



REPTILE LIGHTING GUIDE





*Expedition 2011
Sri Lanka*

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.

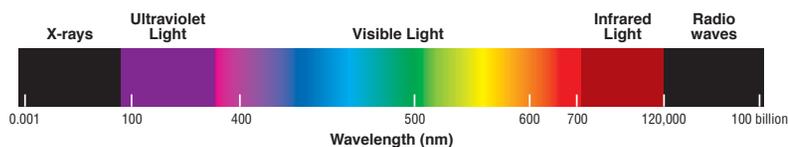
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What is Light?

Sunlight arrives at the top of the earth's atmosphere at a power level of about one kilowatt per square meter. It is by this energy that all life-processes on earth are ultimately 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 electro-magnetic fields, called photons. These photons of light can have many different energy levels or wavelengths, which are expressed in nanometers (nm). The most familiar wavelengths are the visible ones. Every wavelength is represented by a different colour. For example, the Sun appears as 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. Of the entire electromagnetic spectrum, only ultraviolet light, visible light and infrared light are important to us at this time.



Electromagnetic spectrum

Visible Light

Besides providing us (and reptiles) 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.

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

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.

UVB is generally defined as the wavelength band from 290-320 nm. In the wild, most reptiles synthesize their vitamin D3 from the UVB component of sunlight. Vitamin D3 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 D3. Depending on heat and the aid of a mechanism in the skin, provitamin D3 is converted into vitamin D3 itself. The liver and kidneys transform vitamin D3 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 D3 requirement from their food. However, plants do not contain D3 (cholecalciferol), instead they contain D2 (ergocalciferol), which is far less efficient in calcium metabolism than D3. Herbivorous reptiles are therefore far more dependent upon the quantity and quality of artificial lighting than carnivorous specimens.

If inadequate vitamin D3 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.

Infrared Light

The ectothermic 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).

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 microhabitat 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/cm²) 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/cm². However, this high amount of radiation decreases as the day passes, in the same way that it had increased since sunrise, and taking into account that not all days are clear. In the wild, basking activities of most reptiles are limited to early morning and late afternoon. The rest of the day is spent in the shade, either 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:

Habitat:

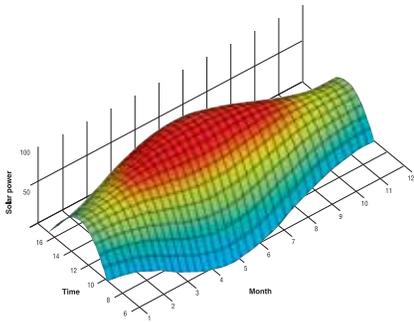
Forest and shrub areas provide more shade than plains and deserts. Dense forests have many gradients of UV radiation, with high levels in the forest canopy to very low UV-levels on the forest floor. Grasslands and savannahs provide the same gradients for smaller species, whereas larger species are more 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.



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 and some even

Variation in solar power at the Tropic of Cancer



come out of their hiding spots to bask in the sun for thermoregulation purposes.

Time of Day:

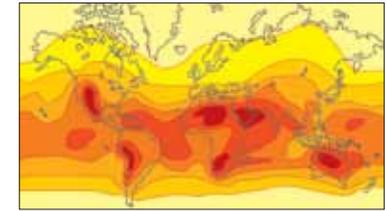
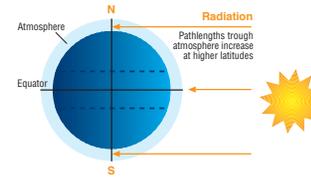
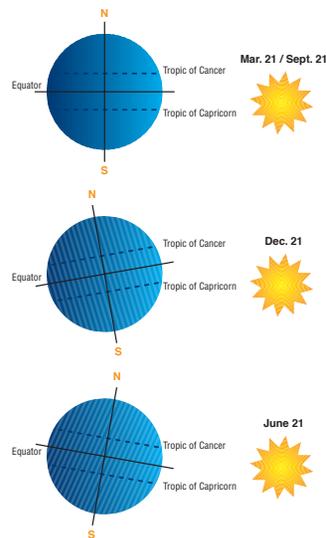
The sun is at its highest in the sky around noon. At this time, the sun's rays have the least distance to travel through the atmosphere and UVB levels are at their highest. In the early morning and late afternoon, the sun's rays pass through the atmosphere at an angle and their intensity is greatly reduced.

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 the winter.

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. Also the ozone is naturally thinner in the tropics compared to mid- and high-latitudes, so there is less ozone to absorb the



UVB - Hotspots

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.

Altitude:

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

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

Reflection:

Some surfaces, such as 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.

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.

Exo Terra Reptile 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. The table at right will help you in making the right lighting choice. 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.

Light Source	UVB	Reptile Vision	Human Vision	Infrared Heat
All-in-one Bulbs				
Sunray	*****	*****	*****	*****
Solar Glo	*****	****	****	****
UVB Fluorescent Bulbs				
Reptile UVB100	***	****	****	*
Reptile UVB150	****	****	****	*
Reptile UVB200	*****	****	****	*
Turtle UVB Bulb	**	****	****	*
Linear Fluorescent				
Natural Light		****	*****	*
Reptile UVB100	***	****	****	*
Reptile UVB150	****	****	****	*
Visual Light Bulbs				
Natural Light		****	*****	*
Natural Light ION		****	*****	*
Reptile Vision		*****	****	*
Heat & Basking Bulbs				
Halogen Basking Spot		**	****	****
Daytime Heat Bulb		**	****	****
Daylight Basking Spot		**	****	****
Intense Basking Spot		**	****	****
Night Heat Bulb		*	*	****
Infrared Basking Spot		*	*	*****
Swamp Basking Spot		**	****	****

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Reptile UVB a new standard!



Over the past few years, more and more research has been done on reptiles and their UV requirements. Exo Terra has been following the scientific community carefully so we could implement new discoveries into our product development process.

Unlike 10 years ago, when the knowledge of this subject was minimal, we now know the requirements of most species kept in captivity. In order to provide reptiles the best possible lighting solution Exo Terra has tweaked all spectrums and added several new bulbs based on recent research.



Our new UVB spectrums come with different, easier to understand names;

Reptile UVB 100 – tweaked spectrum, formerly Repti Glo 5.0

Reptile UVB 150 – tweaked spectrum, formerly Repti Glo 10.0

Reptile UVB 200 – brand new spectrum with a very high UVB output

The numbers 100, 150 & 200 refer to the average UVB output at 4" or 10 cm from the bulb. All our new UVB bulbs have been designed for maximum vitamin D3 photosynthesis, by concentrating the UVB output near the 294 nm within the UV output. At this wavelength vitamin D3 synthesis is most active!



Next to our fluorescent bulbs, we also extended and modified our all-in-one bulb offering:

Solar Glo – updated spectrum in the UVB range

Sunray – brand new innovation, the best and most complete reptile bulb yet!

A new rating system has been added to all packaging in order to determine what bulb is right for your animals. The rating system refers to a chart on the Exo Terra website or Exo Terra Lighting Guide where most common reptiles are listed in relation to their lighting requirements.

Choosing the right UVB bulb

1 Check the UVB rating for your animal	2 What is the average distance from the bulb to the animal?	3 Look up the corresponding UVB rating to choose a suitable bulb

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UVB Rating System

LIZARDS		
NAME	LATIN NAME	UV RATING
Bearded & Rankin's Dragon	Pogona vitticeps & Pogona henrylawsoni	*****
Leopard Gecko	Eublepharis macularius	
Green Iguana	Iguana iguana	***
Veiled Chameleon	Chamaeleo calypttratus	***
Spiny-tailed lizards	Uromastyx spec.	*****
Panther Chameleon	Chamaeleo pardalis	***
Chinese Water Dragon	Physignathus cocincinus	***
Anoles (Green & Bahama)	Anolis carolinensis & sagrei	***
Crested Geckos	Rhacodactylus ciliates & Rhacodactylus auriculatus	***
Day Geckos	Phelsuma spec.	****
Collard Lizard	Crotaphytus collaris	****
Steppe Runner	Eremias arguta	***
Long-tailed Lizard	Takydromus sexlineatus	****
Curly Tail Lizard	Leiocephalus spec.	
AQUATIC TURTLES		
Red-eared Sliders	Trachemys scripta elegans	**
Yellow Bellied Slider	Trachemys scripta scripta	**
Painted Turtle	Chrysemys picta	
SNAKES		
Ball Python	Python regius	*
Corn Snake	Pantherophis guttatus	*
King & Milk Snake	Lampropeltis spec.	
Boa Constrictor	Boa constrictor	
AMPHIBIANS		
Fire Belly Toads	Bombina orientalis	
PacMan Frog	Ceratophrys spec.	*
White's Treefrogs	Litoria caerulea	*
Monkey Tree Frogs	Phyllomedusa sauvagii	*
Poison Dart Frogs	Dendrobatidae	
TORTOISES		
Russian Tortoise	Agriemys horsfieldii	****
Greek Tortoise	Testudo Graeca	****
Hermann's Tortoise	Testudo hermanni	*****
African Spurred Tortoise	Geochelone sulcata	

All-in-one bulbs

In nature, the sun produces ultraviolet, visual light and heat radiation all at once. The all-in-one bulbs from Exo Terra combine very high light output and heat radiation with optimal levels of UVA and UVB. These bulbs can be used as a sole light source and are the most natural way to provide lighting and heating to your reptiles while including proper ultraviolet radiation for photosynthesis and physiological well-being.

