

Ultimate 15 holographic recording material

Product description	Ultimate 15nm is a high speed holographic silver halide photo emulsion which has been designed for all applications with continuous red lasers, and many applications with green laser (for example H2 or contact copies, but not Denisyuk). The grain is still fine (15nm), but with an increased sensitivity comparing Ultimate 08 (2x typical). The material can be sensitized to almost any laser line to produce monochromatic holograms, while using a strong safe light in the laboratory, for a comfortable work. Both transmission and reflection holograms (in red wavelength) can be recorded, with a rather low noise rendition. The diffraction efficiency is high, even for Denisyuk red holography..
Applications	Any hologram with red low power laser (when U08 can not be used) H2 transfert from H1 transmission masters with green or red lasers Contact copies from H2 (green or red lasers)
Color Sensitivity	any visible wavelength, depending the dye used
Grain size	15 nm
Resolution	>10000 lines/mm
Recommended Exposure Energy	75µJ/cm ² (minimum) 90 µJ/cm ² (for standart hologram) 120 µJ/cm ² (fmax)
Diffraction efficiency	up to 90% (mirrors)
Spectral sensitivity	blue- green range 440-540nm / red range 610-660nm /deep red range 660-700nm /
Base	glass plates (3mm) - triacetate 190µm
Preswelling Agent	70nm pre swelling as standard on red sensitive material. Other values on request. 70 means that the replay hologram will be shifted in color, 70nm lower than the laser used. As example a record with a red laser like HeNe(633nm) will give a final hologram with a yellow-green color(560nm)-
Laser Suitability: (we have tested our material with these lasers)	Laser diodes: 639-700nm, Ruby: 694nm , HeNe : 633nm Krypon: 647, 676 nm Nd-yag : 532nm Argon:514nm
Safe Light	Depending the dye you use. Green LED for red sensitive materials - High power Red LED for red sensitive materials
Recommended Processing Chemicals	Developer: Ultimate safe (20°C -68°F- up to 6minutes) wash Bleach : Ultimate safe (20°C until film clears) wash Final rince with some drops of wetting agent (photoflo), then vertical drying
handling recommendations	Use gloves when handling film to avoid finger prints. Use protection gloves for glass plates, they are with cut edges
Shelf Life	More than 1 year at 4°C
Storage	in a fridge, in a closed box at 4°C

**Use
Recommendation**

Transfer the plates /films you plan to use for the day, in a box and place it in the recording room at least one hour before shooting, for temperature stabilisation