



# Regulated White/Blue/Ultraviolet Selectable Rechargeable Flashlight

featuring high-flux Cree and Nichia LED Technology

**APPLICATIONS:**

- Crime scene ALS — two wavelengths plus white.
- Crime scene cleanup.
- Inspection, laboratory, scientific, law enforcement where cordless high UV and Blue emission is required.
- Arson investigation (UV).
- Bodily fluids by fluorescence: semen, urine (UV/Blue).
- Blood by absorption (UV/Blue).
- Leak detection (UV/Blue)
- Education, scientific.
- Hotel room inspection.



**FEATURES:**

- Reliable regulated solid-state UV, Blue and white emission from five high flux LEDs, selectable between wavelengths.
- 2x780mW UV output from Nichia 365nm LEDs
- 2x3W output from Cree 450-455nm LEDs
- 3W Neutral white LED, center Cree emitter.
- Current regulated circuitry maintains constant light output.
- Rechargeable batteries included.
- Universal 120-250V AC charger included.
- Thumb switch selects modes.
- 5.25" long x 2.25" wide.
- LED Lifetime 10,000 hours.
- Runtime approaches 4+ hours on full charge (longer for white mode).
- Beam angle 30 degrees approximately.
- Quartz diffusing lens element.
- Patented.



**PART NUMBER**  
XeLED-Cr5BL-MR6-CSE-K

**DESCRIPTION**  
Rechargeable crime scene flashlight kit with high-flux LED technology, selectable 365nm/455nm/white. Kit option includes case, high quality U50 yellow and U60 orange viewing glasses.

Xenopus Electronix  
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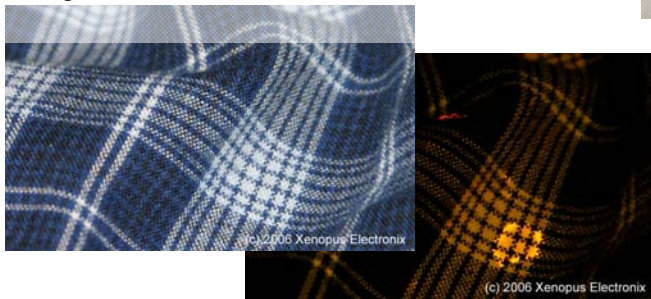


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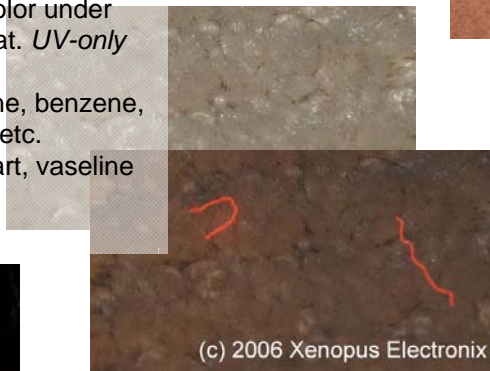
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## APPLICATION SPECIFICS:

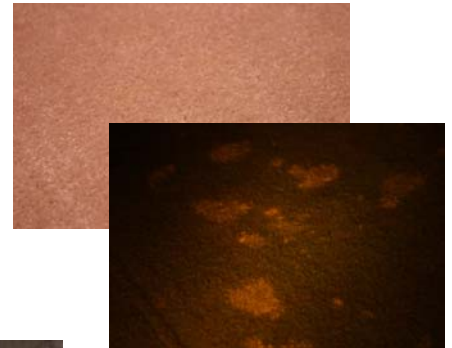
- Inspection work — hotels, bathroom, pest control, carpet cleaning, warehouse, trailer, etc. Fluoresce animal urine, etc.
- Arson investigation — UV lights are a reliable, cost-effective method of detecting accelerant residues, and the point of origin of the fire: the fluorescence wavelength (color under UV) of accelerants is affected by exposure to heat. *UV-only model is recommended for arson investigation.*
- Detectable accelerants include gasoline, kerosene, benzene, acetone, grease, lard, oils (including vegetable), etc.
- Scorpion hunting, invisible ink, glow-in-the-dark art, vaseline glass, etc.



Semen spot on fabric (1/2" in diameter). Viewed normally (top), and under 465nm (bottom) with orange filter.