Sunray

Metal Halide Fixture with Ballast & Bulb

- Metal Halide Fixture with ballast and bulb
- Stylish design
- Easy to install and fully adjustable
- Optimal levels of visible light, heat and UVA and UVB
- Closely approximates natural sunlight
- Contributes to the animal's overall wellbeing
- Intensifies natural coloration of reptiles
- Can be safely used on smaller terrariums



The Exo Terra SunRay Fixture's stylish looks suits all kinds of terrariums and integrates into any living room. The SunRay Metal Halide Bulb is an all-in-one bulb that combines very high light output and heat radiation with optimal levels of UVA and UVB. The Exo Terra SunRay delivers a consistent spectrum, which closely matches that of natural sunlight, contributing to the animal's overall wellbeing. The combination of the correct wavelength UVB and heat enables the animal to produce its own vitamin D3 for proper calcium absorption and to prevent metabolic diseases (e.g. MBD). The powerful light output and the balanced UV rays stimulate the appetite, breeding behavior and the overall health of reptiles. The aluminum faceted reflector produces an evenly distributed light beam. Aluminum dissipates heat very effectively, resulting in a longer lifespan and a more stable operation than glass reflectors. The Exo Terra SunRay can be used as a sole light source.

PT2315 Sunray Fixture with Ballast & Bulb 35W

PT2320 Sunray Fixture with Ballast & Bulb 50W

PT2325 Sunray Fixture with Ballast & Bulb 70W



Easy to install and fully adjustable

To be operated with metal halide bulbs only.
Not suitable for incandescents!



Electronic Ballast with On/Off Switch

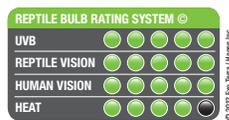
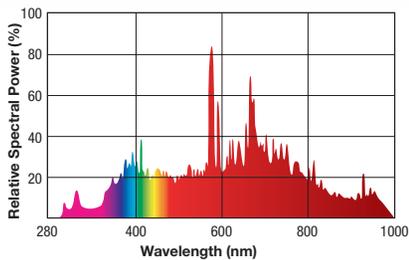
Reptile Lighting

Sunray

Metal Halide Bulb

The Exo Terra SunRay is an all-in-one bulb that combines very high light output and infrared heat radiation with optimal levels of UVA and UVB. The SunRay is available in lower wattages and can be safely used on smaller terrariums. The Exo Terra SunRay delivers a consistent spectrum, which closely approximates that of natural sunlight, contributing to the animal's overall wellbeing. The combination of the correct UVB wavelength and heat enables the animal to produce its own vitamin D3 for proper calcium absorption and prevents metabolic diseases (e.g. MBD). The powerful light output and balanced UV rays stimulate appetite and breeding behavior, while improving the physiological health of reptiles. The aluminum faceted reflector produces an evenly distributed light beam. Aluminum dissipates heat very effectively, resulting in a longer lifespan and more stable operation than glass reflectors. The Exo Terra SunRay can be used as a sole light source. To obtain maximum results and safety the bulb should be used in conjunction with the Exo Terra SunRay Fixture.

Available in 35W, 50W and 70W.



PT2326 Sunray Bulb 35W

35W	Distance		UVA	UVB	Photosynth	UVB Rating	Illuminance	Temperature	
	Inch	cm	$\mu\text{W}/\text{cm}^2$	$\mu\text{W}/\text{cm}^2$	Vit. D3 IU/Min	See Reptile UVB Chart	LUX	$^{\circ}\text{C}$	$^{\circ}\text{F}$
↓	4	10	23000	1390	565	*****	109700	35	95
	8	20	7500	460	225	*****	53600	32	89
	12	30	2700	160	90	*****	24300	29	84
	16	40	1500	90	40	*****	10600	28	82
	20	50	850	50	25	*****	7200	27	80
	24	60	550	35	20	***	4100	26	78
	28	70	400	25	15	***	2900	26	78
	32	80	350	20	10	**	2600	25	77
	36	90	250	15	8	**	2200	25	77
	40	100	200	10	6	**	2000	25	77

PT2327 Sunray Bulb 50W

50W	Distance		UVA	UVB	Photosynth.	UVB Rating	Illuminance	Temperature	
	Inch	cm	$\mu\text{W}/\text{cm}^2$	$\mu\text{W}/\text{cm}^2$	Vit. D3 IU/Min	See Reptile UVB Chart	LUX	$^{\circ}\text{C}$	$^{\circ}\text{F}$
↓	4	10	24000	1440	440	*****	117000	40	104
	8	20	9000	530	125	*****	87300	33	91
	12	30	4500	255	50	*****	32700	31	87
	16	40	2200	130	25	*****	10700	29	84
	20	50	1300	80	15	***	7800	28	82
	24	60	1000	60	10	***	7100	27	80
	28	70	650	40	8	***	4200	27	80
	32	80	500	30	5	**	3400	26	78
	36	90	350	20	4	**	2700	26	78
	40	100	300	20	4	**	2500	26	78

PT2328 Sunray Bulb 70W

70W	Distance		UVA	UVB	Photosynth.	UVB Rating	Illuminance	Temperature	
	Inch	cm	$\mu\text{W}/\text{cm}^2$	$\mu\text{W}/\text{cm}^2$	Vit. D3 IU/Min	See Reptile UVB Chart	LUX	$^{\circ}\text{C}$	$^{\circ}\text{F}$
↓	4	10	28000	1675	500	*****	130400	41	106
	8	20	14500	875	220	*****	103500	34	93
	12	30	6500	395	90	*****	96200	32	89
	16	40	3500	205	55	*****	55200	29	84
	20	50	2000	125	30	*****	31100	29	84
	24	60	1300	80	20	*****	19600	28	82
	28	70	1000	60	15	*****	14000	27	80
	32	80	850	50	10	***	10100	27	80
	36	90	550	35	7	***	7600	27	80
	40	100	400	30	7	**	6400	27	80

Solar Glo

Sun Simulating Bulb

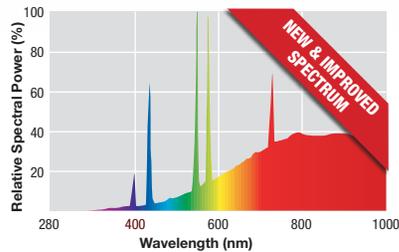
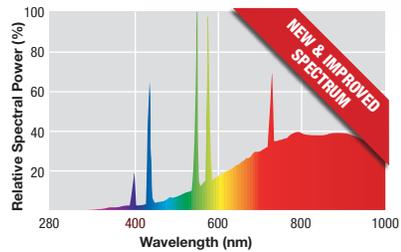
- Stimulates appetite and breeding
- Optimal levels of UVB, UVA, visual light and heat in one bulb!
- Provides the benefits of natural sunlight
- Helps prevent metabolic bone disease
- Increased UVB penetration distance (+30 cm / 12")

The Exo Terra Solar Glo is a selfballasted mercury vapor reptile lamp that provides the benefits of natural sunlight, which is one of the most important aspects in keeping reptiles healthy. The Exo Terra Solar Glo is the choice of professional breeders as it provides the proper balance of ultraviolet light (including UVA and UVB), visual light and infrared light (heat), in one easy-to-install bulb. The Exo Terra Solar Glo is a full spectrum light with carefully tuned peaks to ensure appetite, activity, brilliant colours, and optimal calcium absorption through Vitamin D3 production. The Exo Terra Solar Glo is a self-ballasted mercury vapour lamp, which fits into a standard ceramic socket (No ballast needed). The Exo Terra Solar Glo is available in two wattages: 125 W and 160 W.



