

LEICA CAMERA  
MADE



# Going beyond limits.

Greater view, greater insight, greater experience.

NOCTIVID 10x42

“With a camera, this image is captured by a sensor; with binoculars, the image is stored in your memory – forever.”

Sigrun Kamman

## Behind the scenes. How a pair of binoculars is made.

I was quite overawed when I began my first day of work in 1987. I feel that the lesson I was told back then still plays a crucial role: “Innovations are the consequence of constant dialogue and intense exchange with the users of our products.”

Understanding our customers’ needs is the first step – but for the second, physics comes into play. But how do we go about developing a new line of binoculars? What kind of opportunities do we have to expand the natural boundaries of perception? And how can we make the new Noctivid line even better?

Scientific research, new materials and manufacturing methods also offer new opportunities for the improvement of the mechanical and optical components of binoculars. When I started out at Leica, it was virtually impossible to develop binocular systems with more than 80% transmission. Nowadays, we have optical glasses with particularly high transmission properties. In the Noctivid binoculars, we use such glasses for the lenses, but above all for the prisms, where the ray paths through glass are longest. In addition to this, we have also made further improvements to the special coatings that are applied to all lenses and prisms to minimise reflections.

All these improvements contribute to almost lossless transmission of the entire visible spectrum and colors of the light entering the binoculars through their optical systems and to the eye. This results in a very bright and

color-neutral viewing image. People often ask me whether this is suitable for observation during the day or night. The answer is: for both, eminently.

We naturally also analyze them according to the requirements of international standards and norms, e.g. with transmission measurement equipment. In the particular case of our Noctivid binoculars, in terms of color fidelity and rendition, we even come extraordinarily close to the so-called achromatic locus, in other words, the point of absolute color neutrality. Everything is well engineered, impeccable.

For the Noctivid line my colleague Michael Hartmann actually managed to further improve the already exceptional resolving powers our HD-Plus binoculars are known for. The bright and clear viewing image is now richer in contrast and even sharper. Here at Leica Camera AG, synergy between our work and that of the photographic lens designers brings significant benefits for both sides. The expectations to be fulfilled by a camera lens are very similar. Customers for both product lines expect best contrast, finest resolution of details and the ability to see their subjects in what comes as close as possible to 3D – in both cases, a perfect image. The only difference: In the case of a camera, this image is captured by a sensor and stored while, in the case of a pair of binoculars, it is captured by the eyes and stored in your memories – eternally.

Sometimes, when we’re working on complex calculations to obtain the perfect blend of brilliant optics and highly precise – yet rugged – mechanics, I gaze out the window into the old fruit trees in front of our office and think of the little owl (*Athene noctua*) brooding there. Why shouldn’t it be possible? Doesn’t nature show us how, by creating the perfect eyes? Eyes which, even at night, have incredible 3-D vision, and can make out minutest details even at great distances? Eyes that evolve, developing further with each passing generation? Thinking along these lines, I’m reminded a bit of Leonardo da Vinci, who attempted to recreate the flight of birds mechanically, in flying machines. And that inspires me to keep finding solutions, so that seeing through binoculars becomes as natural as seeing with a second pair of eyes.



Read more about Sigrun Kamman’s experiences at [blog.leica-birding.com](https://blog.leica-birding.com)



# Noctivid binoculars.

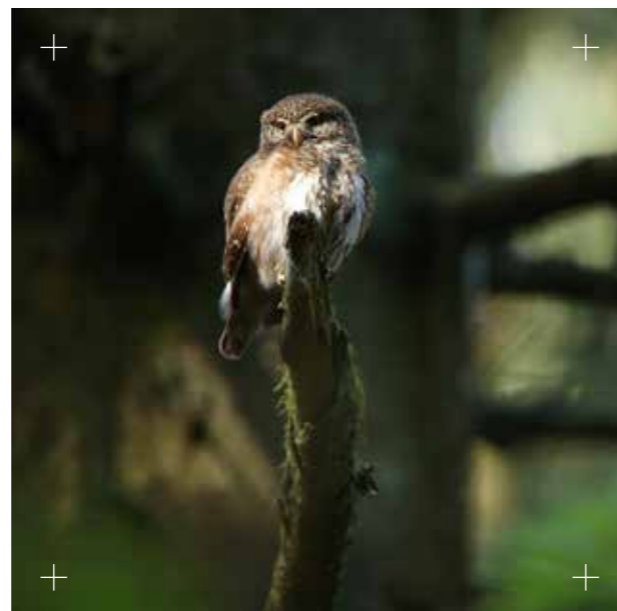


High-contrast,  
brilliant and razor-sharp:  
the perfect balance.

