

SYLVANIA

Blacklight Blue Lamps

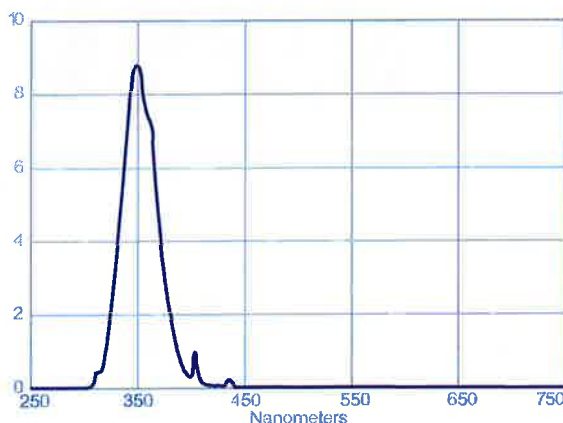
When an object absorbs radiant energy, either visible or invisible, and converts this into radiation of a different wavelength, the converted energy is called "luminescence". This phenomenon transforms blacklight energy into a visible form, which includes fluorescence and phosphorescence.

Fluorescence

Occurs only while the material is being activated by ultraviolet energy. When the exciting source of energy is removed, the emission will stop almost instantly. Fluorescence produced by blacklight is seen best in low-light level conditions or in darkness.

Phosphorescence

Is the ability of the material to retain some of the energy which it receives and to release it in the form of visible light, not only during the period of activation when it is called "fluorescence", but also to continue releasing this energy after the activating source has been removed. This released radiation, following the period of activation, may persist for a matter of hours. The light given off during fluorescence is dim compared to fluorescence.



Lamps : Wood's glass - Max. output at 350 nm

Fluorescent lamp operation can be used to explain the blacklight principle. Ultraviolet radiation produced by an electric discharge excites the atomic



structure of a fluorescent powder called "phosphor", which is coated along the interior tube wall and causes the power to fluoresce; that is to emit a visible secondary radiation. This visible radiation will continue for the duration of the original excitation.

Blacklight Blue

Blacklight Blue lamps are made light blacklight lamps, except that the bulb is made of special dark-blue filter glass (Wood's glass) that absorbs practically all of the visible light, yet freely transmits the ultraviolet radiation. The blue bulb makes it unnecessary to use external filters to absorb the visible light. The filter-bulb structure is more expensive, but fixture requirements are simplified since the lamp is a completely self-contained blacklight unit.

Applications

Blacklight lamps are used for

- special effects in the entertainment lighting industry
- counterfeit detection in philately, money, papers, etc.
- leak and crack detection
- excitation of fluorescent paints in dark rooms
- revealing fluorescence of drawings on textiles
- geological investigation of stones and rocks.

Blacklight Blue Lamps

Description	Watts	Volts	Length (mm)	Diameter (mm)	Base	Box Quantity	Order Code
F4 T5 BLB	4	29	134.5	15.5	G5	50	00008
F6 T5 BLB	6	42	210.5	15.5	G5	50	00018
F8 T5 BLB	8	56	287.0	15.5	G5	50	00024
F15 T8 BLB	15	55	436.0	25.5	G13	25	00077
F18 T8 BLB ES	18	57	590.0	26.0	G13	12	00698
F30 T8 BLB	30	96	895.0	26.0	G13	6	00158
F36 T8 BLB ES	36	100	1200.0	26.0	G13	12	00699
F20 T12 BLB	20	57	609.6	38.1	G13	6	00358
F40 T12 BLB	40	103	1219.2	38.1	G13	10	00186
BriteBlue	160	240	80.0	75.0	E27	40	23952

Effects of Blacklight Energy on People

Blacklight energy as emitted by blacklight lamps is also emitted by sun and sky lights and is therefore a natural component of our environment. Blacklight energy from filtered natural light or blacklight lamps, causes the eye media to fluoresce producing sensations that have been described as unusual or uncomfortable. The fluorescence of the eye media is temporary, existing for the time of exposure and producing no known after effects.

Fixtures for Blacklight Blue lamps

Blacklight lamps are equivalent to other fluorescent lamps in electrical and physical characteristics. They operate in the same circuits and with the same equipment as equivalent wattages of regular fluorescent lamps.



BriteBlue

If you would like more information or a visit from an engineer, please contact your nearest SPG office.

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