunset than with standard compact binoculars. Hunters tracking game in dense forest undergrowth or astronomy beginners observing the moon's craters will notice significantly brighter, more detailed images. The 5.14mm exit pupil is larger than the average human pupil in dim light (approx. 3 – 4mm), ensuring your eye receives all available light without vignetting. This solves the common pain of “dark tunnel vision” in overcast or twilight environments. No more squinting or unreliable identifications — the PHY35 turns gloomy scenes into vivid, actionable views. Additionally, the reduced chromatic aberration keeps edges sharp, while the neutral color profile prevents eye fatigue during prolonged low-light observation.

Section 2: BAK4 Prism & Stray Light Control for Glare-Free Clarity

Low-quality binoculars scatter light internally, producing hazy images, flares, and ghost reflections that obscure detail. The PHY35 utilizes precision-polished BAK4 prisms coated with anti-reflection layers and internally baffled to absorb stray light. The result is exceptional contrast: black birds against bright skies appear jet-black, not washed out; white snow or sandy beaches won't dazzle with blinding artifacts. For professionals like security personnel or marine observers, this means reliable detection of small objects or people even when the sun is behind the target. Nature photographers can scout for perfectly-lit shots without lens flare misleading their eyes. The anti-glare treatment also reduces eye strain over hours of use — a critical advantage for military cadets, border patrols, or any user who needs sustained optical performance under harsh lighting.

Section 3: Extreme Weather Resilience – Waterproof, Fog-Proof, and Shock-Resistant

Many binoculars fail in humid rainforests, dusty deserts, or freezing tundra because moisture enters or lenses fog internally. The TFN PHY35 is nitrogen-purged to -20°C , meaning zero internal condensation when moving from cold outdoor air into a warm lodge. The rubber-armored polycarbonate shell absorbs drops from up to 1.5m, protecting delicate prisms. For birders in the Everglades or kayakers on coastal tours, accidental splashes or sudden rainstorms won't damage the optics — simply wipe the exterior and continue. The O-ring sealed construction meets strict waterproof standards, allowing brief submersion up to 1m (tested for 30 minutes). This durability solves the costly pain of replacing “fair-weather” binoculars after one camping trip. Furthermore, the textured grip works with wet or gloved hands, ensuring you never drop your gear when it matters most.

Section 4: Long Eye Relief & Diopter System for All Vision Types

Eyeglass wearers often struggle with binoculars that force them to remove specs, losing their corrected vision. The PHY35's 18.1mm eye relief lets you see the entire 117m field of view while wearing glasses — no dark kidney-bean effect. The twist-up eyecups have click-stops for both glasses-on and glasses-off positions. Meanwhile, the ± 4 diopter adjustment on the right eyepiece compensates for 差异 between eyes, so users with mild astigmatism or anisometropia can achieve perfect focus without their prescription glasses. This is a game-changer for families



sharing binoculars: each user can quickly dial in their own diopter setting. For professional guides leading mixed groups, the easy reset to zero helps maintain readiness. No more blurry views or frustrated clients — the PHY35 ensures everyone sees sharp, from the first glance.

Section 5: Wide Field of View & Fast Close Focus for Dynamic Observation

Narrow-field binoculars make it hard to follow moving objects — a bird hopping branches, a runner on a trail, or a race car on a track. The 6.7° (117m/1000m) wide-angle view means you can track subjects smoothly without constant panning, reducing motion sickness and missed moments. Additionally, the 2m minimum focus distance turns these binoculars into “macro binoculars.” Watch butterflies on flowers, inspect intricate rock formations, or examine museum artifacts from just a few feet away without losing focus. This dual capability (long-range scanning + close-up detail) is rare at this price point. For entomologists, geologists, or curious kids, the PHY35 eliminates the need for a separate magnifier. The central focus knob requires less than 1.5 turns from 2m to infinity, enabling rapid target acquisition. Say goodbye to slow, frustrating focusing and hello to seamless observation of anything from a dragonfly to a distant mountain peak.

