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# Reptile Lighting | 1

## Guide



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*"The sun, with all those planets revolving around it and dependent on it, can still ripen a bunch of grapes as if it had nothing else in the universe to do."*

*Galileo Galilei (1564)*

Measuring UVB intensity near Lokobe Forest, Madagascar.



*"... Many commercial reptile lights today exceed this 270 mW/cm<sup>2</sup> in an attempt to show the greatest UVB radiation. Some even exceed over 2000 mW/cm<sup>2</sup>, which is absolutely dangerous! Especially if you know that the 270 value of the sun is only measured at high noon on a clear day while most light bulbs are on between 10 and 12 hours with constant values. Reptiles accumulate these UVB rays during the day (10 to 12 hours), so there is absolutely no need to even emit 270 mW/cm<sup>2</sup> continuously."*

**We know, we have been there...**

Each year Exo Terra organizes at least one expedition to one of the world's reptile hotspots. In these reptile biodiversity concentrations we collect ecological, geographical and climatological data; including UVB levels. This is the only way to get a better insight into the needs of reptiles and amphibians. This collected data is incorporated into our product development process in order to ensure optimal results.

Cover photo: *Phyllanthus lesueurii*, Australia

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## Introduction

The Exo Terra Reptile Lighting Guide provides information on the various types of reptile lighting available, complete with an in-depth explanation about light and the crucial part it plays in successful reptile keeping.

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## More is not always better!

### *What is the role of lighting in reptile keeping?*

Light has several functions:

Indicating night/day cycle

Providing light to see properly

Environment perception (visual & UV)

Agonistic and signaling communication (visual & UV)

Physiological well-being (UVA)

Photosynthesis of pre-vitamin D3 (UVB)

Coloration is light intensity dependent

Thermo-regulation (infrared)

### *Is the importance of light often underestimated?*

Yes, absolutely. Especially when it comes to intensity of both UV and visual light. Often though, the importance of high levels of UVB light is overestimated; "More is not always better". In lighting there are many aspects and it is important to offer a balanced lighting system. It has to cover the simple aspects from indicating day and night cycle to more complex issues like photosynthesis. Unfortunately consumers often only use incandescent lights, which in most cases are totally inadequate.

### *What is the relationship between reptiles and the sun?*

The sun's energy ultimately drives all life processes on earth and reptiles are no exception. If we fail to provide the important life sustaining aspects of this energy in captive conditions we will fail to maintain thriving terrarium populations, not to mention reproduction.

### *Which artificial light source is capable of providing visual light, UV light and infrared light (or heat)?*

The only light source today that is capable of providing the three important aspects of light (UV, visual and infrared light) in a somewhat balanced way is a mercury vapor bulb. Unfortunately these bulbs are not suitable for the smaller terrariums because of their high wattage.

### *If heat is infrared light, how do I create heat gradients?*

In heat you have conduction, convection and radiation. Heat gradients are automatically created when a light source is used as a heat source on top of the terrarium. The first energy to strike the ambient air and the objects therein is the radiation. The heated air will then result in convection whereas the heated objects will provide conduction of the heat. The nature of different matters (air, wood, glass, plants, sand, etc.) will result automatically in heat gradients. A well-decorated terrarium increases these heat gradients by preventing the radiation to reach the substrate or underlying dimensions.



### ***It is said that nocturnal and carnivorous reptiles do not need Ultraviolet light, in which case is an incandescent light bulb sufficient?***

Not necessarily. Incandescent bulbs are suitable light sources for nocturnal reptiles in some cases. However, we have to take into account that many nocturnal reptiles are exposed to direct or scattered sun light during the day. Some reptiles rest/sleep on tree trunks or outcrops during the day, some deliberately bask during daytime hours while feeding at night, and others start their activity before sunset. This means that some form of photosynthesis takes place with these species.

Also many carnivorous reptiles still need UV light for photosynthesis purposes, correct environment, food and signaling perception. Not all carnivorous prey is capable of supplying the necessary vitamin D3 levels. If the prey's liver is not consumed, vitamin D3 intake is inadequate.

We can thus state that many nocturnal and carnivorous still require balanced lighting systems and that several more factors, other than just day and night cycle or infrared exposure have to be taken into account.

### ***What are the pros and cons of fluorescent lights?***

Fluorescents are the most economical light source, both in energy consumption and price. They are capable of emitting high levels of UV combined with acceptable levels of visual light. The higher the amount of visual light the lower the UV emission and vice versa. A combination of two fluorescents (visual + UV) and a basking light (incandescent) is recommended since fluorescent lights fail to produce sufficient heat.

Compact fluorescents have the same spectrum characteristics and emission as linear fluorescents. Due to their compact size, and because they are self ballasted, they are often easier to install than linear bulbs that still require a ballast.

### ***What are the pros and cons of Mercury vapor lights?***

These bulbs have it all: UV, high visual light output and sufficient infrared radiation. However, the disadvantage is that they consume a lot of energy (100 watt and plus) in order to operate properly. The lower the wattage, the less stable the bulb is. They are thus only suitable for very big terrariums.

### ***What are the pros and cons of Incandescent lights?***

Incandescents are inexpensive but are not very energy efficient when it comes to visual light. They are excellent as an infrared source to increase the ambient air temperature or as basking light. This type of light source also fails to produce any UVB radiation.

### ***What are the pros and cons of Metal halide?***

Metal halides are one of the best possible light sources around, the drawback is that they are very expensive. They have a very high light output, are capable of producing sufficient UV levels, and have a high infrared radiation. The installation is very expensive since a ballast is needed plus a special fixture.

The new HCl (Osram) or CDM (Philips) fits any HQI (Metal halide) fixture but has a greater visual light production with the same energy consumption. The advantages are the same then as those of metal halide.

### ***What are the pros and cons of Halogen lights?***

Halogen lights are somewhat more energy efficient than regular incandescent lights since they produce more visual light.

### ***How much Ultraviolet light do reptiles receive in nature?***

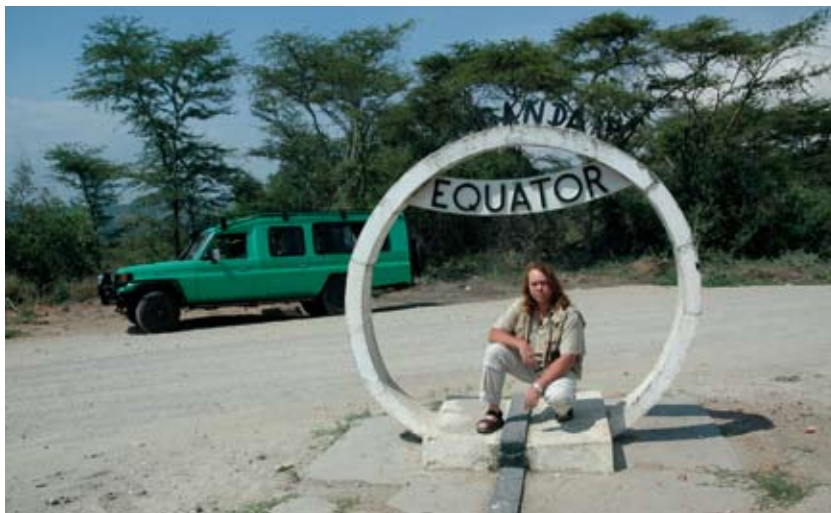
Ultraviolet radiation is expressed in microwatt per square centimeter ( $\text{mW}/\text{cm}^2$ ) and varies tremendously from the poles (low) towards the equator (high). The amount of UVB radiation received on the equator on a clear day at noon is around  $270 \text{ mW}/\text{cm}^2$ . However, this high amount of radiation decreases as the day passes, in the same way that it had increased since sunrise and taking into consideration that not all days are clear. In the wild, basking activities of most reptiles are limited to the early morning and later afternoon. The rest of the day is spent in the shade, in burrows, crevices or other shaded places, or at various places in leafy bushes, shrubs or trees. In tropical forests, home to many types of reptiles and amphibians, only a little direct sun penetrates the forest canopy and underlying layers to reach the ground.

### ***Can we create these conditions in a terrarium?***

Yes, absolutely, but...

