

REPTILE LIGHT AND HEATING OPTIONS

There are a vast number of options available for heating and lighting for reptiles. The following is not an exhaustive list but hopes to clarify any confusion between the different types and what they do.

Sunlight is very important for all species of reptiles. It provides two things:

- **Heat**
- **Ultra Violet Light (UV)**

Heat in the form of infrared light is necessary to warm a reptile's body to its preferred optimum temperature (POT). This is the temperature at which the reptile's metabolic functions are performing at optimum. Too hot and they get heat stressed, too cold and their ability to move, to digest food, perform vital functions such as fight infection etc. is compromised.

UV light comes in two main types A and B. It is not visible to humans but is visible to many other species including reptiles, birds and insects. UV-A is found in some normal household lights and in full spectrum lights and is used to help animals see colours, shapes and patterns This helps them identify males and females of their species in the wild and is used to make the lighting in vivariums more natural looking.

UV-B is NOT found in household or full spectrum lights and needs to be provided as a separate UV-B lamp. UVB light is important for Vitamin D and calcium metabolism in many animals and helps prevent many health problems such as metabolic bone disease. UVB is filtered out by glass and plastics so is not present in sunlight coming through a glass window or vivarium glass.

Lamps producing UVB light also emit visible light which we can see. The visible light may look bright but the UVB will grow weaker with time and the lamp will need changing. Because we cannot see UVB, the only way to tell if a lamp is emitting UVB light is to measure it – this can be done with a small, hand held UVB reader. If you do not have one of these, then replace your lamps regularly. Follow the manufacturer's advice on how far away the lamp needs to be from the reptile and how frequently it needs changing.

UVB Lights

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Globes which produce only UVB light (no heat) come in several varieties:

Strip lights which look like fluorescent lights



And Spot lights



They will also have different percentages such as 2%, 5%, 10% which relates to the light's output - although there are many things which influence this. We typically use 5 – 10% lamps depending on the species. Lower percentage for animals which live in rainforests or only come out at dawn and dusk and higher percentages for animals who bask a lot.

All UVB lights will slowly produce less UV over time. Some need changing every 3 – 6 months and some every 6 – 12 months. The decision to change the lamp must be based on the manufacturer's guidelines unless you have a UVB reader to test for yourself. In the hospital we prefer to use Arcadia and Zoomed brands as we find them very reliable and they do not need changing as frequently as some of the other varieties. All UVB lamps work better with a reflector to direct the light towards the reptile (see below)



Heat Lamps

These are sometimes called basking lamps or full spectrum lamps and come in all sorts of varieties and colours; red, blue, black etc. The two main distinctions to be made with heat lamps are those that emit light

and those that don't. We do not recommend the coloured artificial looking heat lamps such as those below. The colours serve no purpose for the reptile and may cause stress.

Coloured heat lamps



Ceramic heat lamps



Ceramic heat lamps provide heat only, no light. They are cheap, do not need changing regularly and last a long time. The main advantage of these is that they can provide supplemental heat in the night time when having a 'light' on would disrupt your reptiles sleeping patterns. There is no difference between the black and white ceramics in relation to output. They can be used in conjunction with a UVB lamp for heat + UVB and come in different wattages. The higher the wattage the more heat output. If you have a large open area to heat such as a tortoise table or large vivarium then get a higher wattage but no matter what wattage you are using you will need to measure the temperature with a maximum minimum digital thermometer and adjust your heating accordingly.

Combined UV and Heat Lamps

Some lamps emit heat *and* UVB light. Examples of these are Mercury vapour lamps or mercury vapour ballast lamps. These also come in different wattages and are an excellent source of UVB and heat for reptiles. These lamps also need a reflector to work well. The main advantages are that reptiles don't have

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to choose between sitting under heat or light, but receive both at the same time as they would from sunlight in the wild. The good quality ones will last 12 months before needing replacing (the UV B output will wane just like any UV light). The main disadvantage is that they can blow the globe if you connect them to timers and you may need another heat source (such as a ceramic) at night time when these are turned off +/- a second UV source for more extended coverage over a larger enclosure.



The different wattage lamps emit more (160w) or less (80w) heat and need to be chosen based on the size of the area you are heating and measurements of the temperature within that environment taken at both the hot and cold ends of the enclosure.



Other useful pieces of equipment include a lamp stand which is good for suspending lamps over tortoise tables etc and a maximum, minimum digital thermometer which is essential to know what your lowest and highest temperatures are at all times of day and night.