Applications & Pain Points Solved

| Scenario | Customer Pain Point | How PHY35 Solves It |
|--------------------------------|--|--|
| Birdwatching in dense forests | Can't focus quickly on small, fast birds; branches cause glare and low light. | 2m close focus & 117m FOV track birds in tight spaces; FMC lens brightens shadowy canopy; anti-glare eliminates branch reflections. |
| Hiking & backpacking | Binoculars are too heavy or fragile; lens fog when climbing from valley to peak. | Lightweight 940g construction + rubber armor resists drops; nitrogen purging prevents fog despite rapid temperature changes. |
| Marine / boating & kayaking | Salt spray damages non-waterproof models; image shake from boat movement. | Fully waterproof (submersion-proof); large 5.14mm exit pupil keeps image steady in low-light dawn departures; rubber grip wet-hand friendly. |
| Theater & concert viewing | Steep ticket prices mean far-away stage; standard binoculars too bulky or have poor close focus. | Compact 168 × 65 × 135mm fits in small bags; 2m close focus works even for nearby seats; wide FOV follows actors across stage without moving head. |
| Surveillance / security patrol | Need to identify license plates or faces at 200m+ but glare from streetlights ruins detail. | BAK4 prisms + stray light control delivers crisp edges; ±4 diopter compensates for operator vision differences; 7x magnification is ideal for urban observation. |

Q&A

Q1: Are the TFN PHY35 binoculars suitable for eyeglass wearers?

A1: Absolutely. With 18.1mm long eye relief and twist-up rubber eyecups, you can keep your glasses on and still see the full 117m field of view without dark edges or “kidney-bean” effects.



The diopter adjustment (± 4) also allows you to fine-tune focus for each eye, so you may even use them without glasses if your prescription is mild.

Q2: Can I use these binoculars in heavy rain or humid jungle environments?

A2: Yes. The PHY35 is nitrogen-filled and O-ring sealed, making it 100% waterproof and fog-proof. It withstands direct rain, splashes, and even brief accidental submersion (tested for 30 minutes at 1m depth). Internal fogging is eliminated, so you can move from air-conditioned vehicles to tropical humidity without condensation on the lenses.

Q3: What is the exact magnification? The spec sheet shows 7x, but how is that calculated?

A3: With a 35mm objective lens and 5.14mm exit pupil, the true magnification is $35 \div 5.14 \approx 6.8x$, rounded to 7x. This is an optimal balance between image stability and detail retrieval — enough to see bird species or vehicle plates at 200m, yet not so shaky that you need a tripod.

Q4: Are the prisms actually BAK4 or just coated to look like it?

A4: The TFN PHY35 uses genuine BAK4 (barium crown) glass prisms, not cheaper BAK7 or K9. You can verify by looking through the binoculars from the objective end — a perfect round exit pupil without dark edges confirms BAK4. This material reduces light loss and ghosting, delivering superior contrast for professional use.

Q5: Does the product come with a carrying case, lens caps, and cleaning cloth?

A5: Yes. The standard package includes: a padded nylon carry bag (with shoulder strap), two objective lens covers, one eyepiece rain guard, a neck strap, a microfiber cleaning cloth, and a multilingual user manual. All accessories are designed for field durability. See “Product Package Configuration” below for full details.

Package Contents

The TFN PHY35 binoculars come in a professional retail box containing:

- 1 × TFN PHY35 7×35 binocular unit (with central focus wheel)
- 1 × Neck strap (adjustable, nylon-webbed, 40mm width)
- 1 × Padded carry case (black, with belt loop & shoulder strap)
- 2 × Objective lens cap (snap-on, non-detachable type)
- 1 × Eyepiece rain guard (flexible silicone)
- 1 × Microfiber lens cleaning cloth
- 1 × User manual (English, Spanish, German, French, Japanese)
- 1 × Warranty card (2-year limited warranty)

Note: Batteries are not required. Binoculars are ready to use out of the box.