PT2192 Solar Glo 125W

PT2193 Solar Glo 160W



REPTILE BULB RATING SYSTEM	
UVB	●●●●●●●●
REPTILE VISION	●●●●●●●●
HUMAN VISION	●●●●●●●●
HEAT	●●●●●●●●

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REPTILE BULB RATING SYSTEM	
UVB	●●●●●●●●
REPTILE VISION	●●●●●●●●
HUMAN VISION	●●●●●●●●
HEAT	●●●●●●●●

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PT2192

Solar Glo 125W

125W	Distance		UVB	Photosynth	UVB Rating	Illuminance	Temperature	
	Inch	cm	μW/cm ²	Vit. D3 IU/Min	See Reptile UVB Chart	LUX	°C	°F
↓	4	10	420	335	★★★★★	24300	35	95
	8	20	340	130	★★★★★	15000	33	91
	12	30	165	75	★★★★★	6800	30	86
	16	40	90	40	★★★★★	4900	29	84
	20	50	70	30	★★★★	2700	29	84
	24	60	50	20	★★★	1900	28	82
	28	70	40	10	★★	1600	27	80
	32	80	25	8	★★	1200	26	78
	36	90	20	6	★★	800	26	78
	40	100	20	5	★	800	25	77

PT2193

Solar Glo 160W

160W	Distance		UVB	Photosynth.	UVB Rating	Illuminance	Temperature	
	Inch	cm	μW/cm ²	Vit. D3 IU/Min	See Reptile UVB Chart	LUX	°C	°F
↓	4	10	855	390	★★★★★	32400	39	102
	8	20	460	180	★★★★★	29500	35	95
	12	30	265	75	★★★★★	15700	31	88
	16	40	135	40	★★★★★	10700	30	86
	20	50	100	30	★★★★★	6300	30	86
	24	60	80	20	★★★★	5400	29	84
	28	70	55	15	★★★	2600	29	84
	32	80	40	10	★★	1900	28	82
	36	90	25	8	★★	1600	28	82
	40	100	20	6	★	1200	28	82



UVB 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 limited 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.

Exo Terra's UVB fluorescent bulbs are classified according to their percentage of UVB output. For tropical and sub-tropical reptiles, Exo Terra Reptile UVB100 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 Exo Terra Reptile UVB150. We recommend the Reptile UVB200 when the distance from the bulb to the animal exceeds 30 cm (12") or when the bulbs are placed above a dense ventilation screen.

Fluorescent bulbs do not provide sufficient heat. In addition, a separate heat source like a heat or basking bulb is required. It is recommended to combine a Reptile UVB bulb with a the proper visual light output for optimal results.



Reptile UVB100

Tropical Terrarium Bulb

- Ideal for all tropical and sub-tropical reptiles
- Optimal levels of UVB
- Effective up to 40 cm (15")
- Provides necessary UVB rays for optimal calcium metabolism
- UVA rays stimulate appetite, activity and reproductive behavior
- Combine with Natural Light or Reptile Vision for optimal visual light output

The Exo Terra Reptile UVB100 emits optimal levels of UVB, similar to that of shady environments such as rain forests or other tropical locations. Reptiles living in these habitats receive moderate UV radiation due to climatological conditions (fairly high humidity, changes in weather, etc) that prevent unfiltered sunlight from reaching the reptile's basking site. The optimal Vitamin D3 yield index ensures vitamin D3 photosynthesis to aid calcium absorption and prevent metabolic diseases.



13W	Distance		UVA		UVB		Photo-synth.		UVB Rating	Illumin.
	Inch	cm	µW/cm²	µW/cm²	UVI D3 U/Min	See Reptile UVB Chart	See Reptile UVB Chart	LUX		
↓	4	10	630	105	45	★ ★ ★	★ ★ ★	2530		
	8	20	210	35	10	★ ★ ★	★ ★ ★	660		
	12	30	90	15	9	★ ★	★ ★	340		
	16	40	40	7	4	★	★	240		
	20	50	30	5	2	★	★	200		
	24	60	20	3	1			180		
	28	70	15	3	1			160		
	32	80	5	1	0			150		
	36	90	2	0	0			140		
	40	100	0	0	0			140		

26W	Distance		UVA		UVB		Photo-synth.		UVB Rating	Illumin.
	Inch	cm	µW/cm²	µW/cm²	UVI D3 U/Min	See Reptile UVB Chart	See Reptile UVB Chart	LUX		
↓	4	10	1000	170	65	★ ★ ★	★ ★ ★	3650		
	8	20	270	45	20	★ ★ ★	★ ★ ★	970		
	12	30	120	20	15	★ ★	★ ★	550		
	16	40	50	8	5	★	★	330		
	20	50	40	8	4	★	★	220		
	24	60	20	3	3			180		
	28	70	15	3	2			180		
	32	80	7	1	1			160		
	36	90	3	1	0			150		
	40	100	1	0	0			150		

REPTILE BULB RATING SYSTEM

UVB: ●●●●●

REPTILE VISION: ●●●●●

HUMAN VISION: ●●●●●

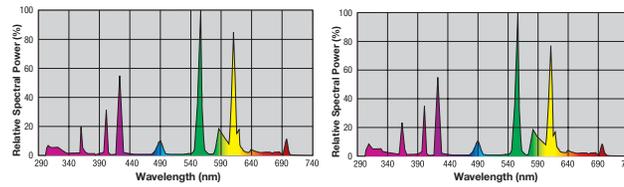
HEAT: ●●●●●

Reptile UVB100

PT2186 PT2187

13W 26W

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Reptile UVB150

Desert Terrarium Bulb

- Ideal for all desert dwelling reptiles
- High UVB output
- Very high D3 conversion
- Effective up to 50 cm (20")
- Provides necessary UVB rays for optimal calcium metabolism
- Recommended for terrariums with dense screen covers
- Combine with Natural Light for optimal visual light output

The Exo Terra Reptile UVB150 has a very high UVB output similar to sunlight in deserts. These locations receive more direct sunlight, therefore desert reptiles are more exposed to UV radiation than any other type of reptile. This bulb can also be used on terrariums with denser screen covers to ensure sufficient UVB penetration. Dense screens can filter out up to 50% of the UVB rays. The high Vitamin D3 yield index ensures vitamin D3 photosynthesis to aid calcium absorption and prevent metabolic diseases.

New Spectrum
former Repti Glo 10.0



Reptile UVB200

High Output UVB Bulb

- For reptiles with very high UV requirements
- Helps prevent metabolic bone disease
- Ideal for desert set-ups or taller terrariums
- Very high D3 Yield Index
- Increased Vitamin D3 photosynthesis
- Maximizes calcium absorption
- Enhanced UVB penetration distance
- Combine with Natural Light or Reptile Vision for optimal visual light output

The Exo Terra Reptile UVB200 emits the ideal UVB spectrum for optimal Vitamin D3 photosynthesis. The Reptile UVB200 bulb is especially designed to simulate conditions for reptiles with very high UV requirements, like diurnal reptiles from desert environments. These areas receive direct unfiltered sunlight with high levels of UVB. The significantly high Vitamin D3 yield index results in increased vitamin D3 photosynthesis to aid calcium absorption and prevent metabolic diseases. The extended UVB penetration makes this bulb the ideal choice for taller terrariums or terrariums with denser screens.

New

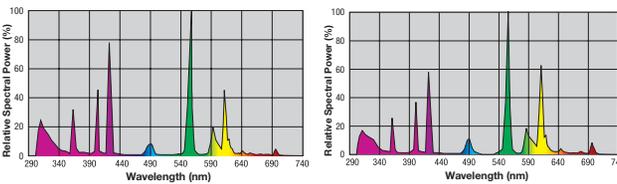


13W	Distance		UVA µW/cm²	UVB µW/cm²	Photo-synth. VIT. D3 IU/Min	UVB Rating See Reptile UVB Chart	Illumin. LUX
	Inch	cm					
	4	10	690	115	45	★★★★	3070
	8	20	300	50	10	★★★	670
	12	30	150	25	8	★★	420
	16	40	90	15	6	*	280
	20	50	50	8	4	*	220
	24	60	30	4	2	*	190
	28	70	20	3	1		160
	32	80	5	3	0		150
	36	90	3	1	0		140
	40	100	1	0	0		140

26W	Distance		UVA µW/cm²	UVB µW/cm²	Photo-synth. VIT. D3 IU/Min	UVB Rating See Reptile UVB Chart	Illumin. LUX
	Inch	cm					
	4	10	1150	195	75	★★★★	4340
	8	20	360	60	20	★★★	980
	12	30	150	25	15	★★	490
	16	40	60	10	7	*	350
	20	50	40	6	7	*	270
	24	60	30	5	2	*	220
	28	70	20	4	1	*	200
	32	80	10	3	0		170
	36	90	5	1	0		150
	40	100	2	0	0		150

REPTILE BULB RATING SYSTEM ©
 UVB: 5/5
 REPTILE VISION: 5/5
 HUMAN VISION: 5/5
 HEAT: 0/5
 © 2012 Exo Terra / Hagen Inc.

