FUJIFILM
I&I – Imaging & Information

High-Speed, High-Resolution

Silver Halide Holographic Film

Fuji Photo Film Co., Ltd. announced that it has developed a silver halide Holographic* Film that can record and reproduce three dimensional (3-D) images using light interference phenomenon. And now, Fujifilm has started selling the product in the US market.

In Japan, holograms are often used to prevent counterfeiting of credit cards and currency. Overseas, however, holograms are used far more widely in commercial uses, archiving of cultural assets, family portraits and art, etc.

Multiple lasers were used in the conventional hologram recording process and silver halide film or photopolymers suitable for each sensitivity level were also necessary. However, the newly developed silver halide Holographic Film is panchromatic and has wide-range spectral sensitivity suitable for most visible lasers, thus simplifying the manufacturing process.

In addition, the use of high-speed ultra-fine silver halide emulsion results in bright and vivid images with low noise. The new film can easily record and produce high sensitive color images. Fujifilm will recommend using its new high sensitive silver halide film to current users of photopolymers.

NEW

* A hologram is an image recorded as interference fringes using holographic technology. When a hologram is spotlighted, a 3-D image appears consisting of a light pattern.

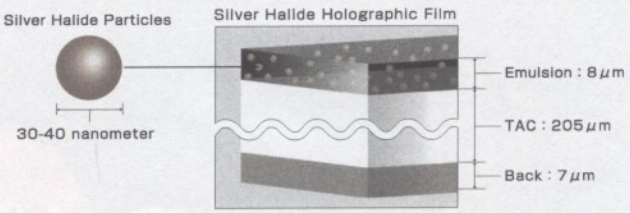
Toward a Bright, Finely detailed, Color 3-D Image
The Birth of Fujifilm's Silver Halide Holographic Film

A Single Film that Responds to All Operation Processes

By utilizing its proprietary Spectral Sensitivity Technology, Fujifilm has achieved a panchromatic film that responds to almost all visible wavelength laser beams—including ruby laser.
This negates the necessity of separate film for each different wavelength, and allows a single film to be used for the whole spectrum of lasers, from blue lasers to red lasers.

The World's Highest Sensitivity and Detail

The newly-developed 30-40 nanometer, ultrafine silver halide particles allow full compatibility with 100-200 microjoule high sensitivity. The emulsion used for the hologram enables precision recording and reproduction with interference fringes, resulting in a hologram that boasts the world's highest image quality.



Easy Reproduction of Individual and Blended Colors

A single film can be used for individual color holograms through to individual red, green or blue lasers.
The high diffraction efficiency rate also enables bright and vivid images.

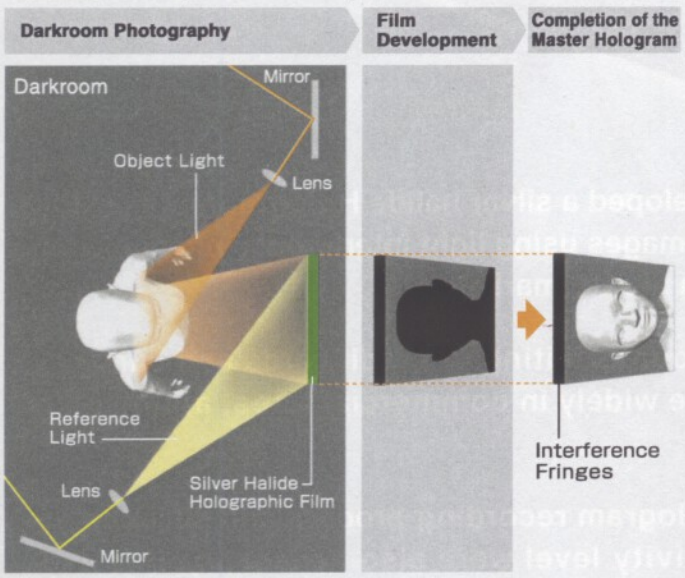
Responding to Transmitted Beams with a TAC Base

The hologram is supported with Fujifilm's TAC(triacetycellose)base highly acclaimed for its use as a display material. With a greatly reduced refraction rate, the laser enables precision recording and reproduction with interference fringes.

Production Process for the Lipman Hologram

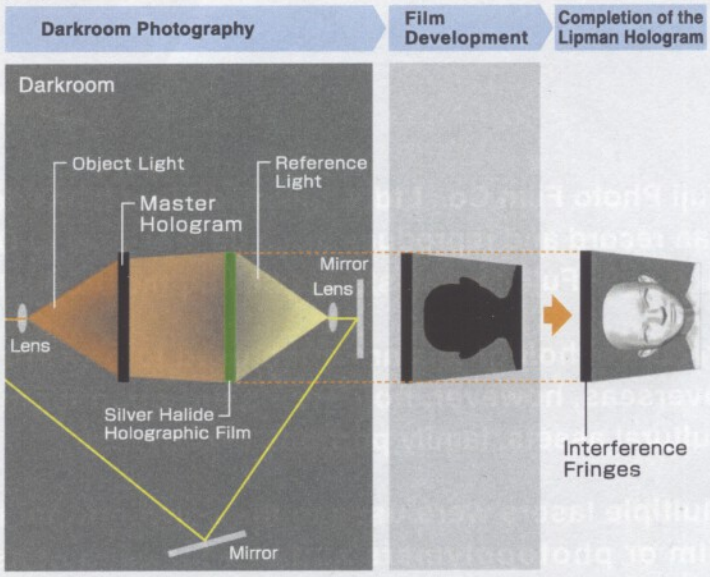
Production of the Master Hologram

The reflected light(object light) obtained from exposure of a photographic subject and the reference light combine to produce a low interference film that can record images and be developed.



Production of the Lipman Hologram

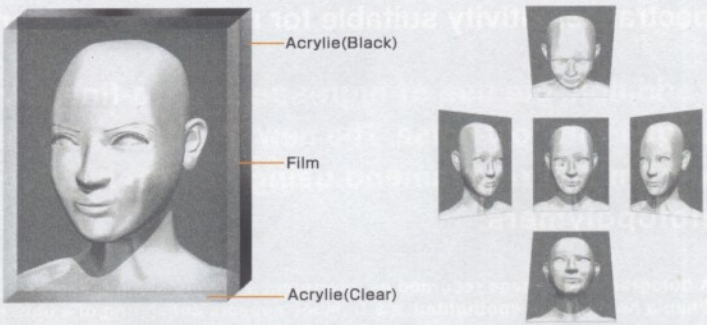
The development process incorporates laser burning from the Master Hologram to the silver halide film. Ordinarily, this hologram can be used for a variety of purposes.



Silver Halide Holographic Film

FHL-10	30cm×40cm	10 Sheets
FHL-10	50cm×60cm	10 Sheets
FHL-50	30cm×40cm	50 Sheets
FHL-50	50cm×60cm	50 Sheets
FHL-R	100cm×10m	1 Roll

Final Image



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