



POWERSUN H.I.D. METAL HALIDE UVB LAMP & FIXTURE

HIGH OUTPUT UVB & HEAT
BRIGHT, TRULY NATURALISTIC LIGHT
95 CRI - 6500 K



Congratulations on your purchase of Zoo Med's PowerSun® H.I.D. Metal Halide UVB Lamp! The following instructions will assist you with the proper set-up and operation of this unit. Please read the following instructions carefully. If you have any questions regarding these instructions or the proper use of this item, please contact our customer service department at:

email: zoomed@zoomed.com website: www.zoomed.com
or by calling (888) 496-6633 (US and Canada only).
Customers in other countries, please call (805) 542-9988.

FEATURES:

- High output UVB lamp for larger habitats.
- Truly sun-like bright naturalistic light for terrariums.
- 6500K color temperature & 95 CRI for amazing color combined with UVB, UVA, & heat from one lamp!
- Proprietary Zoo Med lamp construction creates a true flood-lamp effect, eliminating dangerous UV "hot-spots" common to other metal halide reptile lamps.
- Full one year lamp guaranty (Product registration required. Complete and return card enclosed with lamp or combo pack.) No registration required for lamp fixture.

CAUTION:

PowerSun H.I.D. Metal Halide UVB lamps emit UV radiation and must be used in accordance with these instructions. Just as you would not stare into the sun, do not stare into this lamp! This lamp must be placed directly overhead of your reptiles, and not to the side which would force them to stare into this lamp! This lamp must be placed a minimum of 12 inches away from your animals. Failure to use the lamp according to these instructions may result in personal injury or may cause injury to your animal(s).

SAFETY INSTRUCTIONS:

WARNING! RISK OF FIRE: Read and save all safety instructions before operating lamp fixture.

IMPORTANT: This appliance has a GROUNDED plug for safety and must be plugged into a grounded receptacle. Do not modify the plug in any way.

- **DO NOT** exceed electrical rating. This 70 watt metal halide lamp is designed for use ONLY in Zoo Med's 70 watt PowerSun® H.I.D. Metal Halide UVB Lamp Fixture.
- **DO NOT** splice, repair, or modify this product in any way. Fully extend cord before using.
- **DO NOT** use in wet conditions. Use indoors only. Not for use with aquariums.
- Keep children and pets (other than your terrarium animals) away from fixture.
- Fully insert plug. Unplug when not in use. Unplug power cord before inserting or changing bulb.
- **DO NOT** cover with blankets, rugs, or any material.
- **DO NOT** use with damaged cord sets – inspect periodically.
- **DO NOT** alter or modify this product. Contact an electrician if you are unsure about the electrical connection.

This unit has no user-serviceable parts. Do not attempt to examine or repair this product yourself. Return to Zoo Med for inspection and repair.

OPERATING INSTRUCTIONS*:

This lamp has an effective range from 12 to 38 inches from the face of the lamp. Within this range, are four zones of increasing UV intensity. These zones are described below and will help you determine the correct basking distance for your reptile(s).

ZONES 1 & 2 (minimum range):

28 – 38 inches (71-96 cm)

Zone 1: UVI 0.4 to 0.7

(Shade/Crepuscular)

Species in this zone can be either diurnal (active during the day) or crepuscular (active at dawn or dusk). They avoid direct sunlight exposure and are able to meet their vitamin D requirements through exposure to low levels of UVB typically found in the shade, or at dawn or dusk. Examples include Jamaican Brown Anoles (Anolis lineatopis), Elaphe species (Corn and Rat Snakes), Leopard Geckos, Leaf-tailed