Many commercial reptile lights today exceed this  $270 \text{ mW}/\text{cm}^2$  in an attempt to show the greatest UVB radiation. Some even exceed over  $2000 \text{ mW}/\text{cm}^2$ , which is absolutely dangerous! Especially if you know that the 270 value of the sun is only measured at high noon on a clear day while most light bulbs are on between 10 and 12 hours with constant values. Reptiles accumulate these UVB rays during the day (10 to 12 hours), so there is absolutely no need to even emit  $270 \text{ mW}/\text{cm}^2$  continuously.

### ***Conclusion: "More is not always better!"***



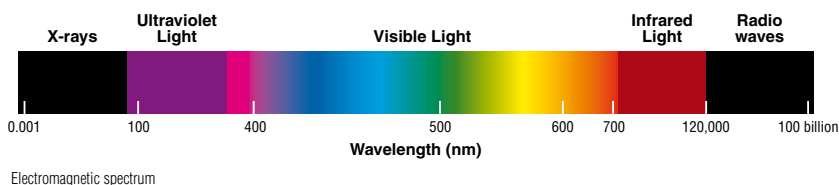
# 1 What is light?

It is by the sun's energy that all life-processes on earth are driven. Without the sun's constant energy input our planet would quickly radiate away its own energy in short order, making all life extinct.

Light is referred to as electromagnetic radiation because the true nature of light is based on tiny electromagnetic fields, called photons. These photons of light can have many different energy levels or wavelengths, which are expressed in nanometers (nm). The most familiar ones are the visible wavelengths; every wavelength is represented by a different colour. For example, the Sun is yellow because its light is most powerful at the visible wavelength of yellow.

However, there are many other wavelengths beyond visible light. All of them together are called the electromagnetic spectrum. At the most powerful end of the spectrum are the gamma rays, followed by X-rays, then ultraviolet light, and then visible light, which takes up only a tiny fraction of the electromagnetic spectrum and is sandwiched between ultraviolet and infrared light. Infrared light is familiar to us as heat. The spectrum continues as microwaves and ends in radio waves, the least powerful photons.

Although light is much more complex, there are only three facets important for reptile husbandry, ultraviolet light, visible light and infrared.



## 2 Visible Light

Besides providing us with light to see properly, the indication of daytime and night time (light and dark) is an important function. The visible light spectrum ranges from 390 to 700 nm. The light registered by the eye, and the colour of it, depends on the strength of each wavelength. The Colouring Rendering Index (CRI) expresses the ability of a light source to illuminate an object as compared to natural light, with natural sunlight having a CRI of 100. Nowadays, every artificial light source with a CRI above 95 is considered to be a full-spectrum light, since it is able to light-up an object as it would appear under natural light and thus receive a certain amount of any wavelength within the visible spectrum. Closely related is the colour temperature, expressed in Kelvin (K), to define the colour of the light emitted.

In describing colour temperatures, a low colour temperature corresponds to a warm or a red-yellow appearance like incandescent lamps, around 2500 Kelvin. Fluorescent lamps,

operating at 4500 Kelvin or higher, emit a white-bluish light. In colour temperature, the higher the Kelvin temperature, the whiter and bluer the light.

The standard average temperature for daylight is about 5600K, although it can range from as low as 2000K at sunset, to more than 18000K in overcast or humid conditions. To obtain natural visible light conditions in the terrarium, it is important to choose a light source with the highest possible CRI and a colour temperature from around 6000K for optimal colours in animals and plants. Terrarium plants benefit from certain wavelengths within the visible light for photosynthesis. This is a process by which plants use the energy from light to produce sugar, the "fuel" used by all living things. The conversion of light into usable energy is associated with the green pigment Chlorophyll. A light source with a high output in the 400-450 nm range promotes plant growth and health.

## 3 Ultraviolet Light

Ultraviolet or UV light is a high energy portion of the electromagnetic spectrum, just beyond visible light.

The UV-spectrum is divided into three wavelength groups:

- **UVA** - Long wave ultraviolet A, ranges from 320-400nm (nanometres) and is of significant importance for reptiles.
- **UVB** - Medium wave ultraviolet B, ranges from 290-320nm and is the most important for reptile purposes
- **UVC** - Short wave ultraviolet C, ranges from 180-290nm and is dangerous to all living organisms

### 3.1 UVA

It has been demonstrated that UVA can influence agonistic, reproductive, and signalling behaviours in reptiles. As reptiles can see into the UVA range (320-400 nm) it will affect the way they see things. The colour of their food or their bodies will appear different in a reptile's eye than the way we see it if exposed to UVA radiation. Signalling by exposing body parts (e.g. Anolis sp.) or changing colours (e.g. Chameleon sp.) is common in reptiles, these signals are perceived and also interpreted differently by reptiles if UVA radiation is absent. Failure to provide UVA to diurnal reptiles can cause stress by altering the reptile's perception of its surroundings and how it responds to it. This is crucial for breeding or keeping them around for the length of their natural life span.

### 3.2 UVB

UVB is generally defined as the wavelength band from 290-320nm, but it is the band between 290-305 nm that is most important. Sufficient irradiation within this narrow sub-band of the UVB range is a requirement for the photosynthesis of vitamin D<sub>3</sub> in skin. Although radiation below wavelength of 310 nm promotes photosynthesis of vitamin D<sub>3</sub>, radiation above 310 nm destroys vitamin D<sub>3</sub> that has been already synthesised in skin tissue or obtained nutritionally. Skin temperature has also a significant effect on the pace of vitamin D<sub>3</sub> synthesis.



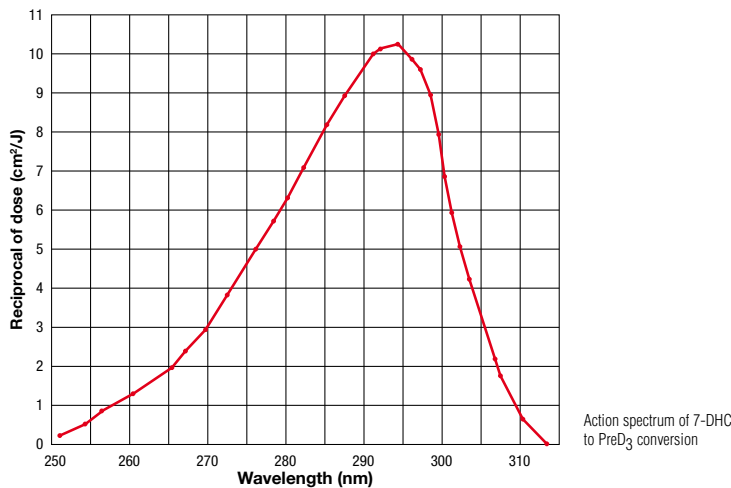
### 3.2.1 Vitamin D<sub>3</sub>

In the wild, most reptiles synthesize their vitamin D<sub>3</sub> from the UVB component of sunlight. Vitamin D<sub>3</sub> is essential for the effective metabolism of dietary calcium in reptiles. UVB reacts with the precursor of vitamin D, 7-dehydrocholesterol, in the skin to produce provitamin D<sub>3</sub>. Depending on heat and the aid of a mechanism in the skin, provitamin D<sub>3</sub> is converted into vitamin D<sub>3</sub> itself. The liver and kidneys transform vitamin D<sub>3</sub> into its active form, a hormone (1,25, hydroxy-vitamin D) that regulates calcium metabolism. Carnivorous and omnivorous reptiles get a high proportion of their vitamin D<sub>3</sub> requirement from their food. However, plants do not contain D<sub>3</sub> (cholecalciferol), instead they contain D<sub>2</sub> (ergocalciferol), which is far less efficient in calcium metabolism than D<sub>3</sub>. Herbivorous reptiles are therefore far more dependent upon the quantity and quality of artificial lighting than carnivorous specimens.

If inadequate vitamin D<sub>3</sub> is available, the animal will rapidly develop the condition known as Metabolic Bone Disease. In this condition, bone density suffers and various other serious metabolic problems occur. Symptoms include swelling, lethargy, general weakness, tremors and softening of the shell in turtles and tortoises. Next to a UVB light source, adequate levels of calcium must be present in the diet or must be provided by means of dietary supplementation. Juvenile reptiles are most at risk, although adults too can be affected if maintained in a state of deficiency for a long enough period. Egg laying females are also at great risk, due to the extra demands in calcium necessary for egg production.

