

#1 IN REPTILE LIGHTING

FREE



REPTILE LIGHTING GUIDE



INTRODUCTION

The key to healthy and happy reptiles in captivity is approximating the conditions that they would experience in their natural habitat. In the wild, many species are dependent upon natural sunlight for several aspects of their health. Most terrarium animals do not have access to unfiltered sunlight, but fortunately, artificial light sources can be used to provide for the needs of most species. This guide is broken into sections based on animal types and their relationship with the sun in the wild.

UNDERSTANDING BASIC REPTILE LIGHTING

The following is a basic explanation of some relevant lighting terminology:

UVB is an invisible kind of “light,” present in natural sunshine, which is important for many animals in captivity. UVB causes a reaction in the skin that produces active vitamin D3. The D3 is necessary for proper calcium metabolism, and without it, animals will suffer from Metabolic Bone Disease (MBD). Providing UVB lighting is the safest way to get D3 to your animal, since overdose is impossible, unlike with dietary D3 supplements, drops, etc. that can be harmful. Incandescent heat lamps cannot produce UVB, so a fluorescent or mercury vapor lamp must be used to provide it.

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UVA is also a group of light wavelengths that are invisible to humans; however, many animals, including some reptiles, can see UVA and use its visual cues to identify food, mates, rivals, and other important things. For this reason, providing UVA to captive reptiles often stimulates feeding, breeding, and generally more natural behavior.

Visible light is just that: visible. It is the light that, as humans, we are most familiar with since it is what our eyes can see. Visible light is important to terrarium animals because it establishes normal day and night cycles. Lack of a correct photoperiod (light time) can be quite stressful to some reptiles and amphibians.

Infrared is essentially heat radiation, and it is invisible to the human eye. Infrared bulbs and Ceramic Heat Emitters give off infrared with little or no visible light in order to provide heat without disturbing nocturnal behavior or sleeping in captive animals.

A **thermal gradient** is a variance in temperature from one place to another. Specifically, in our applications it means that it is warmer at one end of a cage than at the other. With an appropriate thermal gradient, an animal can change its position in the enclosure in order to regulate its body temperature. In order to accomplish this, heaters are usually concentrated in one area of the cage, while another area is left cooler.

“Full spectrum” is a term that has come to represent the full visible spectrum, and does not necessarily include any UV wavelengths, though many “full spectrum” bulbs do produce some UVA. It should never be assumed that a lamp produces any UVB unless it specifically states it on the packaging.

Flood lamps, as the name implies, flood an area with a wide spread of light. **Spot lamps**, on the other hand, focus their output into a tight beam in order to concentrate it on a particular spot.

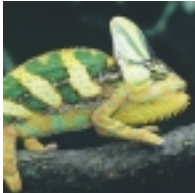




LIZARDS: DIURNAL (DAYTIME ACTIVE)



This category encompasses a wide variety of lizard species that naturally bask in sunlight, including essentially all vegetarian lizards and many more. These creatures use the heat from the sun to regulate their body temperature, and they utilize UVB radiation from the sun to produce the vitamin D3 that they need to properly metabolize calcium. Without the invisible UVB wavelengths, these species of lizards will eventually suffer from a calcium deficiency known as Metabolic Bone Disease (MBD); no matter how much calcium they receive in their diet.



Lizards in this category include the following species and many more:



- All Iguana Species
- Plated Lizards
- Bearded Dragons
- Water Dragons
- Frilled Dragons
- Day Geckos
- Most Monitors
- Horned Lizards
- Tegus
- Basilisks
- Chuckwallas
- All Anoles including Green, Bahaman, and Cuban Anoles



For most of these species, UVB should be provided using Zoo Med's ReptiSun 5.0 Fluorescent, Iguana Light 5.0 fluorescent, or PowerSun UV mercury vapor lamp. The PowerSun UV will also provide heat, but the fluorescents should be used in combination with incandescent lamps like the Repti Basking Spot Lamp, Repti Halogen, and Nightlight Red to establish an appropriate thermal gradient.



