

An Introduction to Black Light Photography

By Scott Musson

The top half of the image features an abstract background composed of numerous thin, vertical lines in various shades of light blue and grey, creating a textured, grass-like effect. A solid dark teal horizontal band spans the width of the image, serving as a background for the title and footer.

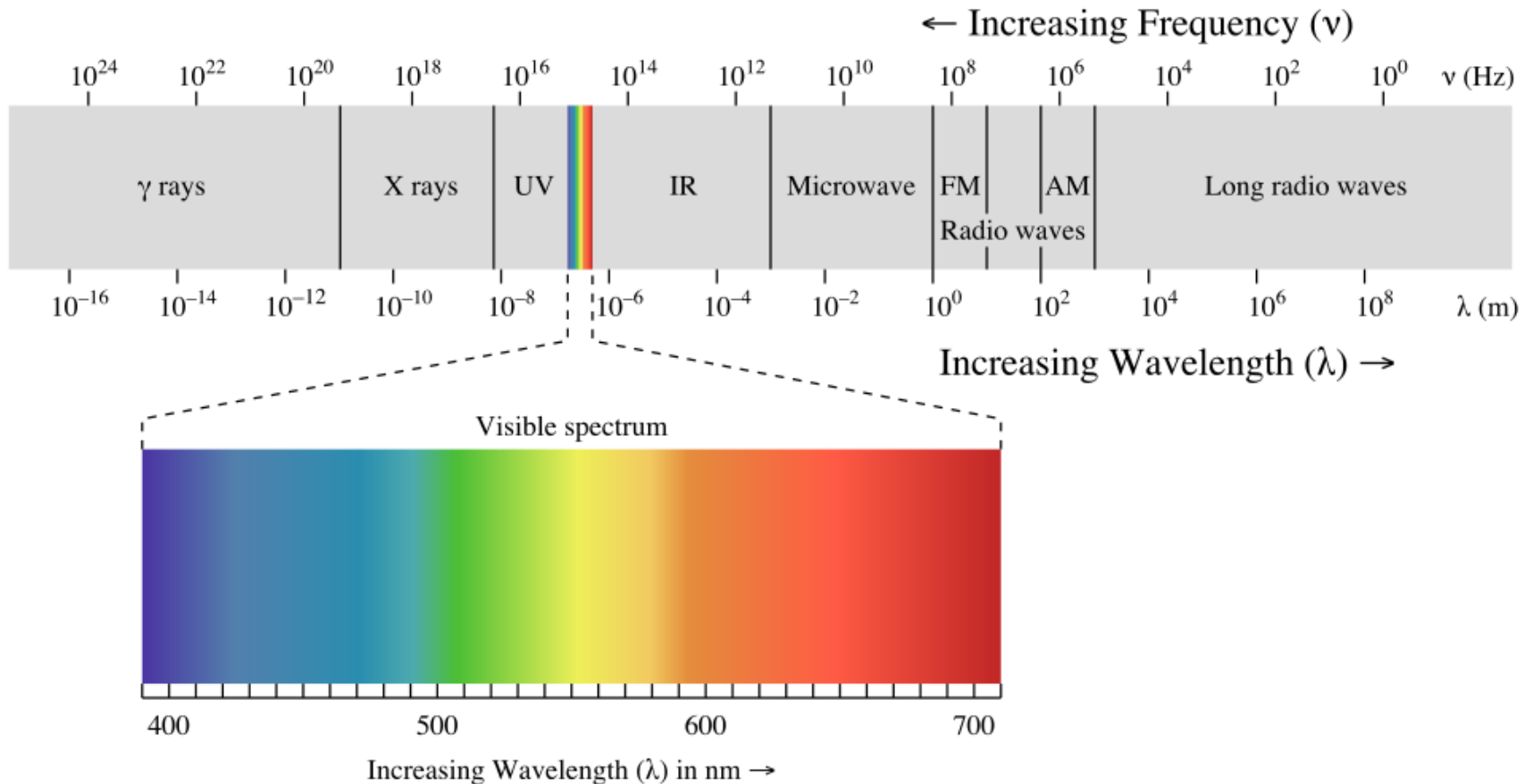
What is Black Light?

What is Light?