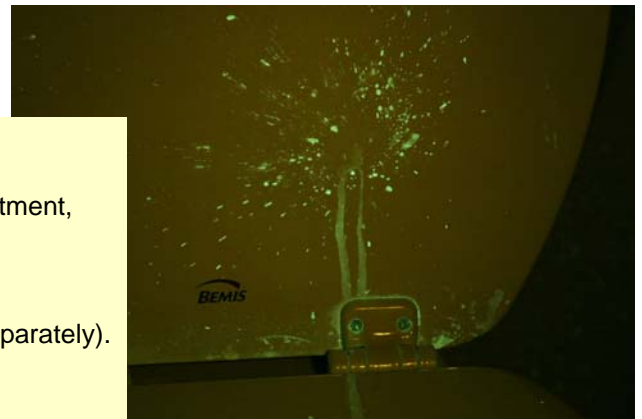
Fiber evidence viewed in carpet: normally (top), and under 465nm with orange filter (bottom).



Organic evidence in girl's bedroom: viewed normally (top), and under 465nm with orange filter (bottom).

## INSTRUCTIONS FOR USE:

- Charge batteries before first use.
- When charged, insert two cells positive up in flashlight battery compartment, then screw head of flashlight onto the battery compartment.
- Unit will light briefly to indicate correct connection.
- Cycle through modes white/low-UV/high-UV with pushbutton switch.
- Four cells may be used for double the runtime (additional cells sold separately).
- Do not submerge in water — unit is splash-resistant, not waterproof.
- Do not unscrew head.
- Not a toy — keep out of reach of children!
- Yellow UV-blocking viewing goggles must be worn in UV mode.
- Appropriate clear UV-blocking goggles can be used, check for block at 400nm and below (eg: NOIR Laser Shield brand)
- Batteries are fully recyclable, and must be recycled in accordance with local and state guidelines.
- Quartz lens can shatter if dropped, use caution.



Upper toilet seat, missed by cleaning crew (UV)

**CAUTION: Device emits intense UV radiation:  
Avoid direct or strongly reflected exposure.  
Standard clear "UV Blocking" safety glasses offer little or no protection. Use appropriate approved eyewear.**



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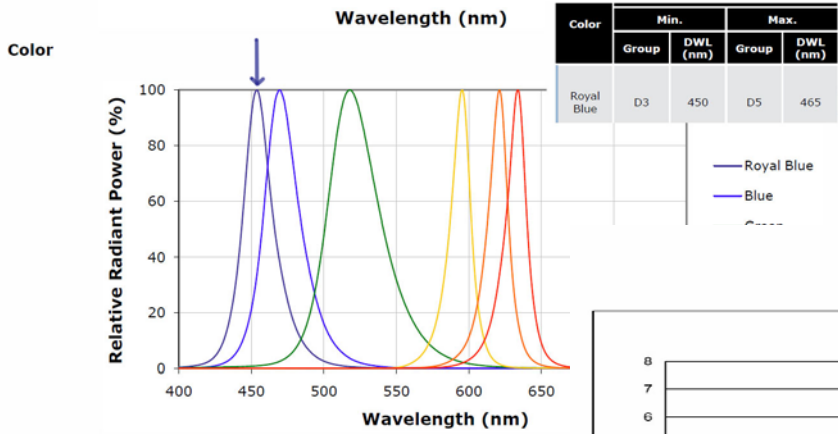
Assembled in USA