### 3.2.2 D<sub>3</sub> Yield Index

The proportion of radiation energy that takes part in the photosynthesis of vitamin D<sub>3</sub> is used to calculate the D<sub>3</sub> Yield Index. If there is no UVB radiation emitted by a specific bulb within the action spectrum of 7-DHC to preD<sub>3</sub> conversion, the bulb has no photosynthesis capabilities. It is concluded that the percentage of UVB radiation from the total radiation figure does not necessarily give a true indication of a lamp's capability to maintain production of vitamin D<sub>3</sub>.



## 4 Infrared Light

The exothermic nature of reptiles (being cold-blooded) emphasizes the importance of infrared radiation (heat) for thermoregulation. The infrared segment of the electromagnetic spectrum occurs just below or "infra" to red light and is not visible. It can, however, be perceived as heat by the skin. The sun produces most of its energy output in the infrared segment of the spectrum. The best artificial source of heat for diurnal reptiles is through an overhead radiant source by means of incandescent light bulbs, all emitting high amounts of infrared light (+700 nm).

## 5 The Intensity

The earth's climate is determined by the amount of solar radiation that strikes the surface. Factors like the sun's position, the earth's rotation, geographic location, the ozone layer, clouds, air-humidity, elevation, environment, etc. influence the intensity of light. Also within the micro-habitat the light intensity of both visual and non-visual light varies, depending on the density of the vegetation or geological conditions. The amount of light falling on a surface is known as the illuminance and is measured in lumens per square meter or lux. The illuminance of direct sunlight is approximately 100,000 lux, but normal daylight, which is filtered through a cloudy sky, is between 5,000 and 10,000 lux, while moonlight can be as little as 0.25 lux.

Ultraviolet radiation is expressed in microwatt per square centimetre (mW/cm<sup>2</sup>) and varies tremendously from the poles (low) towards the equator (high). The amount of UVB radiation received on the equator on a clear day at noon lies around 270 mW/cm<sup>2</sup>. However, this high amount of radiation decreases as the day passes, in the same way that it had increased since sunrise and taking into consideration that not all days are clear. In the wild, basking activities of most reptiles are limited to the early morning and later afternoon. The rest of the day is spent in the shade, in burrows, crevices or other shaded places, or at various places in leafy bushes, shrubs or trees. In tropical forests, home to many types of reptiles and amphibians, only a little direct sun penetrates the forest canopy and underlying layers to reach the ground.

**The UV radiation and light levels to which the reptiles are exposed can vary, depending on a variety of factors:**



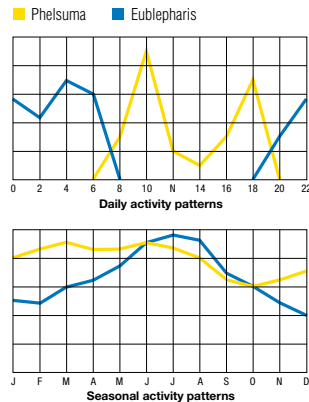
Rain forest, Seychelles

### 5.1 Habitat

Forest and shrub areas provide more shade than plains and deserts. Dense forests have many gradients of UV radiation, with high levels in the forest canopy to very low UV-levels on the forest floor. Grasslands and savannahs provide the same gradients for smaller species, whereas larger species are more exposed. In deserts there is less protection from direct sunlight, and UV levels can even be amplified by reflection. Some mountainous regions have valleys, meaning that sunlight may only penetrate the habitat several hours after sunrise, considerably reducing the length of exposure to UV rays.

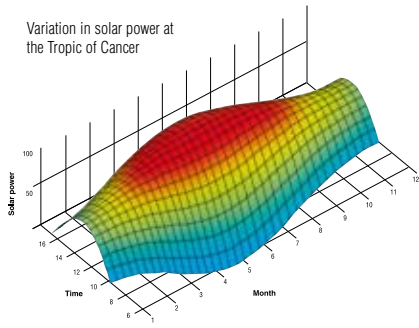
## 5.2 Activity patterns

Diurnal (active during daytime) animals receive higher levels of UV than nocturnal species for obvious reasons. But even diurnal reptiles do not spend all day in direct sunlight. Many species seek cover during the hottest time of the day to avoid overheating. Their basking periods are limited to morning hours and late afternoon. These activity cycles may change in reptiles from seasonal regions. Some nocturnal animals are exposed to UV radiation as their resting location receives sunlight or some even come out of their hiding spots to bask in the sun for thermo-regulation purposes.



## 5.3 Time of Day

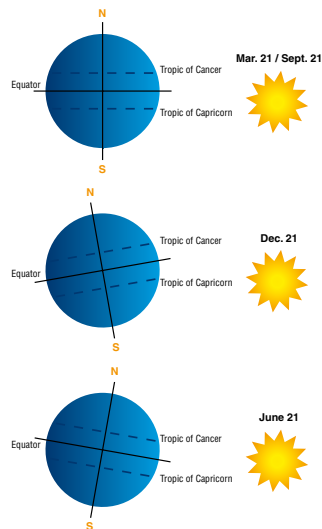
Variation in solar power at the Tropic of Cancer



The sun is at its highest in the sky around noon. At this time, the sun's rays have the least distance to travel through the atmosphere and UVB levels are at their highest. In the early morning and late afternoon, the sun's rays pass through the atmosphere at an angle and their intensity is greatly reduced.

## 5.4 Time of Year

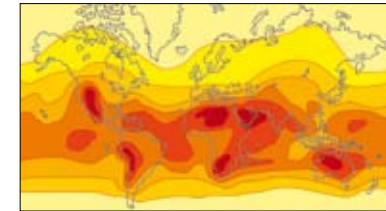
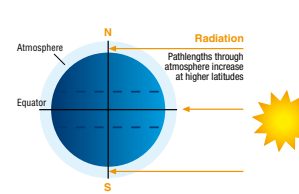
The sun's angle varies with the seasons, causing the intensity of UV rays to change. UV intensity tends to be highest during the summer months.



In the Northern Hemisphere, the sun shines directly overhead at noon at the Tropic of Cancer on the first day of summer, at the equator on the first day of spring and autumn, and directly overhead at the Tropic of Capricorn on the first day of winter.

## 5.5 Latitude

The sun's rays are strongest at the equator, where the sun is most directly overhead and UV rays must travel the least distance through the atmosphere. Ozone also is naturally thinner in the tropics compared to the mid- and high-latitudes, so there is less ozone to absorb the UV radiation as it passes through the atmosphere. At higher latitudes the sun is lower in the sky, so UV rays must travel a greater distance through ozone-rich portions of the atmosphere and, in turn, expose those latitudes to less UV radiation.



UVB - Hotspots

## 5.6 Altitude

UV intensity increases with altitude because there is less atmosphere to absorb the ultraviolet rays.

## 5.7 Weather Conditions

Clouds play a big role in the amount of UV radiation reaching the ground. On a cloudy day, depending on the shape and thickness of the clouds, they can absorb and reflect 35-85% of the sun's radiant energy, and along with the other effects prevent all but a negligible amount of radiation from reaching the ground. Many reptiles seek the security of their burrows or hiding places during rain, stormy and overcast conditions.



Sunrays, Reunion Island

## 5.8 Reflection

Some surfaces, such as snow (80%), sand (12%), grass (10%), or water (5%) can reflect much of the UV radiation that reaches them. Because of this reflection, UV intensity can be deceptively high even in shaded areas.

## 5.9 Ozone

The ozone layer absorbs some of the UV radiation that would otherwise reach the earth's surface. Ozone levels vary over the year (even throughout the day) and from one geographical location to another.



# Lighting

Without the sun's energy, all life on earth would cease to exist. It is by the sun's energy that all life forces are driven. Without it, our planet would quickly radiate away its own energy in short order, making all life extinct.

Although light is much more complex, there are only three facets of light that are important for reptile husbandry: ultraviolet light, visible light and infrared light. In order to create these three biological aspects of sunlight artificially, Exo Terra has developed several specialized lights. Reptiles require appropriate and high quality lighting in order to meet certain different metabolic needs.

As it is almost impossible to accommodate all of these needs in a single light source, a combination of different light sources is necessary in most cases. This table will help you in making the right lighting choice.