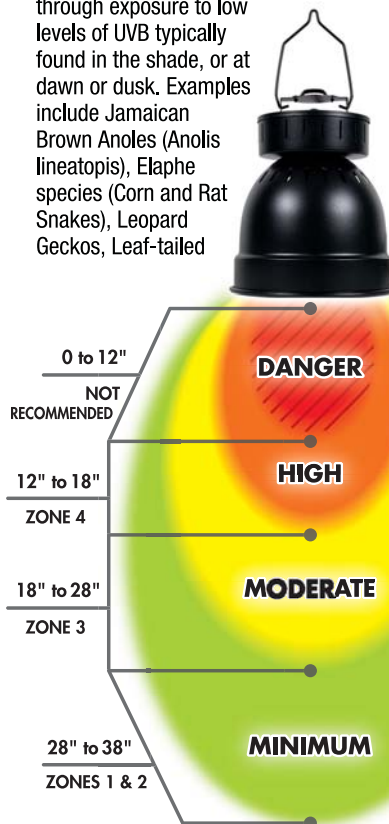
FERGUSON ZONES

	ZONE	BASKING BEHAVIOR	*UV INDEX
MINIMUM	ZONE 1	SHADE	0.4 to 0.7
	ZONE 2	MOSTLY PARTIAL SUNLIGHT	0.7 to 1.0
MODERATE	ZONE 3	MOSTLY FULL SUNLIGHT	1.0 to 2.6
HIGH	ZONE 4	MIDDAY FULL SUNLIGHT	2.6 to 3.5 or more
DANGER			> 7.9

Geckos and Tokay Geckos. Some amphibian species (like Dart Frogs) will also benefit from UVB exposure in this zone. Some nocturnal species may benefit from Zone 1 UVB exposure as they have been found to expose limbs and body parts to UVB while sleeping (like Crested Geckos).

Zone 2: UVI 0.7 to 1.0 (Mostly partial sun/Occasional full sun baskers)

This is a small range that is very close to Zone 1, but species in this zone will occasionally venture out into full sunlight for short periods of time. Examples include Green Anoles (Anolis carolinensis), Water Dragons (Physignathus cocincinus), Day Geckos (Phelsuma species), Skinks, Box Turtles (Terrapene species), Boa Constrictors, Ball Pythons, Garter and Ribbon Snakes (Thamnophis species) and most species of diurnal Colubrid snakes (like Kings Snakes and Gopher Snakes). This zone is also recommended for Old World Chameleons (Panther



Chameleons, Jackson's Chameleons, and other Chameleon species). If you're unsure what the appropriate zone is for a given species, Zone 2 can be used as a safe and effective level that will prevent the onset of metabolic bone disease or nutritional secondary hyperparathyroidism (NSHP).

ZONE 3 (moderate range): 18 – 28 inches (46 to 71 cm)

UVI 1.0 to 2.6 (Mostly full sun/Occasional partial sun baskers)

Zone 3 covers a fairly broad range and includes many species commonly kept as pets. These temperate, tropical, and sub-tropical species will bask in full sun early in the day or early afternoon. During mid day, they may be found basking when conditions are partly cloudy. This zone is appropriate for most species of aquatic turtles and tortoises. Many of the small spiny lizards of the genus Sceloporus fall into this zone, Monitors and Tegus, Blue-tongued Skinks, as well as Green Iguanas (Iguana iguana) and Curly-tailed Lizards of the genus Leiocephalus. With zone 3 and above, it is **VERY IMPORTANT** to provide a UVB gradient down to zone 1 UVB levels so that reptiles can "photoregulate" and adjust their UVB exposure as needed. Failure to provide a UVB gradient can result in illness, eye & skin damage, or even death.

ZONE 4 (high range): 12 – 18 inches (30 to 46 cm)

Zone 4: UVI 2.6 to 3.5 or more (Mid day full sun baskers)

Zone 4 species would include the majority of "desert" species that bask in full sunlight, even after Zone 3 species have retreated into burrows or the shade.

(continued on back)

OPERATING INSTRUCTIONS*: (continued)

Examples include Bearded Dragons (*Pogona vitticeps*), Uromastix lizards, Chuckwallas (*Sauromalus* sp.) and Desert Iguanas (*Dipsosaurus dorsalis*).

IMPORTANT: Just as with zone 3, it is critical that the habitat is large enough to provide a UVB gradient down to zone 1 levels to allow reptiles to photoregulate and adjust their UVB exposure. Failure to provide a UVB gradient can result in illness, eye & skin damage, or even death. Avoid UVI levels of 8.0 or more for zone 4 species as even the most sun-loving species retreat from full sunlight at these high levels (see lamp safety notes below for more info).

*Notes on operating range:

The operating range is the distance from the lamp to the reptile's basking site. In order for your reptile to benefit from the UVB, you must provide your reptile with the appropriate temperature zone. Be sure to provide an appropriate temperature and UVB gradient. This will allow your reptile to adjust their distance to heat and UVB lamps in order to regulate their body temperature and UVB exposure.