“Light is the propagation of energy in the form of electric and magnetic waves and is therefore also known as electromagnetic radiation. The electromagnetic spectrum is the entire range of possible kinds of electromagnetic radiation, which are classified by the frequency of the wave. The spectrum ranges from gamma rays, which have a very short wavelength and very high energy, to radio waves, which have a very long wavelength and very low energy. Visible light makes up a very small portion of the spectrum.”

- worldpress.com

What is Light?



What is Black Light?

“A Black light or UV Light is a lamp emitting electromagnetic radiation that is almost exclusively in the soft near ultraviolet range, and emits very little visible light. Ultraviolet radiation itself is invisible to the human eye, but illuminating certain materials with UV radiation prompts the visible effects of fluorescence and phosphorescence.”

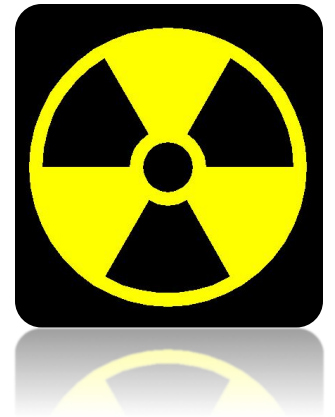
- Wikipedia

What is Black Light Photography?

Photographing subjects illuminated by the light produced by fluorescence and phosphorescence of certain materials from being exposed to the UV radiation emitted by a black light.

Radiation? Are Black Lights Safe?

- Black lights produce light in the UV range
- Black light (BLB) is limited to UVA spectra
- UVA is the safest of the 3 spectra of UV light



Radiation? Are Black Lights Safe?

- UVB and UVC are responsible for damage related to skin cancer
- UVA light is much lower in energy and does not cause sunburn
- Recommend that you take precautions using black light, limit your exposure
- If your eyes get tired –turn off the light for a while!



For Black Light Photography

RECOMMENDED & OPTIONAL EQUIPMENT

Recommended Photo Equipment

- Anything you would use with low light photography
- Required
 - A Sturdy Tripod
 - A Sturdy Tripod
 - A Sturdy Tripod
 - An IS or VR lens alone nor high ISO will not suffice
 - A Black Light (BLB) source
 - More about what specific types of black light you should use in a few minutes

Optional Camera Equipment

- Optional but Optimal
 - Macro lens
 - Fast Prime lens that can focus close
- The closer the focus, the better the results



Optional Camera Equipment

- Optional
 - Extension Tube
 - Close Up Filter (Diopter)
 - Cable Release or Remote Trigger
 - Mirror Lockup
 - Focusing Rail

Optional Camera Equipment

- Extension Tube “poor mans macro lens”
 - The tube contains no optical element
 - Sole purpose is to move the lens farther from the image plane
 - The farther away the lens
 - the closer the focus
 - the greater the magnification
 - the greater the loss of light
 - Affordable
 - Some allow auto exposure
 - Travel well



Optional Camera Equipment

- Close-up Filter, Close-up Lens, Macro filter or Diopter
- Simple secondary filter used to enable macro photography
- Some single-element close-up lenses produce images with severe aberrations
- High-quality close-up lenses composed as achromatic doublets which are capable of producing excellent images
- Close-up lenses are usually specified by their optical power
- Affordable, travel well and allow auto-exposure



Optional Camera Equipment

- Cable Release or Remote Trigger
 - Allows wired or wireless ability to trip your camera shutter
 - Reduces camera shake and image blur from manually pressing the shutter
 - Also great for family and self portraits



Optional Camera Equipment

- Mirror Lockup
 - Available on many DSLRs
 - Locks mirror in the open position
 - Further reduces camera shake by reducing the need to open the mirror prior to opening the shutter
 - Have to press the shutter release twice, once to open the mirror, then once to open the shutter



Optional Camera Equipment

- Focusing Rail
 - Allows for gross and fine focusing adjustments
 - Helps get camera closer to macro subjects



Not Recommended

- Do not use haze filters, UV filters, or clear glass filters unless you are certain they don't add a blue cast to your images
- UV filters are generally counter productive since this really is UV photography



Recommended Camera Settings

- White Balance
 - Florescent (when using florescent tubes)
- ISO
 - 100 or 200 is best
- Exposure
 - BLH (bracket, bracket, bracket)
 - Use your camera's histogram
 - Generally underexpose slightly $1/3 - 2/3$ stop

Recommended Camera Settings

- Depth of Field
 - Suggest using “A” or Aperture priority
 - Use creative judgment
- Focus
 - May need to use manual focus as with any macro or low light photography

