

Fluker Farms

FAQ Incandescent bulbs

1. In what situations is it appropriate to use the different bulbs?
 - a. Basking light bulb:
 - i. This light can be used to provide an appropriate **daytime basking spot**. This bulb should not be used at night because it provides visible light. Twenty-four hours of visible light is stressful to reptiles and may make them more susceptible to infections (immunosuppressed). This bulb produced negligible quantities of UVB. Please refer to the table on the box to determine the most appropriate wattage. This lamp can be positioned over a rock surface to provide an appropriate basking spot for a reptile.
 - b. Day light bulb:
 - i. This neodymium light bulb can be used to provide an appropriate **daytime basking spot**. Neodymium is a rare earth element that absorbs yellow light, which allows it to produce a more pure white light. This affect is primarily for aesthetics. This bulb should not be used at night because it provides visible light. Twenty-four hours of visible light is stressful to reptiles and may make them more susceptible to infections (immunosuppressed). This light produces negligible amounts of UVB. Please refer to the table on the box to determine the most appropriate wattage.
 - c. Black light bulb:
 - i. This light can be used to provide an appropriate **nighttime basking spot**. Because this light does not provide light in the visible light spectrum, it can be used during the night without causing negative effects. This bulb produces negligible quantities of UVB. Please refer to the table on the box to determine the most appropriate wattage
 - ii.
 - d. Red light bulb:
 - i. This light can be used to provide an appropriate **nighttime basking spot**. Because this light does not provide light in the visible light spectrum, it can be used during the night without causing negative effects. This bulb produced negligible quantities of UVB. This lamp can be positioned over a rock surface to provide an appropriate basking spot for a reptile. Please refer to the table on the box to determine the most appropriate wattage.
2. In the case in which someone was using a daytime and nighttime bulb, should one buy the same size wattage for day and night use?
 - i. Reptiles should experience a drop in the nighttime temperature. Therefore, a lower wattage bulb at night should be used. It is important for a pet owner to identify the specific environmental temperature range for their pet (species) to determine the most

appropriate bulb wattage. Please refer to the table on the box to determine the most appropriate wattage

3. Black lights and red lights are both used at night. In what cases is it appropriate to use each bulb?
 - a. The red light is the preferred nighttime basking spot. The black light provides UVB and can change the aesthetics, such as giving a blue hue to black pigment.
4. What is the difference between a neodymium bulb and standard white bulb?
 - a. Neodymium is a rare earth element that absorbs yellow light. Neodymium bulbs produce a more pure white light, which improves the aesthetics of an enclosure.
5. Do incandescent bulbs emit UVA and UVB?
 - a. Incandescent bulbs produce moderate quantities of UVA and negligible quantities of UVB. Incandescent bulbs are primarily used to provide heat and visible light. These bulbs should be used in combination with Repta-Sun bulbs to produce a complete lighting package.

Fluorescent bulbs

1. What do reptiles use UVB for? UVA?
 - a. UVB: Diurnal (active during the day) reptiles use UVB rays (primarily 290-310nm) to stimulate a cascade of chemical reactions in the body to create vitamin D. Vitamin D plays an important role in calcium absorption from the intestine. This spectrum of light is especially important to herbivorous, omnivorous and insectivorous reptiles.
 - b. UVA: UVA rays appear to play a role in regulating reptile behaviors, such as reproductive activity.
2. Full spectrum bulbs are usually sold in 2-8% UVB. How do you decide what percentage to purchase?
 - a. In general, the higher the concentration of UVB being produced, the better. However, regular exposure to excessive quantities (>7%) of UVB can be dangerous. Humans and animals exposed to high concentrations of UVB can develop ocular (eye) damage and skin cancer. The 5 % bulbs are best suited for diurnal (daytime) reptiles, such as lizards and tortoises, that rely on the sun to stimulate vitamin D synthesis, while 2% bulbs are fine for those species not dependent on the sun, such as snakes. The 5% bulb is an excellent choice for a default when the needs of the reptile are not known.
3. What makes one full spectrum bulb better than another? How long can the best UVB bulbs last?
 - a. The qualities of a full spectrum bulb that are generally used to compare bulbs are:
 - i. UVB concentration: 5% best (Repta-Sun 5.0 achieves this)
 - ii. Color rendering index: >90 best (Repta-Sun bulbs achieve this)

- iii. Color temperature: describes warmth or coolness of a light. 5,000-5,500 Kelvin is preferred temperature. (Repta-Sun bulbs achieve this temperature)
 - b. These bulbs lose a great deal of their UVB spectrum within the 1st month of activity. The bulbs then stabilize and should be replaced about every 12 months.
4. In what cases does someone need a 7.0 or 8.0 bulb?
 - a. These higher levels are probably not required, as research has shown that 5% bulbs provide sufficient spectrum to stimulate vitamin D synthesis in green iguanas. The higher % UVB can be dangerous for animals and humans. Common side effects from excessive UVB is ocular (eye) disease and skin cancer.
5. Do reptiles still need exposure to the sun when they are provided full spectrum lighting?
 - a. The sun is the best method for stimulating vitamin D synthesis in reptiles. Reptiles should be provided exposure to the unfiltered (no glass or screening) sun whenever possible. Exposure to the sun, in combination with full spectrum lighting, should be recommended. When providing a reptile exposure to natural unfiltered sunlight, the pet owner should be sure to monitor the environmental temperature. Poorly ventilated enclosures or glass enclosures can achieve excessive temperatures if allowed uncontrolled exposure to the sun. Reptiles placed in these situations can die from hyperthermia.

Approximate UVA and UVB quantities produced by Fluker Farms incandescent and fluorescent bulbs.

Bulb type		UVA	UVA	UVB	
Incandescent		Bulb surface	15 "	Bulb surface	15 "
	Red light	90-120 $\mu\text{W}/\text{cm}^2$	10-15 $\mu\text{W}/\text{cm}^2$	0.0 $\mu\text{W}/\text{cm}^2$	0.0 $\mu\text{W}/\text{cm}^2$
	Day light	250-300 $\mu\text{W}/\text{cm}^2$	15-25 $\mu\text{W}/\text{cm}^2$	2-3 $\mu\text{W}/\text{cm}^2$	0.0 $\mu\text{W}/\text{cm}^2$
	Black light	60-80 $\mu\text{W}/\text{cm}^2$	5-10 $\mu\text{W}/\text{cm}^2$	0.5-1.0 $\mu\text{W}/\text{cm}^2$	0.0 $\mu\text{W}/\text{cm}^2$
	Basking light	75-100 $\mu\text{W}/\text{cm}^2$	10-15 $\mu\text{W}/\text{cm}^2$	< 0.25 $\mu\text{W}/\text{cm}^2$	0.0 $\mu\text{W}/\text{cm}^2$
Fluorescent					
	Repta-Sun 5.0	270-340 $\mu\text{W}/\text{cm}^2$	15-25 $\mu\text{W}/\text{cm}^2$	80-120 $\mu\text{W}/\text{cm}^2$	5-10 $\mu\text{W}/\text{cm}^2$
	Repta-Sun 2.0	100-150 $\mu\text{W}/\text{cm}^2$	10-15 $\mu\text{W}/\text{cm}^2$	30-45 $\mu\text{W}/\text{cm}^2$	0-2 $\mu\text{W}/\text{cm}^2$