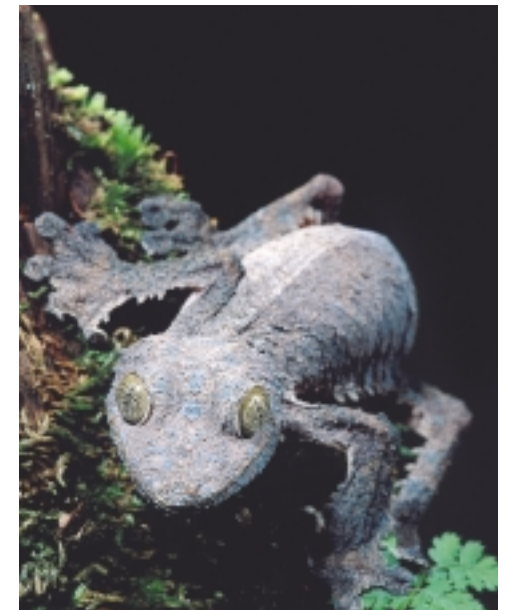
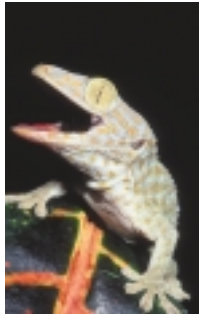
LIZARDS: NOCTURNAL (NIGHTTIME ACTIVE)

In this category are all of the lizard species that, in the wild, would sleep or hide during daylight hours, and consequently would not receive significant sunlight exposure. These creatures have evolved efficient ways to procure and use vitamin D3 in order to do without the UVB in natural sunlight.

Lizards in this category include the following species:

- Most Geckos including Leopard, Tokay, Fat Tail, House, and Crested Geckos
- Alligator Lizards
- Some Skinks

While these creatures may not require UVB, they may benefit from the use of a full spectrum lamp like the ReptiSun 2.0 to establish a normal day and night cycle (photoperiod). Heat can be provided in many ways including Under Tank Heaters and Ceramic Heat Emitters. If lamps are to be used, we usually recommend the Nocturnal Infrared Heat Lamp or the Nightlight Red because they are good 24-hour heat sources that will not disturb the nocturnal behavior of these lizards.





TURTLES AND TORTOISES

Almost all Tortoises and Turtles, in nature, rely on significant levels of sunlight; therefore, they need UVB lighting in captivity, in order to avoid suffering from Metabolic Bone Disease (MBD), and spot or flood heat lamps to effectively thermoregulate.



UVB is critical for all turtles and tortoises in captivity, that includes:

- Red Eared Sliders
- Sulcata (Spur Thigh) Tortoises
- Leopard Tortoises
- Russian Tortoises
- Painted Turtles
- Musk Turtles
- Box Turtles



For most of these species, UVB should be provided using Zoo Med's ReptiSun 5.0 Fluorescent, Iguana Light 5.0 fluorescent, or PowerSun UV mercury vapor lamp. The PowerSun UV will also provide heat, but the fluorescents should be used in combination with incandescent lamps like the Repti Basking Spot Lamp and Nightlight Red to establish an appropriate thermal gradient.



SNAKES:

- Corn and Rat Snakes
- Boas and Pythons
- Garter and Green Snakes

As primarily nocturnal creatures, snakes do not make significant use of direct sunlight. Heat is the primary concern with snakes, and it can be provided in many ways including Under Tank Heaters and Ceramic Heat Emitters. If lamps are to be used for



snake heating, we usually recommend the Nocturnal Infrared Heat Lamp or the Nightlight Red because they are good 24-hour heat sources that will not disturb the nocturnal behavior of snakes. During the day, a ReptiSun 2.0 will provide for excellent viewing and also establish a normal photoperiod.

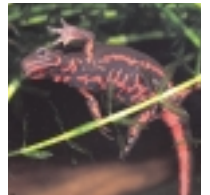
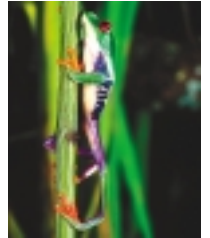


AMPHIBIANS

While most amphibians may not require UVB, they may benefit from the use of a full spectrum lamp like the ReptiSun 2.0 to establish a normal day and night cycle (photoperiod). They will also look better and may behave more naturally when exposed to a ReptiSun 2.0. If lamps are to be used for heating, we usually recommend the Daylight Blue or the Nightlight Red, because amphibians do not really bask, and a flood lamp may contribute less to drying them out than a spot lamp would.

- Tree Frogs
- Pac Man Frogs
- Newts
- Salamanders
- Etc.

Some frog species, like dart frogs and mantellas, are very active during the day, and may benefit from exposure to UVB from the ReptiSun 5.0.