For Black Light Photography

LIGHTING OPTIONS

Recommended Lighting

- Florescent Tubes
 - 20 watts or better (no less than 1
 - Use a BLB type blub (Black Light B
 - F20T12/BLB is the type I use
 - Work best mounted vertically



Recommended Lighting

- LED Panels
 - More expensive than blubs or tubes
 - Slightly different wavelength
 - Far more durable
 - Long lasting
 - Don't get hot



Lighting



- Incandescent Blubs
 - Very inefficient generating UV
 - Operate very hot
 - Lighting tends to be concentrated (hot spots)
 - Will work if you have them, but florescent & LEDs will produce better results
 - Hard to find
 - Inexpensive

Lighting

- Compact fluorescents
 - Now available
 - Work ok
 - Produce a smaller area of illumination
 - Affordable



Not Recommended

- UV Lasers
 - Light is too concentrated and too bright
- Do not use
 - Bug zappers
 - Sterilization lights



Recommended Lighting Enhancements

- Reflectors will help improving your exposures
 - White foam core
 - White matt board
 - Mylar sheets
 - Mirrors
 - Traditional 5 in 1 reflectors on a stand

For Black Light Photography

CREATIVE RECOMMENDATIONS

Creative Recommendations

- Black light photography works well with smaller scale subjects
 - Portraits
 - Abstracts
 - Close-up & Macro
- Black light photography is difficult with large scale subjects
 - Group portraits
 - Large scale abstracts
 - Etc.

Creative Recommendations

- Take your time, little things are emphasized
- Fill the frame with your subject
 - Get even closer!!!
- Reflections look great
 - Use mirrors
 - Use Mylar
 - Anything reflective

Creative Recommendations

- Compose for the background
- Be creative with the background
 - Florescent construction paper, foam core or matte board
 - Paint your own backgrounds using florescent paint
 - Mirrors
 - Sheets of Mylar

Creative Recommendations

- Use subjects that are
 - Florescent
 - Phosphorescent
 - Reflective
 - Transparent

Creative Recommendations

- Dust
 - Your biggest enemy
 - Use lint rollers, lint brushes, masking tape, etc.
 - Hurricane blower
 - Lint free cloths to remove
- Finger Prints
 - Your second biggest enemy
 - Use lint free cloths to remove (not paper products)

What is Florescent in Black Light?

- Anything that glows in the dark
- Most anything that looks florescent in daylight
- Walk around your house with a black light, you'll be surprised!
 - Especially in your bathroom and on your carpets (Ewww!)

What is Florescent in Black Light?

- Florescent paint
- Glow in the dark paint
- Highlighters
- Some plastics (often toys)
- Florescent construction paper
- Security stripe in money
- Reflective clothing (e.g. tennis shoes)
- Woolite

What is Florescent in Black Light?

- Antique Glass
 - Vaseline Glass
 - Uranium Glass
 - Florescent Teal Carnival Glass
 - Manganese-content Glass
 - Cranberry Glass
 - Custard Glass
 - Burmese Glass
 - Green depression glass

What is Florescent in Black Light?

- Milk
- Tonic water
- Liquid laundry detergent
- Tooth whiteners
- Petroleum Jelly
- Certain minerals
 - Fluorite
 - Calcite
 - Etc.
- Many, many, many more...

What Are Good Subjects?

- Inexpensive clear glassware
 - The cheap stuff works great!
 - Glass plates
 - Wine glasses
 - Martini glasses
 - Vases
 - Marbles

What Are Good Subjects?

- Reflective and shiny objects
 - Silverware
 - Plastic-ware
 - Chrome objects
 - Vases
 - CDs
 - Tchotchke, bric-a-brac, etc.

What Are Good Subjects?

- Florescent Paint on...
 - Plastic plants
 - Fruit
 - Baskets
 - Leaves & branches
 - Inexpensive glassware
 - Limited by your imagination

What Are Good Subjects?