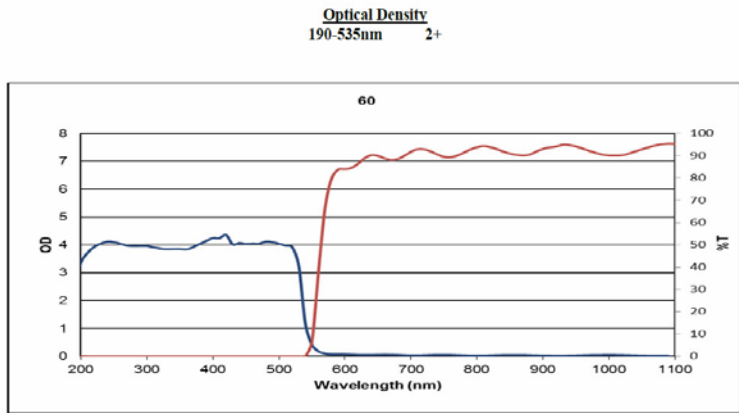


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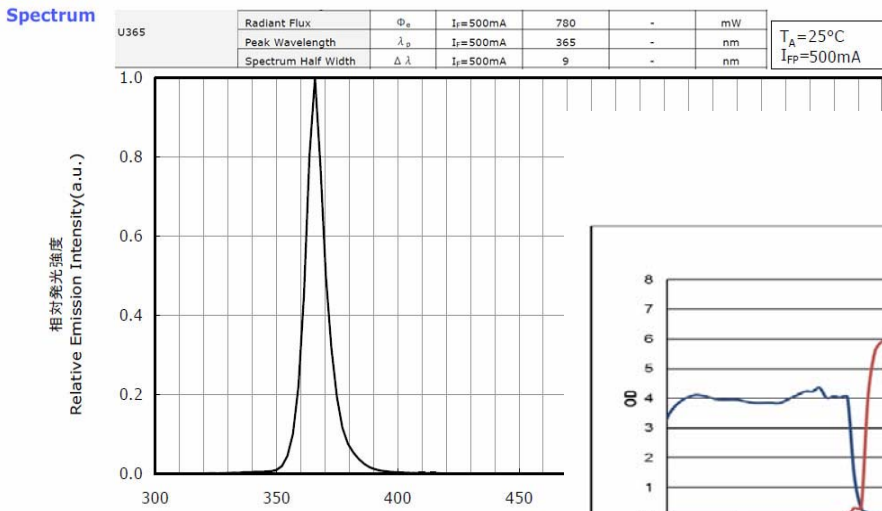
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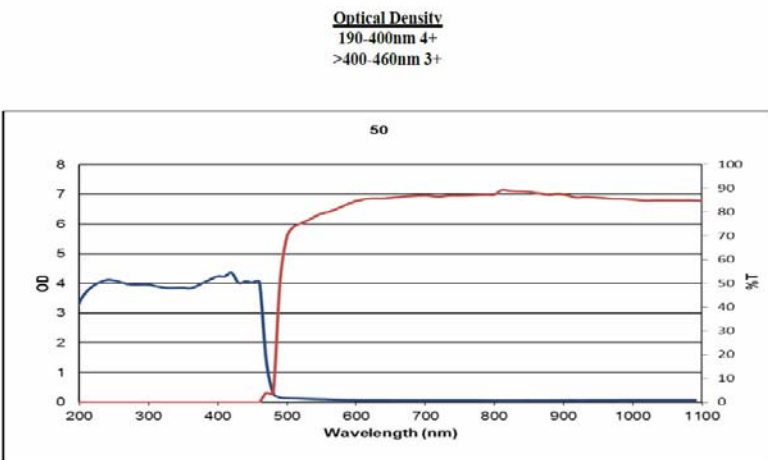
Cree Royal Blue XP-E emission spectra



NoIR Laser Shield U60 orange goggle performance.



Nichia 385nm emitter emission spectra



NoIR Laser Shield U50 yellow goggle performance.

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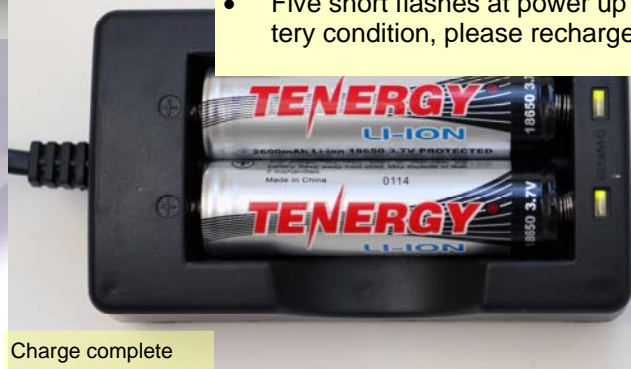
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Charge in progress

### INSTRUCTIONS FOR BATTERY CHARGER:

- This unit is provided with an external 120-250 volt AC charger.
- Red LEDs on charger indicates charging.
- Green LEDs on charger indicates charge complete.
- Carefully observe correct battery polarity when using charger.
- All batteries' positive terminal must face flashlight head.
- Insert two (or four) cells positive up in battery compartment, then screw battery compartment onto head of flashlight.
- All battery slots in battery barrel are identical—batteries are in parallel, and insert with the same orientation.
- Unit will light briefly to indicate correct connection.
- Five short flashes at power up or during operation indicates low battery condition, please recharge cells.