Lamp: **ReptiSun 5.0 and Iguana Light 5.0**

Type: Fluorescent Tube

Primary Function: UVB for vitamin D3 synthesis

Added Benefits: Full spectrum light and UVA, no heat emitted

Notes: These lamps provide the necessary UVB wavelengths for Diurnal Lizards, Turtles, and Tortoises.

ReptiSun 5.0 UVB Fluorescent

15"	Item# FS-15	T-8	14w
18"	Item# FS-18	T-8	15w
24"	Item# FS-24	T-12	20w
36"	Item# FS-36	T-12	30w
48"	Item# FS-48	T-12	40w

Iguana Light 5.0 UVB Fluorescent

15"	Item# FI-15	T-8	14w
18"	Item# FI-18	T-8	15w
24"	Item# FI-24	T-12	20w
36"	Item# FI-36	T-12	30w
48"	Item# FI-48	T-12	40w



Lamp: **ReptiSun 2.0**

Type: Fluorescent Tube

Primary Function: Full spectrum and UVA light

Added Benefits: Can stimulate more natural behavior and create a natural day/night cycle, no heat emitted

Notes: Use this lamp during the day for animals that do not require UVB like most Amphibians, Snakes, and Nocturnal Lizards.

ReptiSun 2.0 Fluorescent

15"	Item# ES-15	T-8	14w
18"	Item# ES-18	T-8	15w
24"	Item# ES-24	T-8	18w
36"	Item# ES-36	T-8	30w
48"	Item# ES-48	T-8	36w



Lamp: **PowerSun UV**

Type: Mercury Vapor Lamp

Primary Function: High intensity UVB

Added Benefits: Full spectrum light and UVA and heat

Notes: This lamp is for large enclosures and animals that require large amounts of UVB like Iguanas, large Tortoises, Bearded Dragons, and more. It can be used in place of the ReptiSun 5.0 to provide UVB.

PowerSun UV

100 Watt Flood	Item# PUV-11
160 Watt Flood	Item# PUV-10

Lamp: **Repti Basking Spot Lamp**

Type: Incandescent Spot

Primary Function: Heat

Added Benefits: Full spectrum light, and some UVA

Notes: This lamp's unique patented double reflector focuses 35% more heat and light into a tight beam. Its focused output is ideal for creating a high temperature basking area for diurnal reptiles.



Repti Basking Spot Lamp

25 Watt	Item# SL-25
50 Watt	Item# SL-50
75 Watt	Item# SL-75
100 Watt	Item# SL-100
150 Watt	Item# SL-150

2-bulb value packs

50 Watt	Item# SL2-50
75 Watt	Item# SL2-75
100 Watt	Item# SL2-100



Lamp: **Repti Halogen**

Type: Halogen Incandescent Spot

Primary Function: Heat

Added Benefits: Full spectrum light, and some UVA, long life (one year guarantee)

Notes: This specially designed halogen produces 15% more heat, light and UVA than comparable reptile basking lamps, and its balanced light output makes animals' colors appear richer.



Repti Halogen

50 Watt	Item# HB-50
75 Watt	Item# HB-75
100 Watt	Item# HB-100
150 Watt	Item# HB-150

Lamp: **Daylight Blue**

Type: Incandescent Flood

Primary Function: Heat

Added Benefits: Full spectrum light, some UVA, true blue glass (not painted or coated) for better heat transfer

Notes: This flood lamp is great for hoods with horizontally mounted fixtures where spot lamps will not work. Use the Daylight Blue for daytime heating of the ambient air in an enclosure. It is also ideal for all non-basking pets like invertebrates and amphibians.

Daylight Blue

15 Watt	Item# DB-15
25 Watt	Item# DB-25
40 Watt	Item# DB-40
60 Watt	Item# DB-60
100 Watt	Item# DB-100
150 Watt	Item# DB-150



Lamp: **Nocturnal Infrared Heat Lamp**

Type: Incandescent Spot

Primary Function: Heat

Added Benefits: Low visible light output, true red glass (not painted or coated) for better heat transfer

Notes: This lamp's spot reflector focuses more heat into your enclosure and minimizes nighttime glare. Create a "hot spot" at night without disrupting the natural day and night cycle. This lamp will

allow

observation of nocturnal behaviors without disturbing them.