## A century of knowledge has come to life.

Today, more than a century of experience and expertise in the development of optical devices for long-distance observation, microscopes and cameras has been brought together in a new generation of Leica binoculars – the Noctivid family. Not only compact in size, stylish and elegant, but also unbelievably robust and resilient. These binoculars set new standards on all accounts, including design. Thanks to the open bridge, you can grasp the slender tubes with just one hand. A short overall length means that main weight of the glass rests in the center of your palm, enabling fatigue-free viewing. The non-slip rubber armoring offers a pleasant feel and an excellent grip. And a patented, high-strength coating additionally protects the metal surfaces of the rugged magnesium housing.

The true milestones are however set by the mechanical construction and optical systems of this new family of Leica binoculars. In the case of its optical qualities, the Noctivid unites the best of all the most innovative and proven technologies at our disposal. The Schott HT™ (High Transmission) glasses ensure the amazingly natural color rendition and exceptional transmission values of the Noctivid line. Extremely complex and innovative baffle systems for the suppression of stray light guarantee maximum contrast and an absolute minimum of stray light.



### The benefits at a glance

- extraordinarily plastic viewing experience thanks to perfectly harmonised combination of light transmission, stray light suppression and levels of contrast
- perfect color-neutrality and brilliance
- large oculars and long eye-relief distance of 19mm for overwhelmingly fast impressions and comfortable viewing
- extremely compact size and ideal weight distribution guarantee fatigue-free observation for longer periods: the centre of gravity of the binoculars lies in the middle, as a direct extension of the wrist



New, high-temperature plasma deposition processes for highest-quality coatings ensure perfectly balanced transmission characteristics at an outstanding level throughout the entire waveband of visible light. These leads to even better color-neutrality in the viewing image in daylight hours and in the unfavourable conditions of the late twilight hours and under overcast skies. The modification of the radii of the lens surfaces made it possible to achieve

additional, significant improvements to the sharpness at the edges of the viewing image without negative effects on resolving power. A further result of all these improvements is a much more plastic viewing experience. Thanks to the perfect and consistent harmonization of an entire spectrum of modern technologies, Noctivid binoculars deliver an impressively natural viewing experience that is as plastic as seen with the human eye – only better.



### LEICA NOCTIVID 8 x 42

- high light-gathering power, bright viewing image late into the twilight hours, thanks to a large exit pupil and best contrast performance
- steadiest viewing image, thanks to large fields of view and perfect ergonomics
- natural viewing impression, thanks to ideal color-neutrality
- broad field of view for barrier-free overviews at short distances and maximized viewing performance at long distances



### LEICA NOCTIVID 10 x 42

- 10x magnification for optimum resolution of details
- outstanding stray light suppression and high contrast enable viewing of finest structures under even the most unfavourable conditions
- relaxed, fatigue-free observation, thanks to compact size and ideal weight distribution

# Trinovid HD 42.



With the new Trinovid HD, you're right up close – everywhere and anytime.

## Trinovid binoculars. Ready for anything, anywhere.

The new Trinovid HD 42 binoculars are designed for the widest array of uses and expertly combine impressive optical performance, outstanding mechanical features and easy, intuitive operation. Thanks to the time-tested Leica optics, the Trinovid HD offers excellent contrasts, optimum color reproduction and very good light transmission. The rubber armoring provides maximum grip in any weather and makes the glass incomparably robust.

A well-designed Neoprene carrying harness completes the range of features, ensuring a high level of wear comfort, fast access and secure stowing. All full-size Trinovid binoculars are supplied with this handy Adventure-Strap, which can be used as a comfortable and convenient carrying strap as well as a carrying case, hip belt and binocular belt. What's more, the Adventure-Strap also offers optimum protection against rain and dirt. For even more breathtaking visual impressions – anytime, anywhere.



### The benefits at a glance

- top-quality Leica optics for high-contrast, razor-sharp images and optimum color fidelity
- innovative carrying harness for quick and convenient use
- compact design – ideally balanced and light in weight
- large fields of view offer excellent panoramas, even for distant, unpredictable terrain



Includes the innovative Adventure-Strap carrying system.



### LEICA TRINOVID 8x42 HD

- pleasantly steady viewing, even on long and strenuous trips thanks to large exit pupil
- bright visual impressions well into the twilight hours
- generous fields of view for outstanding panoramas, even at extreme distances



### LEICA TRINOVID 10x42 HD

- richly detailed impressions at all distances
- outstanding close-up limit: under 6.2 ft/1.9 m
- ideal contrast and transmission for subtle color nuances and finest details



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