Charge complete



### PART NUMBER

XeLED-Cr5BL-MR6-455-  
HLW-K

### DESCRIPTION

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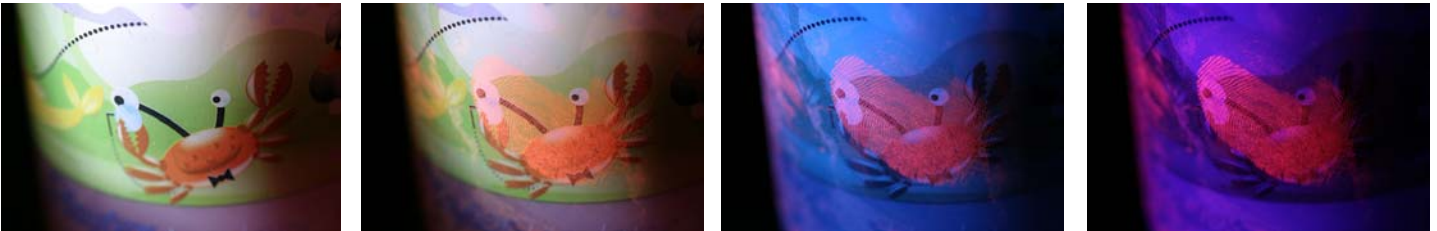


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### FINGERPRINT COLLECTION (Blue and UV):

- Use fluorescent fingerprint powder on both smooth and rough surfaces. Both the blue and UV wavelengths will create fluorescence in many cases, but UV will provide enhanced viewing (and photographic) opportunities on blue-tinted backgrounds.
- Fluorescent powders preferred when dusting a dark or patterned surface.
- Fluorescent *magnetic* powder may be used with ridge detail is very weak.



Colorful surface, photographed with no powder (left), then dusted and viewed (in order) with white, blue, and ultraviolet modes of the CSE lantern. Shown for reference without filter on camera (appropriate filter on camera would greatly enhance contrast).

### BLOOD DETECTION by absorption (Blue and UV):

- Blood absorbs blue and ultraviolet wavelengths (peak absorption around 410nm), making it possible to detect blood against red or dark backgrounds.
- Orange viewing goggles are not used when viewing absorption in this manner.

### ARSON INVESTIGATION (UV):

- Ultraviolet light is used to detect accelerants and spill, splash, or pour patterns.
- Fluorescent hydrocarbons include gasoline (petrol), kerosene, benzene, grease, etc.
- Ultraviolet light can be used to detect pour lines, and splash areas on clothing.
- May be more effective than sniffers in windy conditions or after an intensely hot fire.

### SHOEPRINT LIFTING (White):

- Oblique illumination from the white emitter will be effective when viewing imprints from electrostatic lifters like the PathFinder.



Shoeprint on mylar film lifted from newspaper with PathFinder





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## 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, 455nm blue is preferred to visualize the evidence.
- Yellow barrier filter or orange barrier filter employed (for example U50 or U60 LaserShield material) at 455nm excitation.
- See photographs below to compare different excitation wavelength and barrier filter combinations...

### NO FILTER:



365nm mode, no filter.

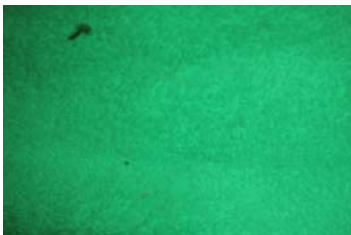


455nm mode, no filter.

White towel, viewed normally, under 365nm and 455nm modes, without filter (as the naked eye would see it). Under UV towel is generally fluorescing a blue color—this is not “purple haze” from 365nm UV light, but actual fluorescence common in items washed with regular whitening detergent. Note some tissue paper absorbs UV and does not fluoresce (near top left).

### 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, 455nm blue excitation yields superior results with yellow filter.



365nm mode, yellow filter. Semen fluorescence obscured.



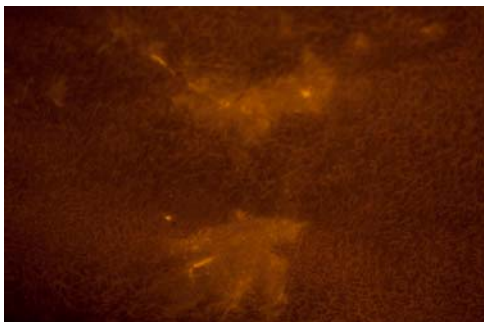
Excellent results with 455nm excitation and yellow filter.

### ORANGE FILTER:

- Good results with orange filter and 455nm excitation.



365nm mode, orange filter.



455nm mode, orange filter. Improved contrast over yellow filter.

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