Nocturnal Infrared Heat Lamp

50 Watt	Item# RS-50
75 Watt	Item# RS-75
100 Watt	Item# RS-100
150 Watt	Item# RS-150



Lamp: **Nightlight Red**

Type: Incandescent Flood

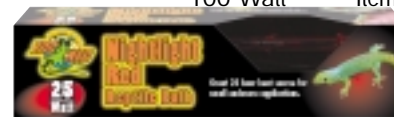
Primary Function: Heat

Added Benefits: Low visible light output, true red glass (not painted or coated) for better heat transfer

Notes: This flood lamp is great for hoods with horizontally mounted fixtures where spot lamps will not work. Use the Nightlight Red for 24-hour heating of the ambient air in an enclosure since its low visible light emissions will not disturb nighttime behaviors. Combine the Nightlight red with a daylight type of bulb and/or added heat during daylight hours.

Nightlight Red

15 Watt	Item# NR-15
25 Watt	Item# NR-25
40 Watt	Item# NR-40
60 Watt	Item# NR-60
100 Watt	Item# NR-100



REPTILE/AMPHIBIAN APPLICATION CHART

- Can use either lamp in category
- +● Can use either lamp in category, but the solid dot is preferred.
- N** Night time heat source.
(If two "N"s are in one species category, you can use either lamp.)

Turtle/Tortoises

	Fluorescent Bulbs			
	ReptiSun 5.0 UVB	Iguanalight 5.0 UVB	ReptiSun 2.0	PowerSun UV
Red Ear Sliders, Cooters (<i>Pseudemys sp.</i>)	○			○
Painted, or Map Turtles (<i>Chrysemys sp.</i>)	○			○
Musk or Mud Turtles (<i>Kinosternon sp.</i>)	○			
Soft Shell Turtles (<i>Trionyx sp.</i>)	○			
Box Turtles (<i>Terrapene sp.</i>)	○			○
Tortoises (<i>All species</i>)	○			○
Wood Turtles (<i>Rhinoclemmys/Geomyda sp.</i>)	○			○

Lizards

	ReptiSun 5.0 UVB	Iguanalight 5.0 UVB	ReptiSun 2.0	PowerSun UV
Green Iguana (<i>Iguana sp.</i>)		○		○
Desert Iguana (<i>Dipsosaurus sp.</i>)				●
Bearded Dragon (<i>Pogona sp.</i>)	○			●
Old World Chameleons (<i>Chamaeleo sp.</i>)	○			○
Anoles (<i>American Chameleon</i>) (<i>Anolis sp.</i>)	●			
Basillisk (<i>Basiliscus sp.</i>)	○			○
Water Dragons (<i>Physignathus sp.</i>)	○			○
Monitor Lizards (<i>Varanus sp.</i>)	○			○
Tegu Lizards (<i>Tupinambis sp.</i>)	○			○
Uromastix Lizards (<i>Uromastix sp.</i>)				●
Swift Lizards (<i>Sceloporus sp.</i>)	○			○
Agama Lizards (<i>Agama sp.</i>)	○			○
Ameiva Lizards (<i>Ameiva sp.</i>)	○			
Leopard Gecko (<i>Eublepharis sp.</i>)			○	
Crested Gecko (<i>Rhacodactylus sp.</i>)			○	
Tokay Gecko (<i>Gekko sp.</i>)			○	
Day Gecko (<i>Phelsuma sp.</i>)	●			
Gold Skink (<i>Mabuya sp.</i>)	○			○
Blue Tongue Skink (<i>Tiliqua sp.</i>)	○			○

Incandescent Bulbs			
Repti Basking Spot Lamp	Nocturnal Infrared Heat Lamp	Daylight Blue Reptile Bulb	Nightlight Red Reptile Bulb
●	N		
●	N		
●	N		
●	N		
●	N		
●	N		
●	N		

Repti Basking Spot Lamp	Nocturnal Infrared Heat Lamp	Daylight Blue Reptile Bulb	Nightlight Red Reptile Bulb
●	N		
●	N		
●	N		
●	N		
○	N	○	N
●	N		
●	N		
●	N		
●	N		
○	N	○	N
○	N	○	N
○	N	○	N
●	N		
●	N		
●	N		