Light Source	UVB	UVA	Visual	Infrared
Sun Glo		*	**	**
Sun Glo Spot		*	**	**
Sun Glo Tight Beam		*	**	***
Sun Glo Halogen		*	***	***
Night Glo			*	***
Heat Glo			*	***
Solar Glo	***	***	***	***
Repti Glo 2.0	*	**	***	*
Repti Glo 5.0	**	***	**	*
Repti Glo 10.0	***	***	**	*

## Self-Ballasted Mercury Vapour

The Exo Terra Solar Glo Sun Simulating Lamp is the solution to one of the most important aspects of keeping reptiles and amphibians, providing the benefits of natural sunlight. The proper balance of ultraviolet light (including UVA and UVB), visual light and infrared light (heat) in one easy-to-install bulb makes the Exo Terra Solar Glo the choice of professional breeders. The Solar Glo is a full spectrum light with carefully tuned peaks to ensure appetite, activity, brilliant colours, and calcium absorption through Vitamin D3 production, and above all to prevent metabolic bone disease.

The Exo Terra Solar Glo is available in two wattages, 125 W and 160 W. Exo Terra refrained from developing lower wattages as lower wattages simply do not generate enough heat for these self-ballasted bulbs to work properly, making them unstable and unreliable.

### Solar Glo Sun Simulating Lamp

Solar Glo	
PT2192	PT2193
125W	160W



- Optimal levels of UVB, UVA, visual light and heat in one bulb
- Self-ballasted mercury vapour bulb
- Provides the benefits of natural sunlight
- Helps prevent metabolic bone disease
- Increased UVB penetration distance (+30 cm)



The Exo Terra Glow Light (PT2056) or The Exo Terra Wire Light (PT2062w) is perfectly suited for the Exo Terra Solar Glo



## Halogen

Halogen bulbs are actually an advanced variation of incandescent bulb technology. One of the major factors that shorten an incandescent bulb's lifespan is the evaporation of the tungsten within the bulb. By adding a trace amount of a halogen gas (methyl bromide) inside the bulb, a chemical reaction removes the tungsten from the wall of the glass and deposits it back onto the filament, extending the life of the bulb resulting in a longer life. The higher temperatures of halogen lighting contribute to a whiter light, a higher light output and a greater efficiency.

### Sun Glo Halogen

#### Halogen Neodymium Lamp

- Highly energy efficient broad spectrum daylight bulb
- Optimizes heat penetration through increased infrared levels
- Enriches colouration through Neodymium
- Stimulates breeding behaviour and physiological well-being through UVA rays
- Can be combined with Night Glo or Heat Glo for a 24-hour cycle



Sun Glo Halogen Neodymium Lamp

PT2181	PT2182	PT2183	PT2184
50W	75W	100W	150W



*Elaphe guttata*, USA



## Incandescent Light Bulbs

Exo Terra's Sun Glo incandescent light bulbs (except the Sun Glo Tight Beam) have a glass sleeve with mixed-in Neodymium, a rare earth metal that changes the colour balance of the illumination, giving terrarium animals, decoration and plants a more natural appearance. The Night Glo has a dark blue glass sleeve allowing it to emit a moon-like light. All bulbs are manufactured in coloured glass, thereby preventing the fading or cracking as seen in coated bulbs. Coloured glass also increases heat radiation transfer. Incandescent lamps are the most common sources of terrarium lighting. Although incandescent bulbs are more suitable as a heat source than as a visual light source, they are the perfect form of complementary lighting as all reptiles need a form of heat radiation. In some cases, incandescent lamps are sufficient as some terrarium animals do not need excessive visual light based on their behaviour, for example night active reptiles, arachnids or some amphibians. Some snakes will do well when only these types of lamps are used, as they do not need ultraviolet radiation. Incandescent bulbs fail to produce ultraviolet B (UVB) rays.

*Nephurus asper*, Australia



### Sun Glo

#### Neodymium Daylight Lamp

- Broad spectrum daylight lamp for terrariums
- Creates heat gradients for thermo regulation
- Increases ambient air temperature
- Stimulates breeding behavior through UVA rays
- Can be combined with Night Glo or Heat Glo for a 24-hour cycle

A broad spectrum daylight lamp with a Neodymium sleeve. The spectrum is ideal for plant's photosynthesis and the UVA (ultraviolet A) light contributes to reptiles' physiological well-being. Another important factor is the heat emitted by this bulb to increase the over all ambient temperature in the terrarium.

Sun Glo Neodymium Daylight Lamp

PT2100	PT2102	PT2104	PT2110	PT2111	PT2112	PT2114
T10 / 15W	T10 / 25W	T10 / 40W	A19 / 60W	A19 / 100W	A21 / 100W	A21 / 150W



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## Sun Glo Neodymium Daylight Basking Spot Lamp

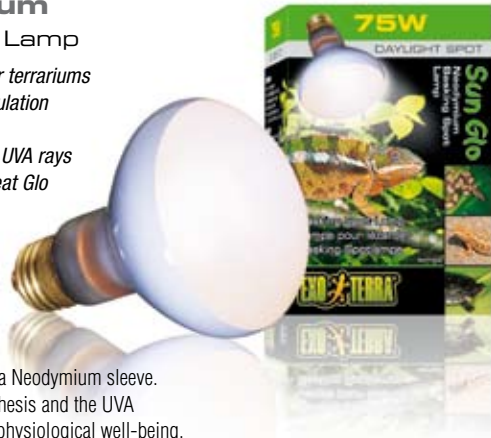
- Broad spectrum daylight spot lamp for terrariums
- Creates a basking area for thermoregulation
- Increases ambient air temperature
- Stimulates breeding behavior through UVA rays
- Can be combined with Night Glo or Heat Glo for a 24-hour cycle



A broad spectrum daylight spot lamp with a Neodymium sleeve. The spectrum is ideal for plant's photosynthesis and the UVA (ultraviolet A) light contributes to reptiles' physiological well-being. The spot allows one to direct the heat and light in a certain direction to create basking sites in the terrarium. a

Sun Glo Neodymium Daylight Basking Spot Lamp

PT2131	PT2132	PT2133	PT2134
R20 / 50W	R20 / 75W	R25 / 100W	R30 / 150W



## Sun Glo Tight Beam Basking Spot Lamp

- 35% increase of light and heat in the beam
- Creates a basking area for thermoregulation
- Increases ambient air temperature
- Stimulates breeding behavior through UVA rays
- Can be combined with Night Glo or Heat Glo for a 24-hour cycle



A lamp specially designed as a basking spot lamp. The tight beam can be directed precisely on an area to create a basking site. The heat and light in the beam is increased by 35%, allowing greater distances between the bulb and the basking site. The UVA (ultraviolet A) light contributes to reptiles' physiological well-being.

Sun Glo Tight Beam Basking Spot Lamp

PT2135	PT2136	PT2138	PT2140
S20 / 50W	S20 / 75W	S25 / 100W	S30 / 150W



## Night Glo Moonlight Lamp

- Moonlight Lamp
- Simulates natural moonlight
- Perfect for nocturnal viewing
- Provides tropical night time temperatures
- Stimulates breeding behavior in reptiles and amphibians
- Can be combined with Repti Glo or Sun Glo for a 24-hour cycle



The bulb simulates natural moonlight to allow nocturnal viewing without disturbing the animal's day and night cycle. The light emitted is bluish due to the use of blue glass. The heat generated by the bulb is minimal but enough to provide tropical night time temperatures. The lower wattage of these bulbs does not interfere with natural night drops in temperature.

Night Glo Moonlight Lamp

PT2120	PT2122	PT2124	PT2126	PT2130
T10 / 15W	T10 / 25W	T10 / 40W	A19 / 50W	A19 / 75W



## Heat Glo Infrared Heat Lamp

- Increases the overall air temperature in the terrarium
- Provides heat, essential for activity and digestion
- Emits infrared heat waves
- Excellent 24 hours radiant heat source
- Will not disrupt normal activity cycle
- Ideal for nocturnal viewing
- Can be combined with Repti Glo or Sun Glo for a 24-hour cycle



The bulb emits infrared heat waves and is a typical heating lamp. The spot lamp has a special build-in reflector to direct the heat in any direction required. The red glass transmits Infrared waves produced by the special filament of the bulb. The reddish light will not disrupt normal activity during night or day, which makes it an excellent 24 hour heat source.