Reptile UVB150
 PT2188 PT2189
 13W 26W

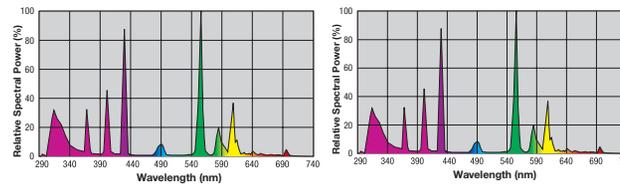


13W	Distance		UVA µW/cm²	UVB µW/cm²	Photo-synth. VIT. D3 IU/Min	UVB Rating See Reptile UVB Chart	Illumin. LUX
	Inch	cm					
	4	10	750	130	50	★★★★	2350
	8	20	360	60	20	★★★	470
	12	30	180	30	10	★★	270
	16	40	120	20	6	*	190
	20	50	90	15	4	*	140
	24	60	40	7	3	*	130
	28	70	30	5	2	*	130
	32	80	20	4	2	*	110
	36	90	15	3	1		110
	40	100	10	2	0		110

26W	Distance		UVA µW/cm²	UVB µW/cm²	Photo-synth. VIT. D3 IU/Min	UVB Rating See Reptile UVB Chart	Illumin. LUX
	Inch	cm					
	4	10	1350	225	130	★★★★	4680
	8	20	550	90	40	★★★★	1030
	12	30	240	40	20	★★★	500
	16	40	150	25	15	★★	290
	20	50	100	15	9	*	250
	24	60	70	10	6	*	200
	28	70	60	9	5	*	180
	32	80	40	7	3	*	160
	36	90	30	6	2	*	150
	40	100	20	4	2	*	150

REPTILE BULB RATING SYSTEM ©
 UVB: 5/5
 REPTILE VISION: 5/5
 HUMAN VISION: 5/5
 HEAT: 0/5
 © 2012 Exo Terra / Hagen Inc.

Reptile UVB200
 PT2340 PT2341
 13W 26W



Linear Fluorescent

The linear Reptile UVB bulbs have a higher output and divide energy more efficiently over wider terrariums. Exo Terra has a full range of seven sizes of each type, Natural Light, Reptile UVB100 and Reptile UVB150, 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 Reptile UVB bulbs in order to simulate any micro habitat suitable for a specific species.



Natural Light

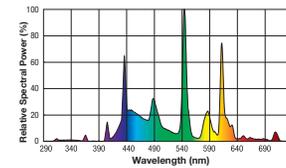
Full Spectrum Terrarium Bulb

- Ideal spectrum for all reptiles & amphibians
- Stimulates plant growth
- High visual light output
- Stimulates appetite, activity and reproductive behavior through UVA radiation
- High Colour Rendering Index of 98 (CRI)
- 6700 K Color Temperature
- Recommended in combination with Reptile UVB100 or Reptile UVB150



PT2149	Natural Light/T8	Full Spectrum Terrarium Bulb	15"	38cm	14W
PT2150	Natural Light/T8	Full Spectrum Terrarium Bulb	18"	45cm	15W
PT2151	Natural Light/T8	Full Spectrum Terrarium Bulb	24"	60cm	20W
PT2152	Natural Light/T8	Full Spectrum Terrarium Bulb	30"	75cm	25W
PT2153	Natural Light/T8	Full Spectrum Terrarium Bulb	36"	90cm	30W
PT2154	Natural Light/T8	Full Spectrum Terrarium Bulb	42"	105cm	40W
PT2155	Natural Light/T8	Full Spectrum Terrarium Bulb	48"	120cm	40W
PT2157	Natural Light/T10	Full Spectrum Terrarium Bulb*	36"	90cm	30W
PT2158	Natural Light/T10	Full Spectrum Terrarium Bulb*	48"	120cm	40W

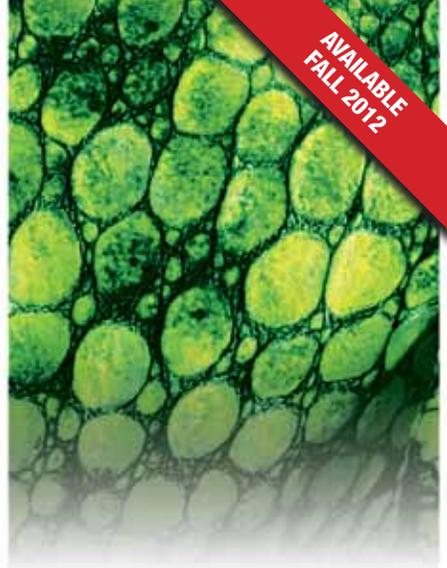
(*) Not available in the UK



Reptile UVB100

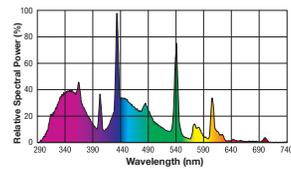
Tropical Terrarium Bulb

- 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 behavior through UVA radiation
- Recommended in combination with Natural Light for a higher visual light output



PT2159	Reptile UVB100/T8	Tropical Terrarium Bulb	15"	38cm	14W
PT2160	Reptile UVB100/T8	Tropical Terrarium Bulb	18"	45cm	15W
PT2161	Reptile UVB100/T8	Tropical Terrarium Bulb	24"	60cm	20W
PT2162	Reptile UVB100/T8	Tropical Terrarium Bulb	30"	75cm	25W
PT2163	Reptile UVB100/T8	Tropical Terrarium Bulb	36"	90cm	30W
PT2164	Reptile UVB100/T8	Tropical Terrarium Bulb	42"	105cm	40W
PT2165	Reptile UVB100/T8	Tropical Terrarium Bulb	48"	120cm	40W
PT2167	Reptile UVB100/T10	Tropical Terrarium Bulb*	36"	90cm	30W
PT2168	Reptile UVB100/T10	Tropical Terrarium Bulb*	48"	120cm	40W

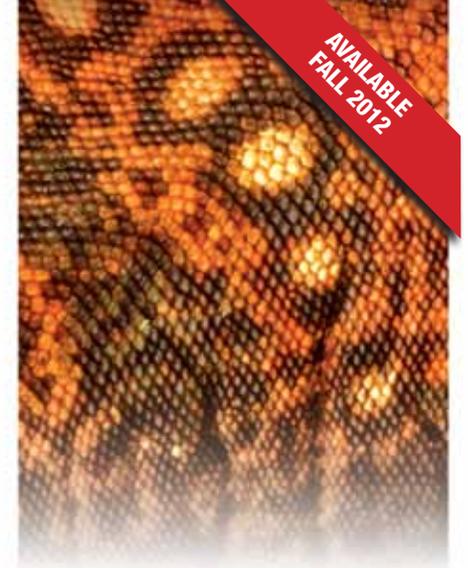
(*) Not available in the UK



Reptile UVB150

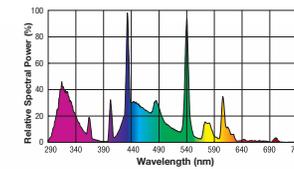
Desert Terrarium Bulb

- 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; (dense screen covers can filter out UVB rays)
- Recommended in combination with Natural Light for a higher visual light output



PT2169	Reptile UVB150/T8	Desert Terrarium Bulb	15"	38cm	14W
PT2170	Reptile UVB150/T8	Desert Terrarium Bulb	18"	45cm	15W
PT2171	Reptile UVB150/T8	Desert Terrarium Bulb	24"	60cm	20W
PT2172	Reptile UVB150/T8	Desert Terrarium Bulb	30"	75cm	25W
PT2173	Reptile UVB150/T8	Desert Terrarium Bulb	36"	90cm	30W
PT2174	Reptile UVB150/T8	Desert Terrarium Bulb	42"	105cm	40W
PT2175	Reptile UVB150/T8	Desert Terrarium Bulb	48"	120cm	40W
PT2177	Reptile UVB150/T10	Desert Terrarium Bulb*	36"	90cm	30W
PT2178	Reptile UVB150/T10	Desert Terrarium Bulb*	48"	120cm	40W

(*) Not available in the UK



Reptile Lighting

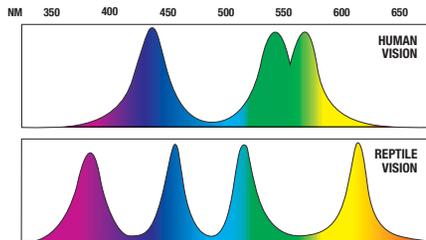
Linear Fluorescent Bulbs

Visual Light Bulbs

Visual light has a different meaning for various organisms! Ever since man created artificial light, the bulb characteristics were developed to suit human vision. Human eyes have three receptors for color vision. Most reptiles possess a fourth receptor, enabling them to perceive higher-wavelength UVA. As a consequence, reptiles experience a more truthful environment as they would in the natural world. This extended color perception is extremely important for their physiological wellbeing.

