Konica

TECHNICAL DATA SHEET

KONICA Infrared 750 Black & White Film

FEATURES AND APPLICATIONS

Konica Infrared 750 Black & White film is applicable to normal infrared photography and to scientific and specialized applications using infrared radiation. With its fine grain the film's photographic sensitivity without filtration enables usage in normal pictorial photography with faithful reproduction of grays. In infrared photography it is effective in creating spectacular scenes and special effects: portraying greens and clouds as pure white and blue sky and water as coal black. Warm skin tones and lips will appear white.
Usage for scientific applications include: Document identification; medical imaging; biological photography; archeological surveying; mapping; and aerial photography.

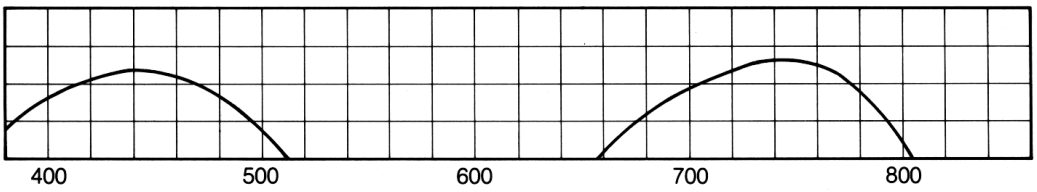
LAYER COMPOSITION

A single thin infrared-sensitive emulsion layer is coated on a colored anti-halation triacetate base. The emulsion is fine grain with excellent resolving power.

FILM BASE Triacetate base

FILM SIZE 135 size: 24 exposure
120 size: 12 exposure (6cm x 6cm)

SPECTRAL SENSITIVITY Daylight (without filter) Wavelength (nm)



Konica Infrared 750 film has a wavelength sensitivity range of 640nm~820nm in addition to the intrinsic sensitivity of the silver bromide of 400nm~500nm. The peak spectra sensitivity occurs at 750nm.

FILTRATION

Without filtration, images obtained are similar to those taken with panchromatic films. In order to emphasize the infrared sensitivity it is necessary to use either red (Kenko R-1) or orange (Kenko YAS) filters over the lens to sharply cut the wavelengths below 520nm or C4Onm. Other red (i.e. Wratten 25, Wratten 29) and orange (i.e. Wratten 15) filters will offer similar results.

INFRARED FOCUSING

Due to the smaller refractive index of infrared radiation, infrared rays will not focus on the same plane as visible rays. If the lens is equipped with an infrared correction mark (P-mark), focus the subject like normal and then shift the lens distance scale to the infrared-correction mark (P-mark).

Note: Some apochromatic lenses may not require the use of the P-mark.

EXPOSURE CONDITIONS

The standard exposure conditions for Konica Infrared 750 film are as follows:

With a Kenko R-1 filter, the standard exposure condition is f5.6 @1/60 second
(normal sunny outdoor conditions)
With no filter the sensitivity of the film is equivalent to ISO 32.
Light meters and the human naked eye are not sensitive to infrared radiation.

Scenes that contain equivalent amounts of white light may not emit equivalent amounts of infrared. The suggested exposure above will yield a usable image, however in order to optimize the exposure, trial exposures should be made. Keep in mind that the shadow areas in a scene will have very low amounts of infrared rays. even in the daytime, therefore in order to avoid under-exposure the lens aperture can be opened by one stop.

DARKROOM ILLUMINATION

Konica Infrared 750 film should be hardled in complete darkness.

PROCESSING CONDITIONS

Developer

The same developers that are used for processing panchromatic films can be used with Konica Infrared 750 film, Final contrast of the film can be adjusted by changing the standard development times. A small tank can be used to process the film. The following table illustrates the standard development times for different developers. When processing, it is important to agitate continuously for the first minute and then for 5 seconds at one minute intervals until the development step is completed.

Developer	Standard Developing Time	
	20 °C	25 °C
Konicadol DP	6 minutes	4 minutes
Konicadol Fine	7 minutes	5 minutes
Konicadol Super	6 minutes	4.5 minutes

(1) Equivalent to Kodak D-76
(2) Equivalent to Kodak DK-20
(3) Equivalent to Ilford ID-68

Stopbath

Stop development using a 1.5% acetic acid solution. Immerse in the stopbath for 30 seconds with the temperature nearly the same as that of the developer

Fix

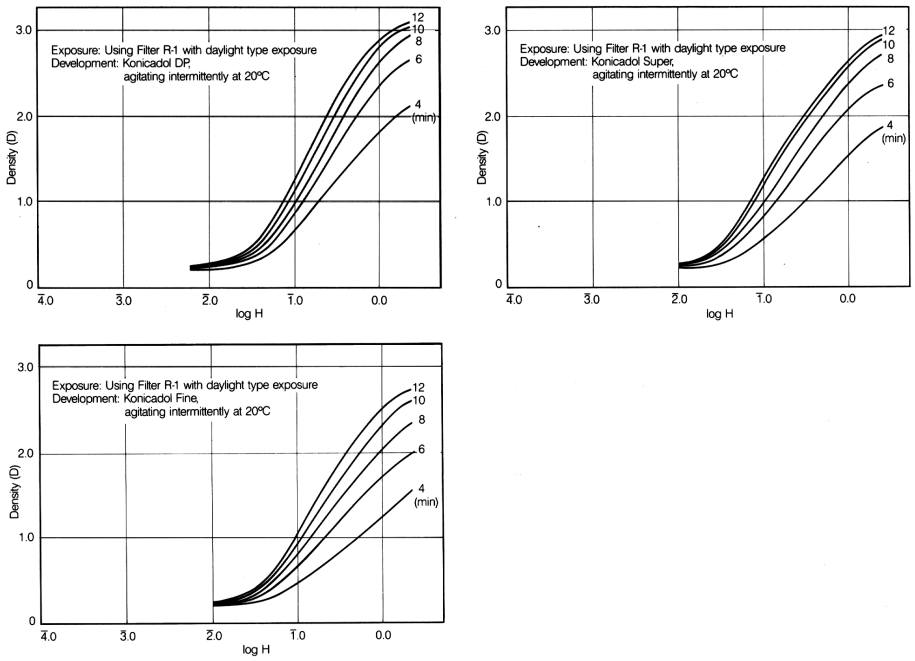
Use the Konica fixers or equivalent described in the following table. The fixer temperature should be nearly the same as the developer temperature. During the fixing step, agitate the films for 5 seconds at one minute intervals.

Fixer	Fixing Time
Konica (an acid layer-hardening fixer)	10 minutes
Konica fix rapid (a rapid acid layer- hardening fixer	3 minutes

Wash
Wash film in running water @15~ 25°C for 20~30 minutes. If more rapid water wash time is desired, dip the film into a 2% anhydride sodium sulfite solution for 2~3 minutes after the fixing solution. Place under running water with agitation for 5 minutes.

Dry
After washing, dip the film into a 0.5% solution of wetting agent for 1 minute. Hang the film in a well-ventilated and dust free location. If a wetting agent is not available, gently squeegee the water off the surface of the film with a sponge.

CHARACTERISTIC CURVE Characteristic curves



FILM STORAGE CONDITIONS

Store unexposed film in a cool, dark place with low humidity. Do not leave the film loaded in a camera for a long time.

NOTICE. The characteristic curves and data in this publication represent test results obtained under the specified conditions of exposure and processing. The manufacturer reserves the right to modify product characteristics at any time.

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