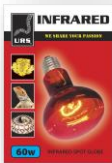


# REPTILE HEAT & LIGHT

Reptiles Do Not make heat for themselves. They maintain necessary body temperatures by taking heat from their environment. The required body temperature varies according to the species, the time of day, and the stage of digestion of food. For this reason, the temperatures in an enclosure must vary the length of the vivarium (temperature gradient). In the wild, the heat is provided by the sun. All reptiles benefit from lighting that closely resembles the sun. Even nocturnal animals will bask in sunlight from time to time.

## HEATING

Reptiles regulate their body temperature by the environment. They cannot see far into the red spectrum, so an infrared heat globe is perfect for heating the air temperature and for use both day and night.



## GRADIANT

It's important the enclosure has a gradient with a clear warm end and cooler end for the animal to move around in to increase or decrease its body temperature. That's the reason for fixing the heat on one side.

## THERMOSTAT

Regulates the heat source so that the enclosure does not overheat the reptile. Reptiles more quickly succumb to overheating compared to lack of heat.

## UV LIGHTING

Important for the process of absorption of Calcium from the gut, particularly in diurnal species. Different strengths for desert vs temperate species.



## MESH GLOBE COVERS

Surround the heat and light sources to reduce the chance of the reptile coming into direct contact and risking burns or electrocution.

## HEATING

There are two main types of heat: basking heat for reptiles that spend a lot of time on branches or high in the cage (Arboreal), and ground heat for reptiles that spend a lot of time on the ground (Terrestrial). Using a thermostat to properly regulate heat sources is essential. The image above demonstrates basking heat but products such as heat mats and heat cords are used for floor heating an enclosure.



Ultraviolet Light ( UVA & UVB ) is essential for diurnal Lizards, Diamond Pythons and will benefit all Reptiles. UV lighting is required to synthesize vitamin D<sub>3</sub> and this in turn is essential for the absorption of calcium through the gut. Its absence will result in illnesses such as Metabolic Bone Disease and Calcium Rigor (i.e. ricketts, dragging of the hind legs and spinal deformities). Most UVB produced by the sun does not pass through glass and this, with the danger of overheating by direct sun through glass, means that the only satisfactory method of lighting is using the correct UVA & UVB tubes or globes. Outback Max tubes or Compact Max globes have been designed for use with lizards, snakes and pythons.

**CAUTION:** Use a qualified electrician whenever installing heating and lighting.

**THE THERMAL GRADIENT.** Because reptiles need to vary their temperatures, they must have a choice of ground and air temperatures within their enclosure. 'Thermal Gradient' is a term describing this temperature variation from one end of the enclosure to the other. Differences of 5 degrees to 8 degrees Celsius are usual, depending on the species kept. For this reason, heating should be set up at one end of the vivarium only. Vents should be in all enclosures to allow the air to circulate.

**TEMPERATURE CONTROL.** The safest and easiest way to control the temperature in an enclosure is to use a thermostat. There are a number of different types of thermostat. Choosing one will greatly depend on the type of heating source you are using. Along with a thermostat, a thermometer should always be used to monitor the performance of the heating element and the thermostat. This will immediately identify if the heat source is not powerful enough to heat the environment efficiently or if the thermostat has malfunctioned.

**ULTRAVIOLET LIGHT.** This can be provided by using Outback Max UVA/UVB tubes or Compact Max Energy style UV globes. They come in different strengths to suit lizards, turtles, snakes, pythons, amphibians and arachnids. These UV products are made especially for Reptiles and amphibians. They simulate sunlight by providing the beneficial UVA and UVB wavelengths that increase appetite, activity and reproductive behavior in captive reptiles as well as to assist in facilitating the production of vitamin D<sub>3</sub> essential for gut absorption of calcium.

The UV tubes should be fitted in a batten and turned on for daylight hours only as they also contain white light. Artificial UV sources have a limited life span and must be renewed every six to twelve months even though they still may be producing visible light. As with heating, shielding of the light is necessary if the cage inhabitant can make direct contact. Shields should be made of smooth mesh. Plastic diffusers will not allow adequate UV rays to reach the reptile and should be avoided.

Most UV sources are not heaters. A UV tube will increase the temperature by about 2 degrees Celsius in the immediate vicinity. They do not provide adequate heat for the rest of the vivarium. However, on extremely warm days lights may have to be turned off to stop further contribution to already warm temperatures.