Plants on the other hand need again different wavelengths within the visual spectrum for proper growth as they photosynthesize. Photosynthesis is an essential process that enables plants to capture the sun's energy. Light energy is transformed into sugars and starches. Photosynthesis in plants depends on Chlorophyll, a photosynthetic pigment that absorbs blue light with wavelengths of 430 nm and red light of 662 nm. Green light is not absorbed but reflected by chlorophyll, this is the reason why plants that contain chlorophyll have a green appearance.

Exo Terra has designed different bulbs with a spectrum geared towards the reptile eye, the human vision and for optimal plant growth. Fluorescent bulbs are up to six times efficient than incandescent bulbs in producing visual light since virtually no heat is produced, but its spectrum is limited to certain peaks in particular wavelengths. By changing the composition of the phosphors inside the bulb we are able to tweak those peaks. Once these peaks correspond to the spectral sensitivity of an organism, an ideal visual spectrum for that organism is created.



Visual light has a different meaning for various organisms! Ever since man created artificial light, the bulb characteristics were developed to suit human vision. Human eyes have three receptors for color vision whereas most insects, birds and of course reptiles, possess a fourth receptor, enabling them to see in UV light.

Reptile Vision

Reptile Visual Spectrum Bulb

- Stimulates appetite and breeding
- Improves the animal's perception of its environment
- Enhances natural behavior
- Adapted for the 4-receptor eyes of reptiles

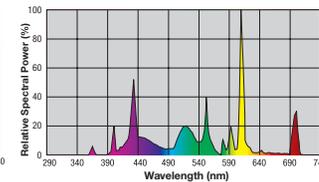
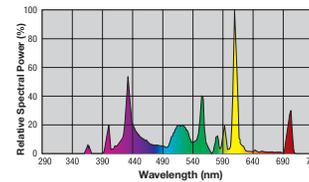
The reptile eye is more sensitive than the human eye to other wavelengths within the light spectrum. Previously, bulbs have been developed towards human vision. The spectrum of the Reptile Vision Lamp peaks in those wavelengths important to reptiles. As a result of the vivid wavelengths of light provided by the Reptile Vision Lamp, reptiles will experience and perceive colors from their environment more naturally. The Exo Terra Reptile Vision Lamp will help to improve the living conditions and physiological wellbeing of your reptiles. Combine with Exo Terra's Reptile UVB bulbs to create the perfect conditions for your reptiles.



13W					26W				
	Distance		UVA	Illuminance		Distance		UVA	Illuminance
	Inch	cm	$\mu\text{W}/\text{cm}^2$	LUX		Inch	cm	$\mu\text{W}/\text{cm}^2$	LUX
	4	10	400	4750		4	10	575	7860
	8	20	175	1040		8	20	155	1600
	12	30	85	510		12	30	70	750
	16	40	60	310		16	40	30	450
	20	50	30	240		20	50	25	310
	24	60	20	190		24	60	15	240
	28	70	15	180		28	70	10	220
	32	80	5	150		32	80	5	160
	36	90	2	130		36	90	3	140
	40	100	0	120		40	100	0	130

REPTILE BULB RATING SYSTEM				
UVB	●	●	●	●
REPTILE VISION	●	●	●	●
HUMAN VISION	●	●	●	●
HEAT	●	●	●	●

Reptile Vision	
PT2345	PT2346
13W	26W



Natural Light

Full Spectrum Daylight Bulb

- Ideal daylight spectrum for all reptiles & amphibians
- Stimulates appetite, activity and reproductive behaviour through UVA radiation
- High Color Rendering Index (98 CRI)
- High visual light output
- 6700 K Color temperature
- Stimulates plant growth
- Recommended in combination with Reptile UVB100, UVB150 or UVB200, depending on the reptile's UV requirements

The Exo Terra Natural Light is a full spectrum daylight lamp with a very high visual light output and high color rendering index (98 CRI). With its high visual light output and 6700 K Color temperature, the Natural Light Terrarium Lamp is recommended as general light source for all terrarium types. The high light output makes this bulb suitable for planted terrariums and it is ideal for animals with lower UV requirements, such as snakes, amphibians (frogs, toads and salamanders) and nocturnal animals. Combine this full spectrum daylight lamp with Exo Terra's Reptile UVB100, UVB150 or UVB200, depending on the reptile's UV requirements, to intensify natural sunlight conditions.



Natural Light ION

Deodorizing Bulb

- Reduces odors
- Purifies terrarium air
- Neutralizes mold spores
- Creates a healthy environment
- New and innovative technology
- High visual light output

The Exo Terra Natural Light ION creates a healthy environment for reptiles and amphibians in the terrarium while reducing odors drastically. The Exo Terra Natural Light ION is a general light source with built-in negative ion generator. Negative ions eliminate odors and help freshen and purify the air in the terrarium. Mold spores, fungi, dust, and other harmful airborne particles are eliminated and neutralized by clumping together. Negative ions also have been shown to be beneficial for the physiological wellbeing. High levels of negative ions are desirable and they are naturally found in places like along coastlines, in the mountains, in deserts, in forests, near rivers and waterfalls, and many other places with an abundance in reptiles and amphibians.



13W	Distance		UVA		Illuminance				
	Inch	cm	µW/cm ²	LUX	Inch	cm	µW/cm ²	LUX	
↓	4	10	350	12560	↓	4	10	500	15350
	8	20	150	2580		8	20	135	3810
	12	30	75	1080		12	30	60	1780
	16	40	45	620		16	40	25	1030
	20	50	25	470		20	50	20	690
	24	60	15	340		24	60	10	510
	28	70	10	270		28	70	7	370
	32	80	3	220		32	80	3	320
	36	90	1	190		36	90	1	250
	40	100	0	180		40	100	0	230

REPTILE BULB RATING SYSTEM

UVB: 4/5 (4 filled, 1 empty)

REPTILE VISION: 5/5 (all filled)

HUMAN VISION: 5/5 (all filled)

HEAT: 1/5 (1 filled, 4 empty)

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Natural Light

PT2190	PT2191
13W	26W

15W	Distance		UVA		Illuminance				
	Inch	cm	µW/cm ²	LUX	Inch	cm	µW/cm ²	LUX	
↓	4	10	360	6250	↓	4	10	450	6460
	8	20	160	1560		8	20	120	2480
	12	30	80	750		12	30	55	1080
	16	40	45	460		16	40	20	700
	20	50	25	340		20	50	15	450
	24	60	15	260		24	60	10	330
	28	70	10	220		28	70	7	270
	32	80	3	170		32	80	3	220
	36	90	1	150		36	90	1	180
	40	100	0	130		40	100	0	160

REPTILE BULB RATING SYSTEM

UVB: 4/5 (4 filled, 1 empty)

REPTILE VISION: 5/5 (all filled)

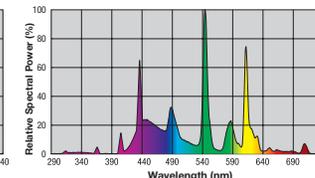
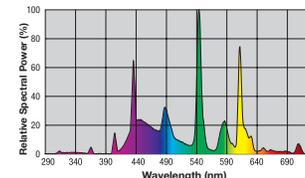
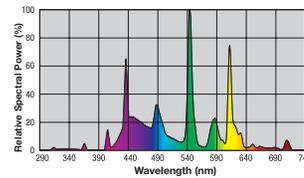
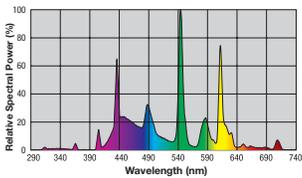
HUMAN VISION: 5/5 (all filled)

HEAT: 1/5 (1 filled, 4 empty)

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Natural Light ION

PT3785	PT3786
15W	25W



Intense Basking Spot

- 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 Heat Bulb or Infrared Basking Spot to create a 24-hour cycle

The Intense Basking Spot is a bulb that is specially designed to create a basking spot site. The tight beam can be directed precisely on a certain area to increase the temperature. 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.



