

N-Mirotar
no. 10 46 11

CONTAX
YASHICA mount



The **N-Mirotar** lens (N = night) is a special lens which, through advanced technology in image intensification, makes night photography possible without the aid of artificial lighting or a tripod.

The instrument comprises a high speed mirror lens, a 3-stage image intensifier tube, along with an appropriate power supply and a wide aperture macro lens.

The mirror lens picks up residual light and throws an image of the night scene onto the photocathode of the image intensifier tube. According to their luminance, the details of the scene are intensified in this tube in 3 steps by a factor of 80,000 and then projected onto a screen. The macro lens links the image intensifier to the camera and transfers the image from the screen onto the film.

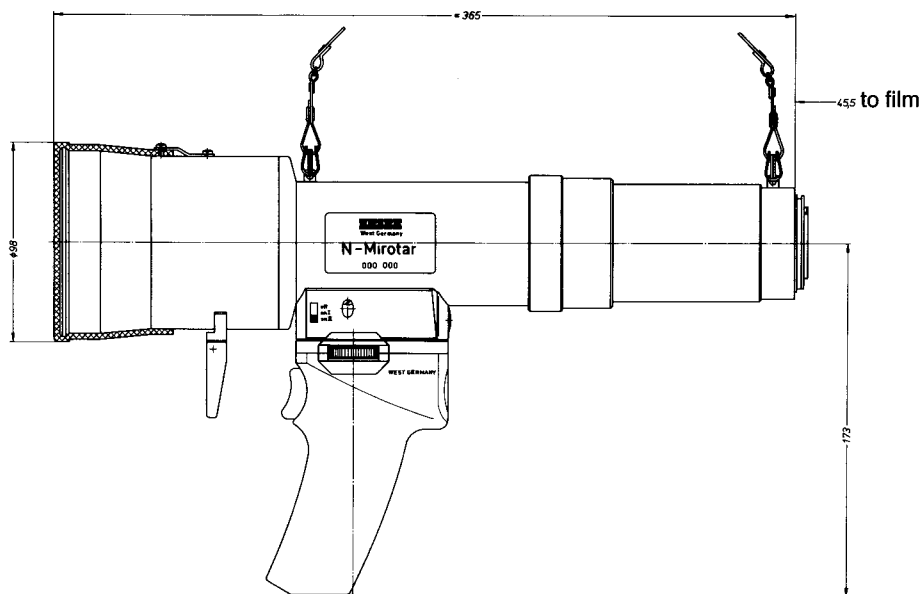
Compared with an f/1.4 lens, the **N-Mirotar** lens amplifies the intensity of illumination on the film plane by a factor of 2,500.

This is about the factor by which the use of the **N-Mirotar** permits exposure times to be decreased, resulting in a gain of about 11 exposure steps.

All commercial black and white films of 20 DIN (85 ASA) and over may be used for night photography with the **N-Mirotar** lens. It is not advisable to use colour films as the image intensifier tube does not project colours.

The **Contax** automatic exposure system also functions perfectly in combination with the **N-Mirotar** lens.

Using a 27 DIN (400 ASA) film, the exposure time is about 1/500 s on a clear, moonlit night (illuminance 10^{-1} lux). Using the same type of film on a night with only a quarter moon (10^{-2} lux) or light from the stars (10^{-3} lux), the exposure times are 1/60 s and 1/4 s respectively.



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Equivalent focal length
Field diameter
Angular field
Focusing range
Image intensifier
Intensification factor compared
to an f/1.4 lens
Power supply
Battery lifetime

210 mm
30 mm
8°
∞ to approx. 20 m
3-stage
2,500
(to 11 exposure steps)
21.5 V baby cells
30-40 hours

Carl Zeiss
Oberkochen
Germany