A-6994, A-6994FK

450NM LED FORENSIC LIGHT SOURCE KIT

RESOURCE GUIDE

APPLICATION SPECIFICS:

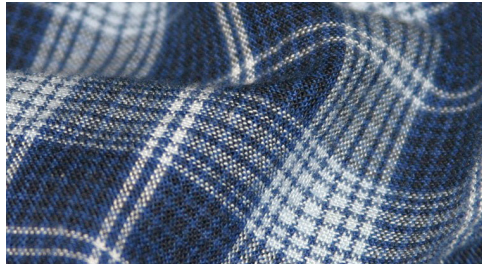
- Crime Scene inspection tool, useful for detecting materials of forensic interest (fibers, blood, contaminants, etc).
- Viewing fingerprints dusted with fluorescent powders.
- Fibers detected and photographed with orange filter.
- Semen and other organic fluids clearly visible with orange filter.

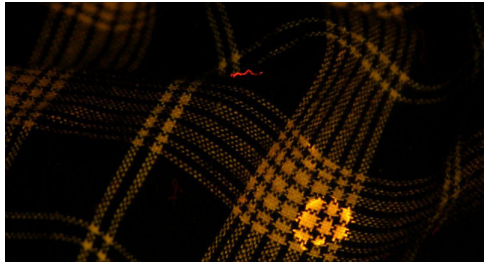
FEATURES:

- Reliable regulated solid-state blue emission from 3 Watt light source.
- 450nm emission, perfect for numerous crime scene applications.
- Current regulated circuitry maintains constant LED output.
- Powered by long shelf-life CR123A lithium cells (included)
- Also supports rechargeable Li-Ion 18650 cell (optional)
- Tailcap switch features momentary on as well as on/off functionality.
- 6" long x 1.5" wide approx.
- Runtime 4 hours (approx., with CR123A cells).
- LED Lifetime 10,000 hours.
- Lanyard included
- Kit includes custom case and professional orange viewing glasses.

IN USE:

- Batteries install positive first from rear of flashlight.
- Do not submerge in water — unit is splash-resistant, not waterproof.
- Do not unscrew head.
- Not a toy — keep out of reach of children!
- Appropriate orange viewing goggles should be worn for forensic applications.
- Batteries must be recycled in accordance with local and state guidelines.
- Glass lens can shatter if dropped, use caution.





Semen spot on fabric (1/2" in diameter). Viewed normally (top), and under 450nm (bottom) (with orange filter)

Possible organic evidence in girl's bedroom: viewed normally (top), and under 450nm with orange filter (bottom).

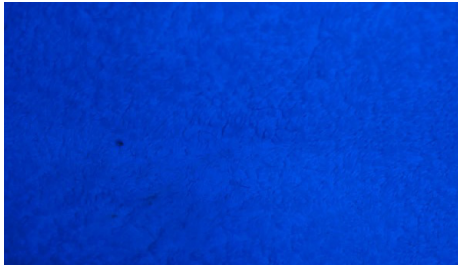
Dusted thumbprint on knife under normal light (top), and under 450nm with orange filter

Fiber evidence viewed in carpet: viewed normally (top), and under 450nm with orange filter (bottom).

SEMEN ON WHITE TOWEL (Blue and UV compared):
Although semen fluoresces under both UV and Blue wavelengths, detergents commonly have brightening agents causing the whole towel (or clothing article) to fluoresce under UV. In this case, 450nm blue is preferred to visualize the evidence. Yellow barrier filter or orange barrier filter employed (for example U50 or U60 LaserShield material) at 450nm excitation.
- See photographs below to compare different excitation wavelength and barrier filter combinations

NO FILTER

Normal lighting



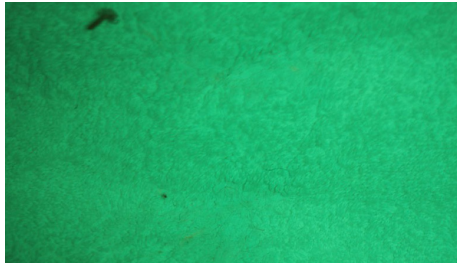
365nm mode, no filter.

450nm mode, no filter.

White towel, viewed normally, under 365nm and 450nm modes, without filter (as the naked eye would see it). Under UV towel is generally fluo-rescing a blue color—this is not "purple haze" from 365nm UV light, but is a true fluorescence. Note some tissue paper absorbs UV and does not fluoresce.

YELLOW FILTER

Normally good results would be expected with 365nm, but not in the case where detergents with brightening agents have been used to previously wash the article. In this case, 450nm blue excitation yields superior results with yellow filter.



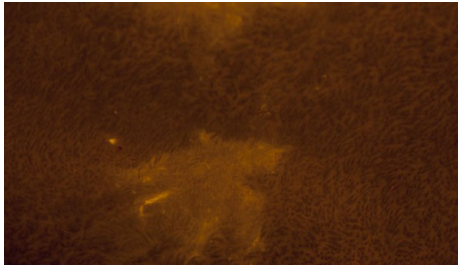
365nm mode, yellow filter. Semen fluorescence obscured.

Excellent results with 450nm excitation and yellow filter.

ORANGE FILTER

Good results with orange filter and 450nm excitation.

365nm mode, orange filter.



450nm mode, orange filter. Improved contrast over yellow filter.

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TEL: 800.953.3274
WEB: arrowheadforensics.com
E-MAIL: sales@arrowheadforensics.com