REPTILE LAMP RATING SYSTEM	
UVB	● ● ● ● ● ● ● ●
REPTILE VISION	● ● ● ● ● ● ● ●
HUMAN VISION	● ● ● ● ● ● ● ●
INFRARED	● ● ● ● ● ● ● ●

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Intense Basking Spot

PT2196 *	PT2135	PT2136	PT2138	PT2140
25W	S20/50W	S20/75W	S25/100W	S30/150W

(*) Not available in the UK

Night Heat Bulb

- Moonlight Bulb
- Simulates natural moonlight
- Perfect for nocturnal viewing
- Provides tropical night time temperatures
- Stimulates breeding behavior in reptiles and amphibians
- Can be combined with Daytime Heat Bulbs or Basking Spot to create 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-time temperature drops.



REPTILE LAMP RATING SYSTEM	
UVB	● ● ● ● ● ● ● ●
REPTILE VISION	● ● ● ● ● ● ● ●
HUMAN VISION	● ● ● ● ● ● ● ●
INFRARED	● ● ● ● ● ● ● ●

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Night Heat Bulb

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

Infrared Basking Spot

- 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 Daytime Heat Bulb or Night Heat Bulb to create a 24-hour cycle

The Infrared Basking Spot emits infrared heat waves to provide animals with a deep penetrating radiant heat. The Infrared Basking Spot has a special built-in reflector to direct the heat in any direction required. The red glass transmits Infrared waves produced by the special filament way better than coated glass bulbs. The reddish light will not disrupt normal activity during night or day, which makes it an excellent 24 hour heat source.



REPTILE LAMP RATING SYSTEM	
UVB	● ● ● ● ● ● ● ●
REPTILE VISION	● ● ● ● ● ● ● ●
HUMAN VISION	● ● ● ● ● ● ● ●
INFRARED	● ● ● ● ● ● ● ●

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Infrared Basking Spot

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



Swamp Basking Spot

- Splash- and mist-proof
- Shatter-proof
- For aquatic and humid terrariums
- Enhances animal colouration

The Exo Terra Swamp Basking Spot is a splash and mist resistant basking spot bulb designed for use in aquatic or extremely humid terrarium set-ups, where high humidity or accidental water spillage could cause a regular incandescent bulb to burn out or shatter. The outer sleeve is made from extra-strong neodymium glass.



REPTILE LAMP RATING SYSTEM ©	
UVB	●●●●●●
REPTILE VISION	●●●●●●
HUMAN VISION	●●●●●●
INFRARED	●●●●●●

Swamp Basking Spot

PT3780 *	PT3781 *	PT3782 *
R20/50W	R20/75W	R25/100W

(*) Not available in the UK

Halogen Basking Spot

- 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 Heat Bulb or Intense Basking Spot to create a 24-hour cycle

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. The higher temperatures of halogen lighting contribute to a whiter light, a higher light output and a greater efficiency.



REPTILE LAMP RATING SYSTEM ©	
UVB	●●●●●●
REPTILE VISION	●●●●●●
HUMAN VISION	●●●●●●
INFRARED	●●●●●●

Halogen Basking Spot

PT2197 *	PT2181	PT2182	PT2183	PT2184
25W	50W	75W	100W	150W

(*) Not available in the UK

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Heat & Basking Bulbs

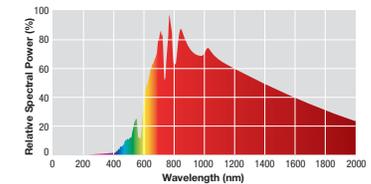
Technical information

Daytime Heat Bulb

PT2100
T10/15W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	9950	>122	>50
8	20	1930	97	36
12	30	168	82	28
16	40	85	79	26
20	50	48	77	25
24	60	35	77	25

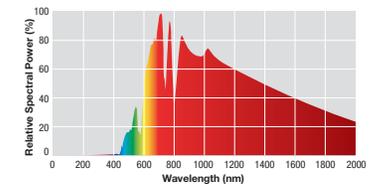
Approximate values at 68°F/20°C - Domains approximaties à 20 °C/68 °F - Intensités lumineuses bei 20°C
Valores aproximados a 68°F/20°C - Temperaturas aproximativas 20°C - Waarden bij benadering bij 68°F/20°C



PT2102
T10/25W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	19200	-	-
8	20	5800	-	-
12	30	500	-	-
16	40	255	-	-
20	50	155	-	-
24	60	100	-	-

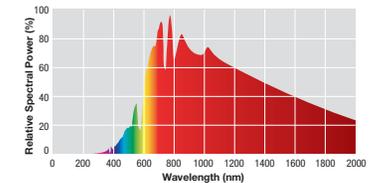
Approximate values at 68°F/20°C - Domains approximaties à 20 °C/68 °F - Intensités lumineuses bei 20°C
Valores aproximados a 68°F/20°C - Temperaturas aproximativas 20°C - Waarden bij benadering bij 68°F/20°C



PT2104
T10/40W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	25000	>122	>50
8	20	8780	99	37
12	30	1850	86	30
16	40	685	82	28
20	50	375	79	26
24	60	205	77	25

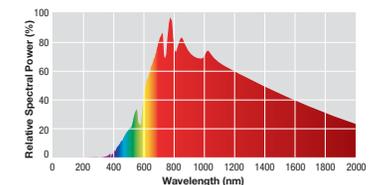
Approximate values at 68°F/20°C - Domains approximaties à 20 °C/68 °F - Intensités lumineuses bei 20°C
Valores aproximados a 68°F/20°C - Temperaturas aproximativas 20°C - Waarden bij benadering bij 68°F/20°C



PT2110
A19/60W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	30100	>122	>50
8	20	11920	95	35
12	30	4500	88	31
16	40	1460	84	29
20	50	690	79	26
24	60	270	77	25

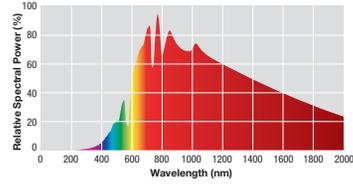
Approximate values at 68°F/20°C - Domains approximaties à 20 °C/68 °F - Intensités lumineuses bei 20°C
Valores aproximados a 68°F/20°C - Temperaturas aproximativas 20°C - Waarden bij benadering bij 68°F/20°C



PT2111
A19/100W

100W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	35660	>122	>50		
	8	20	17560	95	35		
	12	30	8395	91	33		
	16	40	2985	82	28		
	20	50	1100	77	25		
	24	60	405	77	25		

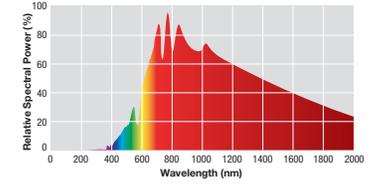
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Intensidade Warts bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT2132
R20/75W

75W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	40060	>122	>50		
	8	20	30250	95	35		
	12	30	21560	84	29		
	16	40	15050	81	27		
	20	50	9340	77	25		
	24	60	3200	75	24		

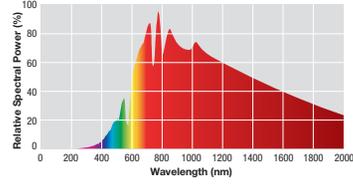
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



PT2112
A21/100W

100W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	35660	>122	>50		
	8	20	17560	95	35		
	12	30	8395	91	33		
	16	40	2985	82	28		
	20	50	1100	77	25		
	24	60	405	77	25		

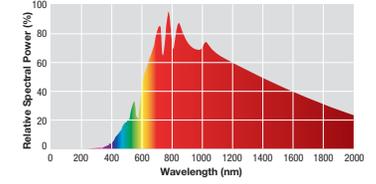
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Intensidade Warts bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT2133
R25/100W

100W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	60000	>122	>50		
	8	20	40560	93	34		
	12	30	29850	86	30		
	16	40	20156	82	28		
	20	50	12590	81	27		
	24	60	4000	75	24		

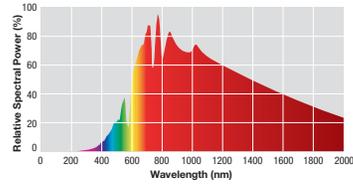
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



PT2114
A21/150W

150W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	40600	>122	>50		
	8	20	22800	95	35		
	12	30	12385	91	33		
	16	40	5560	82	28		
	20	50	2500	77	25		
	24	60	1000	77	25		

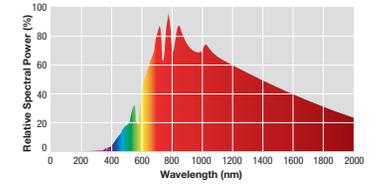
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Intensidade Warts bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT2134
R30/150W

