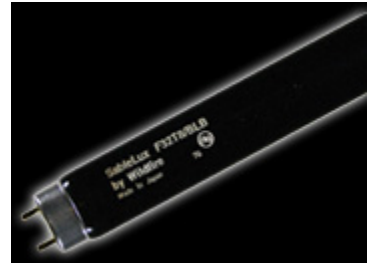


How To Get **Maximum** UV Output Out Of A Fluorescent Black Light Lamp



An explanation of how black light fluorescent lamps work, and how to boost their UV output.

Inside the tube of a fluorescent lamp is a mixture of mercury vapor and a noble gas, such as argon or xenon. The mercury provides conductivity from one electrode at one end of the tube to the electrode at the other end. An electrical current will excite this gas mixture, which then emits shortwave ultraviolet radiation, or UV-C light.

The Fluorescent Powder Coating

A fluorescent powder coats the inside of the glass tube and reacts to the UV-C light, emitting visible light in return or in the case of a fluorescent black light, long-wave UV light (black light), which is filtered through a special purple glass called Wood's glass.

The more powerful this fluorescent material...in other words, the more strongly it reacts to the UV light, the brighter the output of the bulb. So all other things being equal, you can increase the output of the bulb by using a more reactive fluorescent powder coating, which is one of the things we have done with our **SableLux®** Fluorescent Black Light Blue Lamps.

The Tube Diameter

You can also increase the UV output of a fluorescent lamp by reducing its diameter. With a smaller diameter tube, the fluorescent material is closer to the center of the tube and will fluoresce brighter. Most black light lamps have a diameter of T10 or T12. (The number refers to eighths of an inch. So a T10 is one and one-quarter of an inch in diameter.)

Wildfire **SableLux®** Fluorescent Black Light Blue Lamps have a diameter of T8. (Or one inch.) This may very well be the most powerful fluorescent black light available on the market.

VHO Electronic Ballasts

As powerful as this new lamp is, however, the fixture the lamp is housed in has as much to do with output as the lamp itself. For instance, the right fixture can *double* the standard output of a fluorescent lamp with a very-high output (VHO) electronic ballast. To find out more on how this works, take a look at our Effects Master high output fluorescent lighting series fixtures.

In short, to get the most UV output from a fluorescent black light bulb, you want three things...

1. A powerful fluorescent coating inside the tube.
2. A smaller diameter tube.
3. A VHO (very-high output) fixture, which doubles the wattage of the lamp.

At Wildfire, we've exploited all three ways of getting the most out of fluorescent technology. The combination of our **SableLux®** Lamps and **Effects Master®** fixtures, give you the most powerful fluorescent black light combination available!