Heat Glo Infrared Heat Lamp

PT2141	PT2142	PT2144	PT2146
R20 / 50W	R20 / 75W	R25 / 100W	R30 / 150W





## Fluorescent Bulbs

The most important feature of a fluorescent bulb is the ability to emit sufficient UVB light (ultraviolet B), a component of sunlight, whereas an incandescent lamp only emits very little amounts of UVA light. It is impossible to accommodate a high visible light emission with a high ultraviolet (UV) output. The more visible light emitted, the less UV-radiation and vice versa.

Other factors to consider: not all reptiles or terrarium animals need the same amount of UVB-radiation: nocturnal versus daylight activity, geographical and climatological conditions (ex: rainforests versus deserts). The distance from the bulb to the animal is equally important.

Exo Terra's fluorescent bulbs are classified according to their percentage of UVB output. For tropical and sub-tropical reptiles, 5% bulbs (Repti Glo 5.0) are perfectly adequate, provided they are correctly sited, changed regularly, and the number of hours of exposure is sufficient. 10-12 hours daily has proven a satisfactory exposure level for most species. Animals living in deserts, which are areas with high UVB levels, should be exposed to 10% UVB bulbs (Repti Glo 10.0). We also recommend the Repti Glo 10.0 when the distance from the bulb to the animal exceeds 30 cm (12") or when the bulbs are placed above a dense ventilation screen. The Repti Glo 2.0 emits very little UVB light (2 %), in most cases not sufficient for vitamin D3 synthesis. The higher the UV output, the less visual light is emitted. The light also gets a bluer appearance.

It is recommended to combine a high UVB output (Repti Glo 5.0 and 10.0) with a very high visual light output (Repti Glo 2.0) for optimal results. Fluorescent bulbs do not provide sufficient heat. A separate heat source is required in addition (ex: incandescent basking lamp).

Light Source	UVB (mW/cm <sup>2</sup> )	Luminous Flux (LM)	CRI Colour (Ra)	Temperature (K)
Repti Glo 2.0	40	1420	98	6750
Repti Glo 5.0	200	850	88	21000
Repti Glo 10.0	400	660	75	N/A

## Compact Fluorescent

The advantage of the Exo Terra Repti Glo Compact Fluorescent bulb is its size and the fact that it is self-ballasted. A regular screw fitting is sufficient to operate these bulbs. The spiral shape of the bulb enables vertical or horizontal mounting without compromising performance.



## Repti Glo 2.0 Compact Full Spectrum Terrarium Lamp

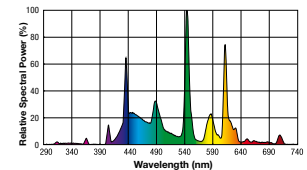
- Ideal spectrum for all reptiles & amphibians
- Stimulates plant growth
- High visual light output
- High Colour Rendering Index of 98 (CRI) - 6700 K
- Recommended in combination with Repti Glo 5.0 or Repti Glo 10.0, depending on the reptile's requirements
- Stimulates appetite, activity and reproductive behaviour through UVA radiation

The Exo Terra Repti Glo 2.0 is a general light source with a high visual light output and a very high colour rendering index (CRI), but a lower UVB radiation. This bulb is suitable for snakes, all amphibians (frogs, toads and salamanders) and nocturnal animals. Plants will thrive under this light as well. It is also a perfect complementary light to a UVB bulb to boost visual light. Fluorescent bulbs lose their UV radiation and approximately 50% of their lighting output quality within one year. Changing your terrarium bulb regularly ensures optimal light conditions and UV radiation to keep your reptiles healthy. Visit [www.exo-terra.com](http://www.exo-terra.com) to "Restore The Rays".



Repti Glo 2.0 Compact

PT2190	PT2191
13W	26W



## Repti Glo 5.0 Compact Tropical Terrarium Lamp

- Ideal for all tropical and sub-tropical reptiles
- High UVB output
- Effective up to 30 cm (12")
- Provides necessary UVB rays for optimal calcium metabolism
- Stimulates appetite, activity and reproductive behaviour through UVA radiation
- Recommended in combination with Repti Glo 2.0 for a higher visual light output

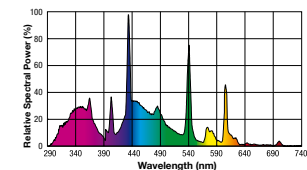
The Exo Terra Repti Glo 5.0 has a moderate to high UVB output, similar to that of shady environments such as rain forests and other tropical locations. Reptiles living in these habitats receive less UV radiation because of the many climatological conditions (fairly high humidity, changes in weather, etc) that prevent direct sunlight from reaching them or their basking sites. Fluorescent bulbs lose their UV radiation and approximately 50% of their lighting output quality within one year. Changing your terrarium bulb regularly ensures optimal light conditions and UV radiation to keep your reptiles healthy.

Visit [www.exo-terra.com](http://www.exo-terra.com) to "Restore The Rays".



Repti Glo 5.0 Compact

PT2186	PT2187
13W	26W





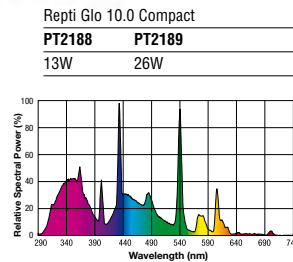
## Repti Glo 10.0 Compact

### Desert Terrarium Lamp

- Ideal for all desert dwelling reptiles
- Ultra High UVB output
- Effective up to 50 cm (20")
- Provides necessary UVB rays for optimal calcium metabolism
- Recommended for use with screened terrariums; terrariums with dense screen covers (screens can filter out UVB rays)
- Recommended in combination with Repti Glo 2.0 for a higher visual light output



The Exo Terra Repti Glo 10.0 has a very high UVB output similar to that associated with desert environments. Desert locations receive more direct sunlight than any other because of fewer clouds, less air humidity and no plants or trees to provide shade. Therefore desert reptiles are more exposed to UV radiation than any other type of reptile. This bulb can also be used on screened terrariums or terrariums with dense screen covers to ensure UVB penetration. Dense screens can filter out up to 50% of the UVB rays. Fluorescent bulbs lose their UV radiation and approximately 50% of their lighting output quality within one year. Changing your terrarium bulb regularly ensures optimal light conditions and UV radiation to keep your reptiles healthy. Visit [www.exo-terra.com](http://www.exo-terra.com) to "Restore The Rays".



## Linear Fluorescent

The linear Repti Glo bulbs have a higher output and divide the energy more efficiently over wider terrariums. Exo Terra has a full range of seven sizes of each type, Repti Glo 2.0, Repti Glo 5.0 and Repti Glo 10.0, in order to cater to any terrarium size. The longer sizes can even be placed on multiple terrariums.

To fit our range of fluorescent bulbs, both linear and compact, Exo Terra developed a complete line of terrarium tops and linear fluorescent bulb controllers. Almost all of these fluorescent fixtures have multiple fittings to enable a combination of different Repti Glo bulbs in order to simulate any micro habitat suitable for a specific species.



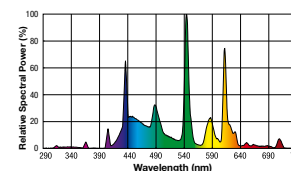
## Repti Glo 2.0

### Full Spectrum Terrarium Lamp

- Ideal spectrum for all reptiles & amphibians
- Stimulates plant growth. High visual light output
- Stimulates appetite, activity and reproductive behaviour through UVA radiation
- High Colour Rendering Index of 98 (CRI)
- 6700 K Colour temperature
- Recommended in combination with Repti Glo 5.0 or Repti Glo 10.0



PT2149	Repti Glo 2.0/T8	Daylight Terrarium Lamp	15"	38cm	14W
PT2150	Repti Glo 2.0/T8	Daylight Terrarium Lamp	18"	45cm	15W
PT2151	Repti Glo 2.0/T8	Daylight Terrarium Lamp	24"	60cm	20W
PT2152	Repti Glo 2.0/T8	Daylight Terrarium Lamp	30"	75cm	25W
PT2153	Repti Glo 2.0/T8	Daylight Terrarium Lamp	36"	90cm	30W
PT2154	Repti Glo 2.0/T8	Daylight Terrarium Lamp	42"	105cm	40W
PT2155	Repti Glo 2.0/T8	Daylight Terrarium Lamp	48"	120cm	40W
PT2157	Repti Glo 2.0/T10	Daylight Terrarium Lamp	36"	90cm	30W
PT2158	Repti Glo 2.0/T10	Daylight Terrarium Lamp	48"	120cm	40W



### Restore The Rays

Sign-up online at [www.exo-terra.com](http://www.exo-terra.com) and we will remind you when it's time to replace your bulb. Restore the Rays is a module of Exo Terra's Reptilium Information System (RIS).