150W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	75620	>122	>50		
	8	20	55620	109	43		
	12	30	39526	90	32		
	16	40	25630	84	29		
	20	50	14500	81	27		
	24	60	5000	75	24		

Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



Daytime Basking Bulb

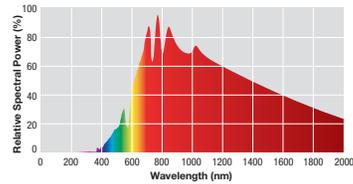
PT2195 *

25W

(*) Not available in the UK

25W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	4800	95	35		
	8	20	2250	81	27		
	12	30	600	75	24		
	16	40	340	73	23		
	20	50	250	73	23		
	24	60	195	73	23		

Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



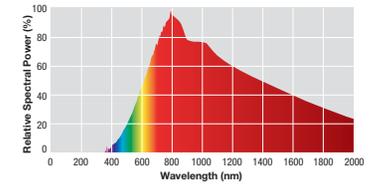
PT2196 *

25W

(*) Not available in the UK

25W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	5010	91	33		
	8	20	1120	77	25		
	12	30	540	75	24		
	16	40	310	73	23		
	20	50	210	73	23		
	24	60	170	73	23		

Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Intensidade Warts bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C

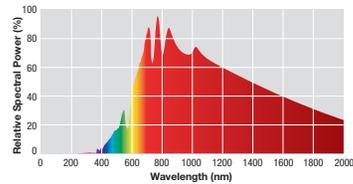


PT2131

R20/50W

50W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	25050	>122	>50		
	8	20	18050	91	33		
	12	30	13560	84	29		
	16	40	9500	81	27		
	20	50	5560	77	25		
	24	60	2500	75	24		

Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F

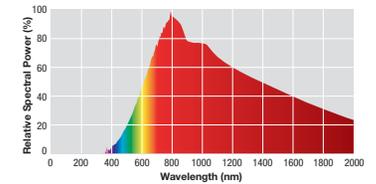


PT2135

S20/50W

50W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux		°F	°C
	4	10	25050	>122	>50		
	8	20	18050	91	33		
	12	30	13560	84	29		
	16	40	9500	81	27		
	20	50	5560	77	25		
	24	60	2500	75	24		

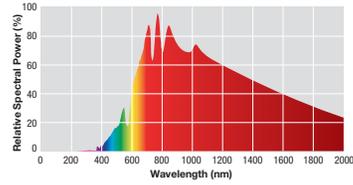
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



PT2136
S20/75W

75W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	40060	>122	>50	
		8	20	30250	95	35	
		12	30	21560	84	29	
		16	40	15050	81	27	
		20	50	9340	77	25	
		24	60	3200	75	24	

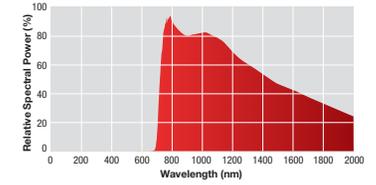
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



PT2124
T10/40W

40W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	-	84	29	
		8	20	-	73	23	
		12	30	-	68	20	
		16	40	-	68	20	
		20	50	-	68	20	
		24	60	-	68	20	

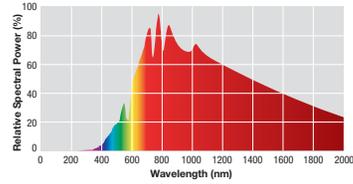
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Ungelähre Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT2138
S25/100W

100W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	60000	>122	>50	
		8	20	40560	93	34	
		12	30	29850	86	30	
		16	40	20156	82	28	
		20	50	12590	81	27	
		24	60	4000	75	24	

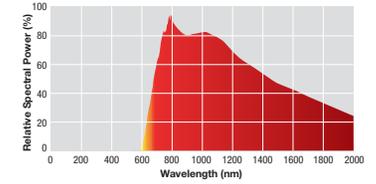
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



PT2126
A19/50W

50W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	-	84	29	
		8	20	-	75	24	
		12	30	-	68	20	
		16	40	-	68	20	
		20	50	-	68	20	
		24	60	-	68	20	

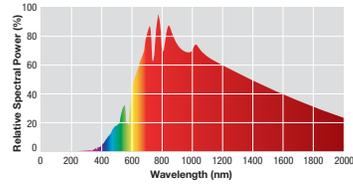
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Ungelähre Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT2140
S30/150W

150W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	75620	>122	>50	
		8	20	55620	109	43	
		12	30	39526	90	32	
		16	40	25630	84	29	
		20	50	14500	81	27	
		24	60	5000	75	24	

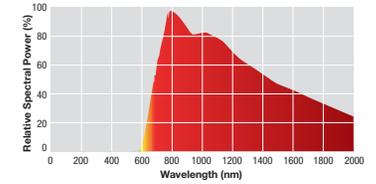
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Domieses aproximativas à 20°C/68°F



PT2130
A19/75W

75W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	-	90	32	
		8	20	-	79	26	
		12	30	-	68	20	
		16	40	-	68	20	
		20	50	-	68	20	
		24	60	-	68	20	

Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Ungelähre Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C

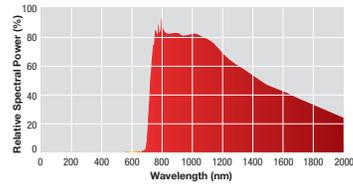


Night Heat Bulb

PT2120
T10/15W

15W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	-	73	23	
		8	20	-	70	21	
		12	30	-	68	20	
		16	40	-	68	20	
		20	50	-	68	20	
		24	60	-	68	20	

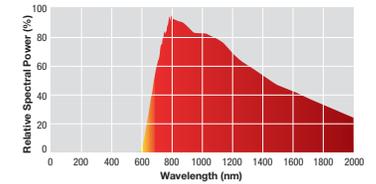
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Ungelähre Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT2141
R20/50W

50W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	-	104	40	
		8	20	-	81	27	
		12	30	-	73	23	
		16	40	-	-	-	
		20	50	-	-	-	
		24	60	-	-	-	

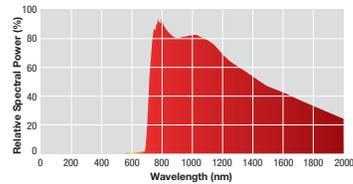
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Valores aproximados a 68°F/20°C



PT2122
T10/25W

25W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	-	77	25	
		8	20	-	72	22	
		12	30	-	68	20	
		16	40	-	68	20	
		20	50	-	68	20	
		24	60	-	68	20	

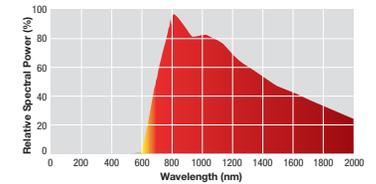
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Ungelähre Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT2142
R20/75W

75W		Distance		Illuminance with Light Dome		Temp.	
		Inch	cm	Lux	°F	°C	
		4	10	-	120	49	
		8	20	-	91	33	
		12	30	-	81	27	
		16	40	-	-	-	
		20	50	-	-	-	
		24	60	-	-	-	

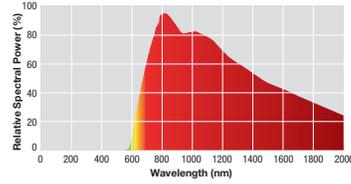
Approximate values at 68°F/20°C - Domieses aproximativas à 20°C/68°F - Valores aproximados a 68°F/20°C



PT2144
R25/100W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	-	>131	>55
8	20	-	113	45
12	30	-	90	32
16	40	-	84	29
20	50	-	-	-
24	60	-	-	-

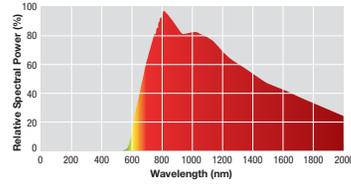
Approximate values at 68°F/20°C - Données approximatives à 20 °C/68 °F - Valores aproximados a 68°F/20°C



PT2146
R30/150W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	-	>131	>55
8	20	-	>131	>55
12	30	-	126	52
16	40	-	99	37
20	50	-	-	-
24	60	-	-	-

Approximate values at 68°F/20°C - Données approximatives à 20 °C/68 °F - Valores aproximados a 68°F/20°C

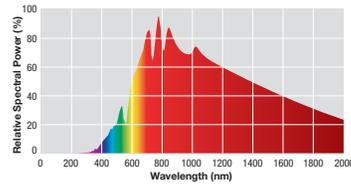


Swamp Basking Spot

PT3780 *
R20/50W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	50100	>122	>50
8	20	2130	91	33
12	30	734	82	28
16	40	380	79	26
20	50	252	77	25
24	60	200	75	24