- People!
 - Painted with florescent body paint
 - Posed with florescent props!
 - Posed with light sticks, glow jewelry, etc.
 - Inspiration found online
 - http://www.pbase.com/tglass0000/tims_blacklight_gallery

How to shoot subjects in black light

PHOTOGRAPHY SETUPS

Black Light Photography Setups

- Table top setup
- Shoot through table top setup
- Mylar tube setup
- Other setups will work too

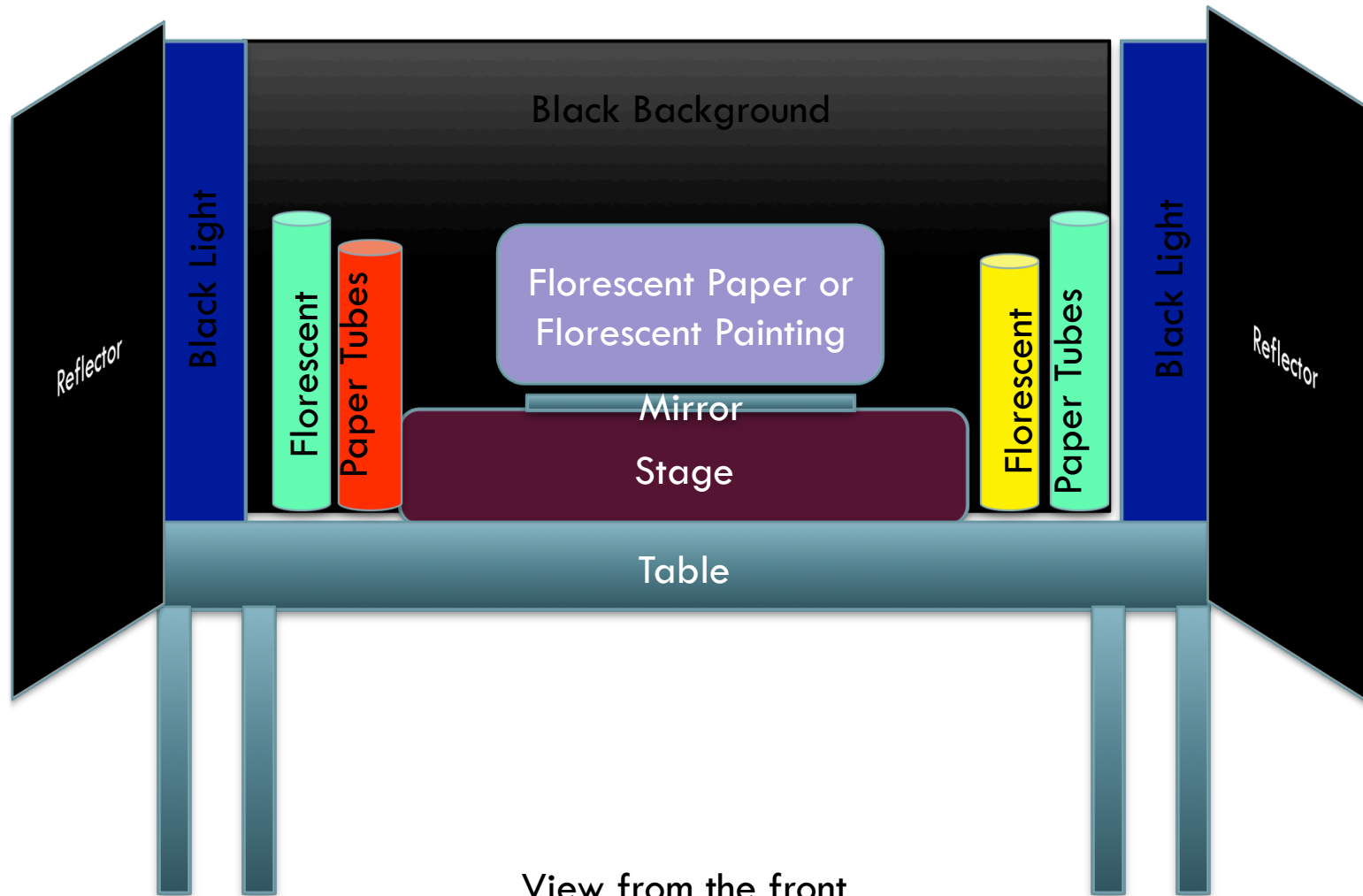
Black Light Photography Setups

- Table Top
 - Use black background and table top
 - Velvet cloth, black mat board, black foam core or black paper over cardboard
 - Any type of table will work
 - Provide support for background(s)
 - Binder clips or clothes pins to attach backgrounds
 - String hung across setup can be used to hang props or backgrounds (optional)