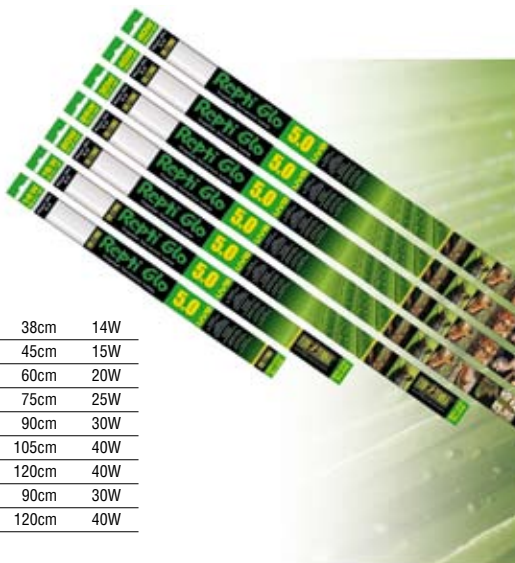
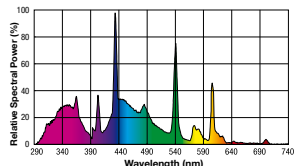


## Repti Glo 5.0

### Tropical Terrarium Lamp

- Ideal for all tropical and sub-tropical reptiles
- High UVB output. Effective up to 30 cm (12")
- Provides necessary UVB rays for optimal calcium metabolism
- Stimulates appetite, activity and reproductive behaviour through UVA radiation
- Recommended in combination with Repti Glo 2.0 for a higher visual light output

PT2159	Repti Glo 5.0/T8	Tropical Terrarium Lamp	15"	38cm	14W
PT2160	Repti Glo 5.0/T8	Tropical Terrarium Lamp	18"	45cm	15W
PT2161	Repti Glo 5.0/T8	Tropical Terrarium Lamp	24"	60cm	20W
PT2162	Repti Glo 5.0/T8	Tropical Terrarium Lamp	30"	75cm	25W
PT2163	Repti Glo 5.0/T8	Tropical Terrarium Lamp	36"	90cm	30W
PT2164	Repti Glo 5.0/T8	Tropical Terrarium Lamp	42"	105cm	40W
PT2165	Repti Glo 5.0/T8	Tropical Terrarium Lamp	48"	120cm	40W
PT2167	Repti Glo 5.0/T10	Tropical Terrarium Lamp	36"	90cm	30W
PT2168	Repti Glo 5.0/T10	Tropical Terrarium Lamp	48"	120cm	40W

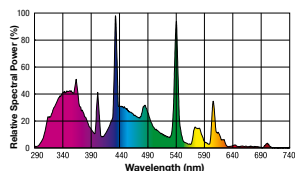


## Repti Glo 10.0

### Desert Terrarium Lamp

- Ideal for all desert dwelling reptiles
- Ultra High UVB output. Effective up to 50 cm (20")
- Provides necessary UVB rays for optimal calcium metabolism
- Recommended for use with screened terrariums; terrariums with dense screen covers (screens can filter out UVB rays)
- Recommended in combination with Repti Glo 2.0 for a higher visual light output

PT2169	Repti Glo 10.0/T8	Desert Terrarium Lamp	15"	38cm	14W
PT2170	Repti Glo 10.0/T8	Desert Terrarium Lamp	18"	45cm	15W
PT2171	Repti Glo 10.0/T8	Desert Terrarium Lamp	24"	60cm	20W
PT2172	Repti Glo 10.0/T8	Desert Terrarium Lamp	30"	75cm	25W
PT2173	Repti Glo 10.0/T8	Desert Terrarium Lamp	36"	90cm	30W
PT2174	Repti Glo 10.0/T8	Desert Terrarium Lamp	42"	105cm	40W
PT2175	Repti Glo 10.0/T8	Desert Terrarium Lamp	48"	120cm	40W
PT2177	Repti Glo 10.0/T10	Desert Terrarium Lamp	36"	90cm	30W
PT2178	Repti Glo 10.0/T10	Desert Terrarium Lamp	48"	120cm	40W



## Fixtures

The fixture is an important aspect of the lighting and heating system, ensuring the safety and proper function of the applied light or heat source. All fixtures comply with both European and North American safety regulations and have been subject to testing by independent laboratories. Exo Terra is committed to ensuring you and your reptile's safety.



## Terrarium Canopies

Exo Terra has developed a range of terrarium canopies, most notably for the Exo Terra Glass Terrariums. These canopies are available for both compact fluorescent and linear fluorescent bulbs. All canopies (except PT2225) are equipped with double fittings to enable the combination of different Repti Glo bulbs in order to obtain the right light output depending on the species and climate. The Dual Top canopy series even comes with one or two additional fittings for the specifically designed basking spot lamp (Sun Glo Halogen). Although designed for the Exo Terra Glass Terrariums, these canopies fit most metal screen covers.



Exo Terra Terrarium set-up with the PT2625 Terrarium Stand, the PT2600 Glass Terrarium, the PT2225 Compact Top and the Exo Terra Digital Thermo- and Hygrometers (All items sold separately)

Exo Terra Terrarium set-up with the PT2627 Terrarium Stand, the PT2605 Glass Terrarium, the PT2226 Compact Top and the Exo Terra Digital Thermo- and Hygrometers (All items sold separately)

Exo Terra Terrarium set-up with the PT2629 Terrarium Stand, the PT2610 Glass Terrarium, the PT2227 Compact Top and the Exo Terra Digital Thermo- and Hygrometers (All items sold separately)

PT2225	Compact Fluorescent Terrarium Canopy	30 x 9 x 15 cm / 11.8" x 3.5" x 5.9"
PT2226	Compact Fluorescent Terrarium Canopy	45 x 9 x 20 cm / 17.7" x 3.5" x 7.8"
PT2227	Compact Fluorescent Terrarium Canopy	60 x 9 x 20 cm / 23.6" x 3.5" x 7.8"
PT2229	Compact Fluorescent Terrarium Canopy	90 x 9 x 20 cm / 36" x 3.5" x 7.8"

## Compact Top

### Compact Fluorescent Terrarium Canopy

- Fits one Exo Terra compact fluorescent or incandescent bulb (maximum 26 W)
- With built-in reflector
- Easy to install
- Sliding rim to mount accessories

The Exo Terra Compact Top Canopy is a compact fluorescent terrarium canopy designed for use with the Exo Terra Glass Terrarium. This easy-to-install canopy accommodates compact fluorescent bulbs or low wattage incandescent bulbs. A combination of two different Exo Terra Repti Glo compact fluorescent bulbs can be used (PT2226-2227) to create the ideal ultraviolet/visual light ratio or a combination with an incandescent light source such as the Exo Terra Sun Glo to increase the ambient air- temperature. Optional accessories such as the Exo Terra Digital Thermometer and Hygrometer and the Exo Terra Thermostat and Hygrostat can be slid into the special sliding rim on the top of the canopy.



Can be mounted on the front and/ or on the back screen



Special Sliding Rim for accessories



Fits the Exo Terra Glass Terrarium



Compact Top Canopy 30 cm - 11.8" (for use with PT2600 & PT2602 Exo Terra Glass Terrarium). Bulb not included.



Compact Top Canopy 45 cm - 17" (for use with PT2605 & PT2607 Exo Terra Glass Terrarium.) Bulbs not included.



Compact Top Canopy 60 cm - 23.6" (for use with PT2610 & PT2612 Exo Terra Glass Terrarium.) Bulbs not included.



Compact Top Canopy 90 cm - 36" (for use with PT2613 & PT2614 Exo Terra Glass Terrarium). Bulbs not included.