CAUTION: Never place this lamp closer than 12 inches to any animal!

IMPORTANT NOTES

UVB Gradient: When placing UVB lamps over a terrarium, it is imperative that the lamp is positioned in a way that creates a UVB gradient in the habitat. UVB will be strongest close to the lamp, and will gradually decrease with distance. This can often be achieved by placing the lamp fixture above the terrarium and off to one end of the habitat. Verify that the desired UVI levels and gradient are achieved using the UVI meter. The habitat must be large enough to provide this gradient and allow reptiles to photoregulate (adjust their exposure to UVB as needed). For all zones, always provide a shelter for reptiles to retreat completely from any light and UVB exposure.

Shade method vs. Sunbeam method: Two methods of providing UVB for reptiles can be used depending on your species and the size of your terrarium. Ferguson UVI zones 1 and 2 approximate UVB levels that would be found in the shade, in the canopy of a tree, or on partly cloudy days. When providing UVI for zone 3 and 4 species, ideally, the Sunbeam method should be used, where the appropriate zone is provided over about half the length of the terrarium, and higher levels (in the range UVI 3.0 - 7.0) are created over just the basking site, to simulate direct sunlight. A gradient down to zero UVI is achieved in the rest of the habitat.

Temperature gradient: The biological process where vitamin D is synthesized in the skin following exposure to UVB can only occur when the proper temperatures are present. This process is heat dependent, so it is critical to research the temperature requirements of various species and provide the "POTZ" (preferred optimum temperature zone) in their habitat. Whenever possible, place the heat source as close as possible to the UVB source.

Watch for abnormal behaviors: It is important to monitor the reptile's behavior following the introduction of a new UVB lamp. If the reptile spends unusually long periods of time basking as close as possible to the UVB and heat lamp(s), then the temperature and/or UVB level may be too low for that species. If a species appears to be trying to avoid the UVB lamp, spending most of its time as far from the lamp as possible then the lamp may be too strong. Under ideal conditions, reptiles should spend some time basking, and should also move throughout the habitat to perform natural behaviors (feeding, sleeping, etc.).

Screen mesh: Screen covers on terrariums significantly reduce the amount of UVB that reaches your reptile's basking site. As the screen mesh gets finer, more UVB is blocked or filtered. The distance recommendations given may need to be reduced depending on the amount of shading produced by the screen mesh. Watch your reptile's behavior as noted above in the section on abnormal behaviors. Glass and most plastics filter all UVB emissions and should not be placed between the lamp and animals.

The information given is provided as a guideline for the proper use of this lamp with your reptile(s). Exact UVB requirements are not known for every species and UVB levels may need to be adjusted for each specific application. If you are unsure about the proper use of this lamp, contact Zoo Med's customer service department for more information.

SUSPENDING THIS LAMP FIXTURE:

CAUTION: Be sure that the lamp fixture is securely suspended above the enclosure. Never place this lamp inside a terrarium. Zoo Med's adjustable Reptile Lamp Stand (Item LF-20) is recommended for safely suspending this fixture above your terrarium. For taller terrariums, the Reptile Lamp Stand Extension Pole (Item LF-20X) can be used and is available on the "store" section of Zoo Med's website. Contact customer service for more information.



WHEN TO REPLACE YOUR LAMP:

Your lamp will provide beneficial UVB for a period of 12 months. After 12 months, the lamp should be replaced with a new PowerSun® H.I.D. Metal Halide UVB Lamp. Before you turn your lamp on for the first time, record the date of first use so that you know when to replace your lamp. Log on to www.zoomed.com and click "UVB Reminder" to receive an email from Zoo Med letting you know that it is time to replace your lamp.

DIGITAL UV INDEX METERS:

If you are interested in measuring the amount of UVB that your lamp is producing, you may want to purchase Zoo Med's Digital UV Index Radiometer (Item# ST-7). This meter is available in the "store" section at www.zoomed.com, or by special order through your reptile product retailer.

For more information on reptiles and UVB, visit www.zoomed.com/UVB



CAUTION

Lamp emits ultraviolet radiation intended for reptile use only.

 -LAMP CONTAINS MERCURY,
Manage in Accord with Disposal Laws, See: www.lamprecycle.org

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