LIGHTING

Snakes

	Fluorescent Bulbs			
	ReptiSun 5.0 UVB	Iguanalight 5.0 UVB	ReptiSun 2.0	PowerSun UV
Boas (<i>Boa sp.</i>)			●	
Pythons (<i>Python sp.</i>)			●	
Corn Snake (<i>Elaphe sp.</i>)			●	
Garter Snake (<i>Thamnophis sp.</i>)			●	
Green Snake (<i>Opheodrys aestivus</i>)			●	
Water Snake (<i>Nerodia sp.</i>)			●	
Gopher Snake (<i>Pituophis sp.</i>)			●	
Kingsnake (<i>Lampropeltis sp.</i>)			●	

Amphibians

	ReptiSun 5.0 UVB	Iguanalight 5.0 UVB	ReptiSun 2.0	PowerSun UV
African Pixie Frog (<i>Pyxicephalus adsporsus</i>)			○	
Leopard Frog (<i>Rana pipiens</i>)			○	
American Tree Frogs (<i>Hyla sp.</i>)			○	
Tropical Tree Frogs (<i>Rhacophorus sp.</i>)			○	
Whites Tree Frog (<i>Litoria caerulea</i>)			○	
Pac Man Frog (<i>Ceratophrys sp.</i>)			○	
Chubby Frog (<i>Kaloula pulchra</i>)			○	
Mantella (<i>Mantella sp.</i>)			○	
Arrow Frogs (<i>Dendrobates sp.</i>)			○	
Fire Belly Newts (<i>Cynops sp.</i>)			○	
Tiger Salamander (<i>Ambystoma sp.</i>)			○	
Fire Salamander (<i>Salamandra salamandra</i>)			○	
Fire Belly Toad (<i>Bombina orientalis</i>)			○	
American Toad (<i>Bufo sp.</i>)			○	
Red Eye Tree Frog (<i>Agalychnis callidryas</i>)			●	
Monkey Frog (<i>Phyllomedusa sauvagei</i>)	●			

Misc. Animals, Archnids, and Terrarium Plants

	ReptiSun 5.0 UVB	Iguanalight 5.0 UVB	ReptiSun 2.0	PowerSun UV
Tarantulas (<i>Asst. Species</i>)			○	
Praying Mantis (<i>Asst. Species</i>)			○	
Millipedes (<i>Asst. Species</i>)			○	
Hissing Cockroach (<i>Gromphadorhina sp.</i>)			○	
Stick Insects			○	
Hermit Crabs (<i>Pagurus armatus</i>)				
Live Terrarium Plants			●	

Incandescent Bulbs			
Repti Basking Spot Lamp	Nocturnal Infrared Heat Lamp	Daylight Blue Reptile Bulb	Nightlight Red Reptile Bulb
	N		
	N		
	N		
○			N
○			N
	N		
	N		

Repti Basking Spot Lamp	Nocturnal Infrared Heat Lamp	Daylight Blue Reptile Bulb	Nightlight Red Reptile Bulb
	N	○	
		○	N
		○	N
	N	○	
	N	○	
	N	○	
	N	○	
	N	○	
		○	N
		○	N
		○	N
	N		
	N		

AQUARIUM LIGHTING

In the aquarium hobby, the goal is usually to recreate an environment that is suitable for aquatic life and is interesting to view. Water quality and temperature are some of the primary concerns, but often lighting is overlooked. There are many different varieties of fish and other aquatic life available in the hobby today; some of them require specialized lighting, and some of them simply display much better under appropriate lighting. Having the right lamp on your tank can increase breeding success, accelerate growth, and enhance coloration in many aquatic organisms.

In this table you will find some basic guidelines for lighting general aquarium types. For more information about each fluorescent lamp, contact our customer service department.



- ✕ A good choice for that tank type.
- An option, but not as good as ✕.
- ⊕ Use these lamps in combination with other for that tank type.

	TropicSun	FloraSun	UltraSun	CoralSun	OceanaSun	ReefSun
Freshwater						
Community Fish <i>(livebearers, tetras, barbs, etc.)</i>	○		✕			
Live Plants <i>(all)</i>		⊕	⊕			
African Cichlids <i>(zebras, peacocks, etc.)</i>					✕	✕
Very Shy Fish <i>(discus, some dwarf cichlids, etc.)</i>	✕	✕				
Saltwater						
Community Fish <i>(damsels, wrasses, angelfish, etc.)</i>			✕		✕	
Large Predatory Fish <i>(lionfish, groupers, puffers, etc.)</i>			✕		✕	
Deep Water Fish					✕	
Reef Tanks <i>(live corals, macroalgae, etc.)</i>			⊕	⊕		
Small Tanks w/single lamp <i>that have some invertebrates</i>						✕



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