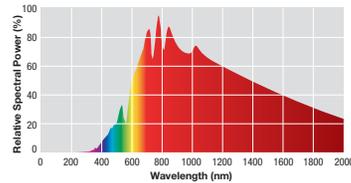
Approximate values at 68°F/20°C - Données approximatives à 20 °C/68 °F - Ungelöste Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT3781 *
R20/75W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	72400	>122	>50
8	20	2515	93	34
12	30	1005	82	28
16	40	536	79	26
20	50	350	77	25
24	60	225	75	24

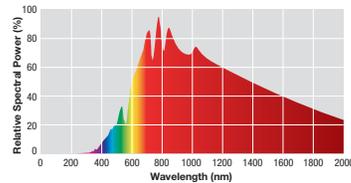
Approximate values at 68°F/20°C - Données approximatives à 20 °C/68 °F - Ungelöste Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



PT3782 *
R20/75W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	35400	>122	>50
8	20	3080	97	36
12	30	1970	90	32
16	40	1070	87	30.5
20	50	575	84	29
24	60	450	82	28

Approximate values at 68°F/20°C - Données approximatives à 20 °C/68 °F - Ungelöste Werte bei 20°C
Valores aproximados a 68°F/20°C - Temperatura aproximativa 20°C - Waarden bij benadering bij 68°F/20°C



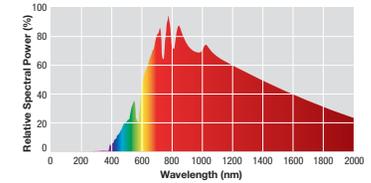
Halogen Basking Spot

PT2197
25W

(*) Not available in the UK

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	3830	95	35
8	20	2150	81	27
12	30	510	75	24
16	40	340	73	23
20	50	220	73	23
24	60	195	73	23

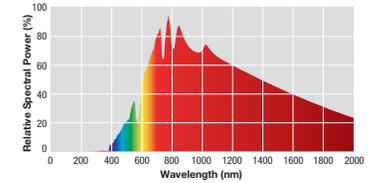
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Données approximatives à 20 °C/68 °F



PT2181
50W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	35520	>122	>50
8	20	20050	86	30
12	30	12820	81	27
16	40	9550	75	24
20	50	6500	73	23
24	60	5000	73	23

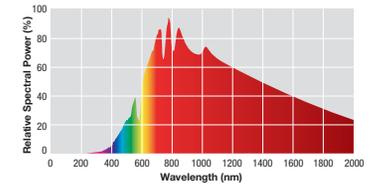
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Données approximatives à 20 °C/68 °F



PT2182
75W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	65520	>122	>50
8	20	43800	>122	>50
12	30	26550	>122	>50
16	40	17580	100	38
20	50	12200	86	30
24	60	9150	81	27

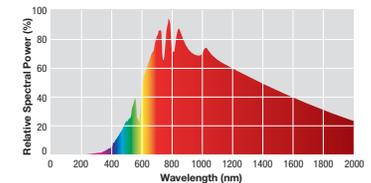
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Données approximatives à 20 °C/68 °F



PT2183
100W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	98823	>122	>50
8	20	76050	>122	>50
12	30	55025	>122	>50
16	40	38000	111	44
20	50	29000	100	38
24	60	22000	91	33

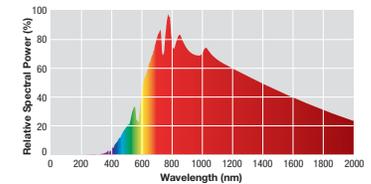
Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Données approximatives à 20 °C/68 °F



PT2184
150W

Distance	Illuminance with Light Dome		Temp.	
	Inch	cm	Lux	°F °C
4	10	241000	>122	>50
8	20	161000	>122	>50
12	30	110500	>122	>50
16	40	72500	>122	>50
20	50	48600	>122	>50
24	60	35800	>122	>50

Approximate values at 68°F/20°C - Valores aproximados a 68°F/20°C - Données approximatives à 20 °C/68 °F



(*) Not available in the UK

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.



Light Bracket

Light Dome Support Fixture

- *Light Dome or Wire Light suspension bracket*
- *Easily adjustable*
- *Extends life span of light bulbs*
- *Suspends most light fixtures securely*
- *Helps prevent accidental tipping*
- *Prevents terrarium damage*

The Exo Terra Light Bracket is designed to suspend the Exo Terra Light Dome or other types domes or wire fixtures above any Exo Terra Natural Terrarium or other glass terrarium securely. The Exo Terra Light Bracket easily adjusts to fit most types of fixtures or can be used to regulate heat/light according to required terrarium conditions by moving the rubber washers. Since the bulbs do not need to be moved after installation – together with increased ventilation – the light bulbs' (basking lamps, Solar Glo, etc.) life span is drastically improved.

PT2223 Light Bracket Large



In combination with Ceramic Heat Emitter and Wire Light



In combination with Light Dome



Compact Top

Compact Fluorescent Terrarium Canopy

- Compact size
- Extra deep, polished reflector dome
- Increases UVB output by up to 100%!
- With On/Off switch and 6ft (180 cm) power cord
- Ceramic socket

The Exo Terra Compact Top Canopy is a compact fluorescent terrarium canopy designed for use with the Exo Terra Natural Terrarium. This easy-to-install canopy accommodates compact fluorescent bulbs or low wattage incandescent bulbs. A composition of various Exo Terra Reptile UVB bulbs, Reptile Vision Bulbs and Visual Light Bulbs can be used in order to create the ideal ultraviolet/visual light ratio. A combination with low wattage incandescent bulbs, such as the Exo Terra Daytime Heat Bulb can be used 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 attached using the special sliding rim on top of the canopy.



 Compact Top Nano / 20 cm - 8"
For use with Exo Terra Natural Terrariums Nano.
Bulb not included.

 Compact Top Small / 45 cm - 17"
For use with Exo Terra Natural Terrariums Small.
Bulbs not included.

 Compact Top Mini
30 cm - 11.8"
For use with Exo Terra Natural Terrariums Mini.
Bulb not included.

 Compact Top Medium
60 cm - 23.6"
For use with Exo Terra Natural Terrariums Medium.
Bulbs not included.

 Compact Top Large
90 cm - 36"
For use with Exo Terra Natural Terrariums Large.
Bulbs not included.

PT2224	Compact Top - Terrarium Canopy Nano	20 x 9 x 15 cm / 8" x 3.5" x 5.9"
PT2225	Compact Top - Terrarium Canopy Mini	30 x 9 x 15 cm / 11.8" x 3.5" x 5.9"
PT2226	Compact Top - Terrarium Canopy Small	45 x 9 x 20 cm / 17.7" x 3.5" x 7.8"
PT2227	Compact Top - Terrarium Canopy Medium	60 x 9 x 20 cm / 23.6" x 3.5" x 7.8"
PT2228	Compact Top - Terrarium Canopy Large	90 x 9 x 20 cm / 36" x 3.5" x 7.8"



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 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.

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.

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



Wire Light

Porcelain Clamp Lamp

- Heat-resistant porcelain socket
- Rated for up to 250 Watts
- Suitable for the Exo TerraLight Bracket
- Ideal for use with Heat Wave Lamps (ceramic heat emitters), self-ballasted mercury vapour bulbs, or regular incandescent bulbs

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 lamp that meets all safety regulations when used in conjunction with the Exo Terra Heat Wave Lamp. Combine the Wire Light with the Exo Terra Light Bracket to suspend it securely above any glass terrarium.

PT2060	Wire Light Small
PT2062	Wire Light Large



Light Dome

Aluminum UV Reflector Lamp

- Compact size
- Extra deep, polished reflector dome
- Increases UVB output by up to 100%!
- With On/Off switch and 6ft (180 cm) power cord
- Ceramic socket

The Exo Terra Light Dome Terrarium Lamp has an extra long reflector dome that extends beyond the face of most bulbs. Perfect for use with Exo Terra Terrariums. The highly polished aluminum reflector increases light, UVB and UVA output by up to 100%! The ceramic socket can accommodate either compact fluorescent bulbs or incandescent bulbs (max. 75W). Combine multiple fixtures with specific light bulbs to create the ideal lighting system.



PT2055	14 cm	5.5"
PT2057	18 cm	7"



Ideal for use with all types of Exo Terra incandescent (max. 75W) and UVB fluorescent bulbs, except Exo Terra Solar Glo and Ceramic Heat Emitter.



Ideal for use with all types of Exo Terra incandescent (max. 150W) and UVB fluorescent bulbs, except Exo Terra Solar Glo and Ceramic Heat Emitter.





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