Chamaeleo johnstoni,  
Uganda

## Dual Top

### Fluorescent & Halogen Terrarium Canopy

- Provides optimal levels of UV, Visual Light and heat in one canopy
- Fits two Exo Terra Repti Glo Fluorescent Bulbs and one or two Exo Terra Sun Glo Halogen Basking Spot Lamp(s)
- Two power cords and switches for individual control
- Rigid Anodized Aluminum Housing
- Sliding rim to mount accessories
- Rigid Aluminum Construction
- Halogen GU-10 Fitting
- Dual Fluorescent Fixtures



Exo Terra Terrarium set-up with  
PT2627 Terrarium Stand, the  
PT2607 Glass Terrarium, the PT2230  
Dual Top and the Exo Terra Digital  
Thermo- and Hygrometers  
(All items sold separately)



Exo Terra Terrarium set-up with  
PT2629 Terrarium Stand, the  
PT2612 Glass Terrarium, the PT2232  
Dual Top and the Exo Terra Digital  
Thermo- and Hygrometers  
(All items sold separately)

The Exo Terra Dual Top Canopy is a fluorescent and halogen combination terrarium canopy designed for use with the Exo Terra Glass Terrarium. This durable aluminum canopy can accommodate two Exo Terra Repti Glo fluorescent bulbs and one or two (PT2232 & PT2233) 35W Exo Terra Sun Glo Halogen Basking Spot Lamp(s). The two power cords and switches enable individual control of both light sources. The halogen light increases the ambient air-temperature in the terrarium and can be controlled with an optional Exo Terra Thermostat. A combination of two different Exo Terra Repti Glo bulbs can be used in order to create the ideal ultraviolet, visual light and heat combination for any specific reptile. Optional accessories, such as the Exo Terra Digital Thermometer and Hygrometer and the Exo Terra Thermostat and Hygrostat, can be slid into the special sliding rim on the top of the canopy.

<b>PT2230</b>	Dual Top 45 x 9 x 20 cm / 17.7" x 3.5" x 7.8"
<b>PT2232</b>	Dual Top 60 x 9 x 20 cm / 23.6" x 3.5" x 7.8"
<b>PT2233</b>	Dual Top 90 x 9 x 20 cm / 36" x 3.5" x 7.8"



Can be mounted on the front and/  
or on the back screen



Two Power Cords for optimal Control  
Individual Switches per Light Source



Special Sliding Rim for accessories



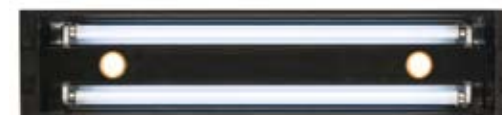
Fits the Exo Terra Glass Terrarium



Dual Top Canopy 45 cm - 17" (for use with PT2605 & PT2607  
Exo Terra Glass Terrarium.) Bulbs not included.



Dual Top Canopy 60 cm - 23.6" (for use with PT2610 &  
PT2612 Exo Terra Glass Terrarium.) Bulbs not included.



Dual Top Canopy 90 cm - 36" (for use with PT2613 & PT2614 Exo Terra  
Glass Terrarium.) Bulbs not included.



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## Fluorescent Light Controllers

The Exo Terra Light Units are the most flexible solution for fitting all types of linear fluorescent tubes onto any type of terrarium. All units come with a double fitting to enable the combination of different Repti Glo bulbs in order to obtain the right light output depending on the species and climate. The Exo Terra Light Cycle Unit has even a timer and a linear fluorescent bulb dimmer built in.

### Light Unit

Electronic Terrarium Lamp Controller

- Fits two fluorescent bulbs
- Ideal for use with Exo Terra Repti Glo and other fluorescent bulbs
- More energy efficient than conventional ballasts or light strips
- No flickering; less stressful for reptiles and amphibians
- Water-resistant end-caps for maximum safety
- Long end-cap leads
- On/Off Switch



PT2235	Light Unit T8/T10	2 X 20W
PT2237	Light Unit T8/T10	2 X 30W
PT2239	Light Unit T8/T10	2 X 40W



The Exo Terra Light Unit Electronic Terrarium Lamp Controller provides flexible lighting solution for your terrarium. Just mount the electronic ballast housing near the terrarium, and connect the fluorescent bulbs to the water-resistant end caps. The long, flexible end-cap leads allow you to position the fluorescent bulbs very close to the animals, necessary when UVB bulbs are used (ie: Repti Glo 5.0 and 10.0). The long end-cap leads also provide the versatility to mount bulbs over any type of terrarium, regardless of size.

### Light Cycle Unit

Electronic Dimming Terrarium Lamp Controller

- Fits two fluorescent bulbs
- Dims fluorescent tubes (dusk and dawn effect!)
- Built-in timer
- Ideal for use with Exo Terra Repti Glo and other fluorescent bulbs
- More energy efficient than conventional ballasts or light strips
- No flickering; less stressful for reptiles and amphibians
- Water-resistant end-caps for maximum safety
- Long end-cap leads
- On/Off Switch

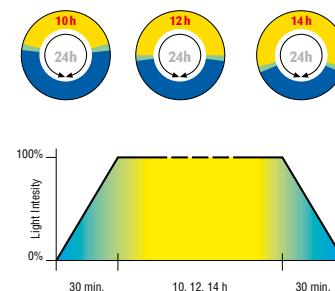


PT2241	Light Cycle Unit T8/T10	2 X 20W
PT2243	Light Cycle Unit T8/T10	2 X 30W
PT2245	Light Cycle Unit T8/T10	2 X 40W



The Exo Terra Light Cycle Unit Electronic Dimming Terrarium Lamp Controller, is an electronic ballast, a timer and a dusk - dawn simulator in one. The timer can be set for three lighting periods: 10, 12 or 14 hours. When a daytime cycle starts it will take about 30 minutes to bring the light output of the bulb to 100%, simulating a natural dawn period. At the end of each daytime cycle it will take again about 30 minutes to go from 100% light output to 0%, simulating a natural dusk period. This is less stressful for the animals and even stimulates breeding behaviour in many species of reptiles. It gives the animals time to retreat into their burrows or hiding places. The Exo Terra Light Cycle Unit provides a flexible lighting solution for your terrarium. Just mount the electronic ballast housing near the terrarium, and connect the fluorescent bulbs to the water-resistant end caps. The long, flexible end-cap leads allow you to position the fluorescent bulbs very close to the animals, necessary when UVB bulbs are used (ie: Repti Glo 5.0 and 10.0). The long end-cap leads also provide the versatility to mount bulbs over any type of terrarium, regardless of size.

#### 3 possible cycles





## Screw-based Fixtures

For our wide range of incandescent light bulbs, and some of our specialty bulbs, Exo Terra developed two types of screw-based fixtures. These heavy duty fixtures are composed of high quality safety components such as porcelain fittings, extra long power cords, an on/off switch, etc. Ideal for use with a variety of bulbs, such as incandescent bulbs, compact fluorescent bulbs, self ballasted mercury vapour bulbs and ceramic heat emitters (Wire Light only).

### Wire Light

#### Porcelain Clamp Lamp

- Heat-resistant porcelain socket
- Rated for up to 250 Watts
- Ideal for Heat Wave Lamps (ceramic heat emitters), Solar Glo lamps (self-ballasted mercury vapour bulbs), or regular incandescent bulbs



PT2060 Wire Light Small

PT2062 Wire Light Large

The Exo Terra Wire Light has a heat resistant porcelain socket designed to withstand up to 250 Watts. Ideal for use with Heat Wave Lamps (ceramic heat emitters), self-ballasted mercury vapour bulbs, and all types of regular incandescent bulbs. The wire guard prevents unnecessary heat build-up. The Exo Terra Wire Light is the only clamp Lamp that meets all safety regulations when used in conjunction with the Exo Terra Heat Wave Lamp.