Black Light Photography Setups

- Table Top continued
 - Provide stage for props (box)
 - Place black lights in front or the side facing background
 - One black light on each side vertically positioned (minimum)
 - Reflectors, foam core, mat board, Mylar, etc. to reflect light onto the stage from lights

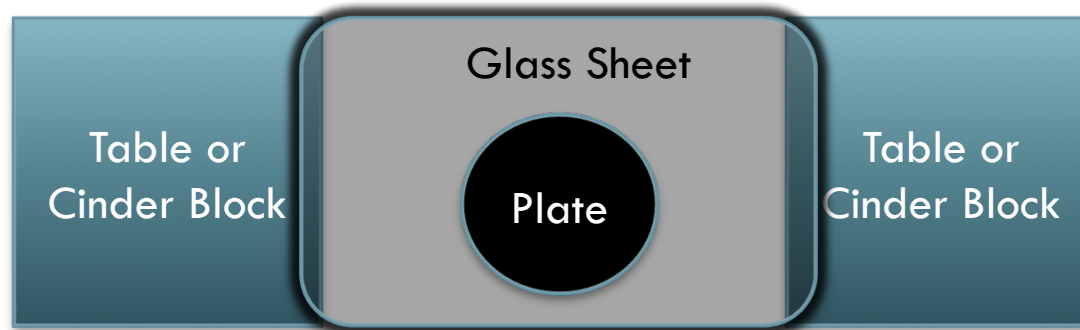
Table Top Shooting Setup



Black Light Photography Setups

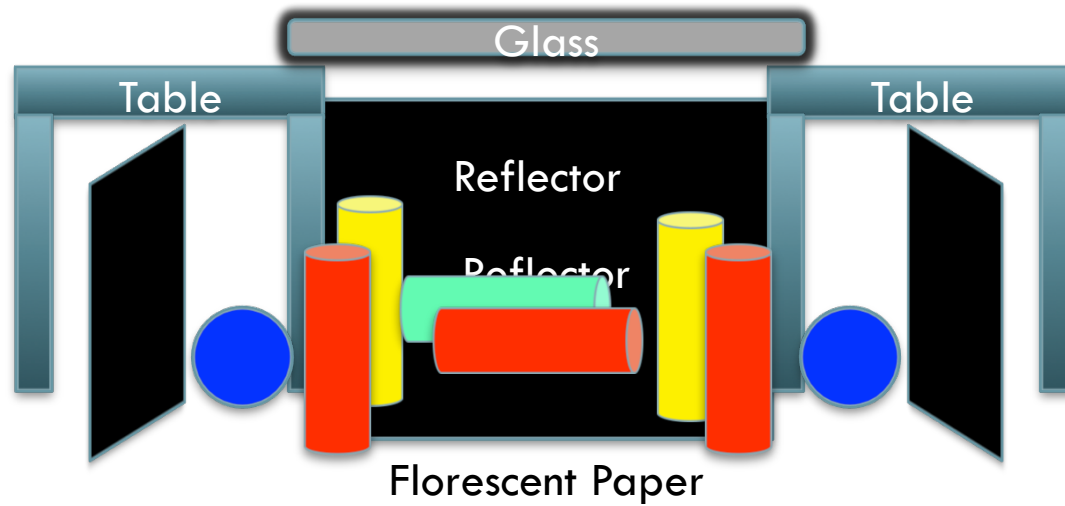
- Shoot Through Table Top
 - Use a glass stage and shoot from above
 - Glass from a picture frame works well
 - Put backgrounds on floor
 - Put lights on floor facing in towards background
 - Place subjects on glass stage
 - Shoot as close as you can to your subject (macro lens, extension tube)

Shoot Through Setup



View from the top

Shoot Through Setup



View from the side

Black Light Photography Setups

- Mylar Tube
 - Tape a 6-12 inch tube of Mylar around the lens barrel
 - Don't tape it to the barrel so you can move it and focus
 - Point your tube towards background illuminated by a black light
 - Bend, crinkle, fold, tape, rubber band, squeeze the Mylar tube to change your image (also move around background)

Black Light Photography Setups

- Mylar Tube Setup



Hope You Will Try It

It doesn't take a lot of expense or time to try your hand at black light photography.

Remember these points:

- Dust is your enemy
- Patience is your friend
- Get close
- Get abstract!
- Embrace your inner child and have fun!

Thank you!

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photography@scottmusson.com

BLACK LIGHT PHOTOGRAPHY