#### Wire-Light PT2060 for use with:

Heat Wave Lamp 40 W (PT2044)  
Heat Wave Lamp 60 W (PT2045)  
Heat Wave Lamp 100 W (PT2046)  
Heat Wave Lamp 150 W (PT2047)

#### Wire-Light PT2062 for use with:

Heat Wave Lamp 250 W (PT2048)  
Solar Glo 125 W (PT2192)  
Solar Glo 160 W (PT2193)

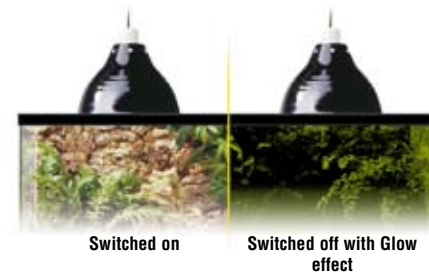
### Glow Light

#### Porcelain Clamp Lamp + Glow Reflector

- Day and Night Fixture in one
- Provides long-lasting luminous, reflective glow
- Heat Resistant porcelain socket
- Ideal for use with compact fluorescent and incandescent bulbs
- Prevents stress
- Ideal for nocturnal viewing



The Exo Terra Glow Light gives you the versatility of placing heat and/or light sources on your terrarium where needed. The device is sturdily constructed, with a metal reflector, heat resistant ceramic socket, and a spring-loaded swivel clamp. It can be easily turned off and on by the switch, mounted on the extra long power cord. The inside of the reflector is coated with a highly reflective luminous coating that continues to glow long after the lamp is turned off. This allows diurnal reptiles and amphibians to retreat in their night burrow or hiding without stress. A moon-like glow enables nocturnal reptiles and amphibians to see properly without disturbing their night cycle. It is also ideal to monitor your animals during night time, without switching on the lights which can cause stress and disorientation.



Switched on

Switched off with Glow effect

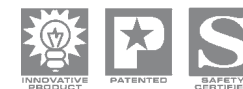
The coating reflects the otherwise wasted light rays and stores the light energy during daytime and slowly releases it at night, which makes this fixture more energy efficient than conventional fixtures. No need to add an additional night bulb, unless used as a heating source.



#### Positions on terrarium

One or more Exo Terra Glow Lights can be mounted on the rim of the terrarium or aquarium and directed to the basking area with the spring-loaded swivel clamp or it can be put on top of a metal screen cover in any desired location.

*This multi-purpose fixture fits a variety of screw-based bulbs; Sun Glo, Sun Glo Tight Beam, Sun Glo Neodymium, Sun Glo Halogen, Repti Glo Compact 2.0, 5.0 & 10.0, Heat Glo, Solar Glo 125W, etc.*



PT2052	Glow Light Small	14cm/5.5"
PT2054	Glow Light Medium	21cm/8.5"
PT2056	Glow Light Large	25cm/10"



www.exo-terra.com



## Applications

### Snakes

	Incandescent bulbs			Fluorescent bulbs		
	Sun Glo Neodymium Daylight Lamp	Sun Glo Neodymium Basking Spot Lamp	Sun Glo Tight Beam Basking Spot Lamp	Night Glo Moonlight Lamp	Heat Glo Infrared Heat Lamp	Repti Glo 2.0 Daylight Terrarium Lamp
Boas ( <i>Boa constrictor</i> )	●					●
Amazon Tree Boa ( <i>Corallus hortulanus</i> )	●			●		●
Emerald Tree Boas ( <i>Corallus caninus</i> )	●					●
Burmese Pythons ( <i>Python molurus</i> )	●					●
Ball Pythons ( <i>Python regius</i> )	●					●
Green Pythons ( <i>Morelia viridis</i> )	●					●
Corn Snakes ( <i>Elaphe guttata</i> )	●			●		●
King Snakes ( <i>Lampropeltis getula</i> )	●			●		●
Eastern Garter Snakes ( <i>Thamnophis sirtalis</i> )	●			●		●
Green Grass Snakes ( <i>Ophedrys vernalis</i> )	●			●		●

### Lizards

	Incandescent bulbs			Fluorescent bulbs		
	Sun Glo Neodymium Daylight Lamp	Sun Glo Neodymium Basking Spot Lamp	Sun Glo Tight Beam Basking Spot Lamp	Night Glo Moonlight Lamp	Heat Glo Infrared Heat Lamp	Repti Glo 2.0 Daylight Terrarium Lamp
Green Iguana ( <i>Iguana iguana</i> )		●			●	○
Desert Iguana ( <i>Dipsosaurus dorsalis</i> )			●	●		○
Bearded Dragon ( <i>Pogona vitticeps</i> )			●	●		○
Green Basilisk ( <i>Basiliscus plumifrons</i> )		●		●		○
Water Dragons ( <i>Physignathus cocincinus</i> )		●		●		○
Ornate Dobb Lizards ( <i>Uromastix ornatus</i> )			●		●	○
Texas Horned Lizard ( <i>Phrynosoma cornutum</i> )			●	●		○
Friilled Lizards ( <i>Chlamydosaurus kingii</i> )			●		●	○
Savannah Monitors ( <i>Varanus albigularis</i> )		●			●	○
Tegus ( <i>Tupinambis teguixin</i> )		●			●	○
Madagascar Day Geckos ( <i>Phelsuma madagascariensis</i> )		●		●		○
Yellow Headed Gecko ( <i>Lygodactylus luteopicturatus</i> )			●	●		○
Leopard Geckos ( <i>Eublepharis macularius</i> )	●			●		●
Wonder Geckos ( <i>Teratoscincus scincus</i> )	●			●		●
Fat Tailed Geckos ( <i>Hemiteconyx caudicinctus</i> )	●			●		●
Eyelash Geckos ( <i>Rachodactylus ciliatus</i> )	●			●		●
Flat Tailed Geckos ( <i>Uroplatus henkeli</i> )	●			●		○
Green Anolis ( <i>Anolis carolinensis</i> )		●		●		○
Fire skink ( <i>Riopa fernandi</i> )		●		●		○
Blue Tongued Skinks ( <i>Teliqua scincoides</i> )			●	●		○
Panther Chameleon ( <i>Furcifer pardalis</i> )		●		●		○
Veiled Chameleon ( <i>Chameleo calyptratus</i> )		●		●		○

### Tortoises & Turtles

	Incandescent bulbs			Fluorescent bulbs		
	Sun Glo Neodymium Daylight Lamp	Sun Glo Neodymium Basking Spot Lamp	Sun Glo Tight Beam Basking Spot Lamp	Night Glo Moonlight Lamp	Heat Glo Infrared Heat Lamp	Repti Glo 2.0 Daylight Terrarium Lamp
Russian Tortoises ( <i>Agriemys horsfieldii</i> )			●		●	○
Spurred Tortoises ( <i>Geochelone sulcata</i> )			●		●	○
Hermann's Tortoises ( <i>Testudo hermanni</i> )			●		●	○
Red Foot Tortoises ( <i>Chelonoidis carbonaria</i> )			●		●	○
Radiated Tortoise ( <i>Astrochelys radiata</i> )			●			○
Leopard Tortoises ( <i>Geochelone pardalis</i> )			●		●	○
Florida Box Turtle ( <i>Terrapene carolina</i> )		●		●		○
Painted Turtle ( <i>Chrysemys picta</i> )		●		●		○
Red Eared Slider ( <i>Trachemys scripta</i> )		●		●		○
Map Turtle ( <i>Graptemys geographica</i> )		●		●		○

### Amphibians

	Incandescent bulbs			Fluorescent bulbs		
	Sun Glo Neodymium Daylight Lamp	Sun Glo Neodymium Basking Spot Lamp	Sun Glo Tight Beam Basking Spot Lamp	Night Glo Moonlight Lamp	Heat Glo Infrared Heat Lamp	Repti Glo 2.0 Daylight Terrarium Lamp
Azure Poison Arrow Frogs ( <i>Dendrobates azureus</i> )	●					●
Red Eye Tree Frogs ( <i>Agalychnis callidryas</i> )	●			●		●
Green Tree Frog ( <i>Hyla cinerea</i> )	●			●		●
Fire Bellied Toads ( <i>Bombina orientalis</i> )	●			●		○
Monkey Frogs ( <i>Phyllomedusa sauvagei</i> )	●			●		○
Fire Salamanders ( <i>Salamandra salamandra</i> )	●			●		●

### Others

	Incandescent bulbs			Fluorescent bulbs		
	Sun Glo Neodymium Daylight Lamp	Sun Glo Neodymium Basking Spot Lamp	Sun Glo Tight Beam Basking Spot Lamp	Night Glo Moonlight Lamp	Heat Glo Infrared Heat Lamp	Repti Glo 2.0 Daylight Terrarium Lamp
Hermit Crabs		●		●		●
Spiders	●			●		●
Stick Insects	●			●		●
Praying Mantis	●			●		●
Life Plants	●	●		●		●

○ It is recommended to always use repti-glo 2.0 as a general visible light source.



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