

AQUARIUM & ZOO LIGHTING

Fish tanks. Enclosures. Indoor plants.

Lighting concepts & solutions for zoological habitats



**MADE IN
EUROPE**



**GERMAN
ENGINEERING**

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Material no. 111054 - Version: October 2019



More than light! We evaluate your specific needs to provide the best individual lighting solution for your habitats. Just give us a call, we will be glad to become your partner: ☎ +49 8094 906 400.

Who we are and what we do

In a nutshell

HISTORY

BLV Licht- und Vakuumtechnik was founded in Steinhoering, Bavaria, in 1968. As a manufacturer of high quality lamps for both general lighting and niche markets, the company quickly made a name for itself. Nowadays the company enjoys a worldwide reputation as a manufacturer of lighting solutions for special applications.

GLOBAL SCALE

With the NEPTURION® series, BLV has been playing a key role in professional aquarium lighting for more than a decade and is selling its products to more than 40 countries around the globe.

UNIQUENESS

As one of the very few players in the market, BLV is offering a lighting portfolio not only for aquariums, but for almost all areas within a zoo including LED solutions for indoor plants, butterfly houses and botanical gardens as well as UV lighting for reptile enclosures and indoor bird aviaries.

EVERYTHING YOU NEED

BLV considers itself much more than just a lighting solution provider. Having retained its character as a mid-sized company, BLV is able to anticipate on individual customer demands. This includes spectrum selection, scenario comparison, light calculations, project installations and sustained after-sales service.

GERMAN ROOTS, GLOBAL PRESENCE

Besides our development, production and sales sites in Germany and Poland, we have a sales team travelling to our clients worldwide.

STRONG BACKING

BLV is member of the USHIO Group, a world player for special lighting with a yearly revenue of about 1,5 billion Euro.



NEPTURION® aquarium lighting for healthy fish, underwater plants & corals

In recent years, more and more public aquariums have shifted from being biological collections to providers of underwater world experiences for visitors. The fascination of an underwater world is strongly enhanced by the mystic atmosphere of an aquarium. A good aquarium allows the spectator to submerge into the scenery.

To create the right atmosphere, most curators resort either to deep blue or reef green light conditions. Blue enhances the sense of depth. It allows schools of fish to appear seemingly out of nowhere and highlights the majestically slow movement of larger fish. Reef green, on the other hand, resembles the natural light conditions in shallow waters. Light absorption and reflections create contrast.

Fish are colourful and lively inhabitants of every ocean. Like most living organisms, fish respond to light and most of them follow a diurnal cycle. This cycle is regulated by light intensity and quality. Maintaining the cycle is crucial for their health and social behaviour. Some fish also change their pigmentation under different light conditions. Hence, well arranged light will prevent your fish from taking on an unnatural appearance.

It becomes even more complex with corals: Corals are the masterpiece of each tank. They are extremely sensitive to the environment and need special care. Not only are they sensitive to the water temperature, but they also need a special light spectrum that stimulates photosynthesis – crucial for calcification, healthy growth and survival of this species. In addition, corals need special wavelengths to stimulate the beautiful fluorescence that optimises their appearance.

BLV helps you to merge all these different aspects into a balanced light installation.

NEPTURION® LED series

LED luminaires for fish tanks

The new NEPTURION® LED luminaires are the result of the combination of latest technology, German engineering know-how and high quality material.

This product series has been developed to offer aquariums a wide range of optimal lighting solutions for different sizes and types of tanks. Curators can choose from different models in terms of shape, wattage, light distribution and control options, all of them offering optimum performance, luminous efficacy and service life.



Linear version
for 1, 2 or 3 LED boards
120 W / 240 W / 400 W



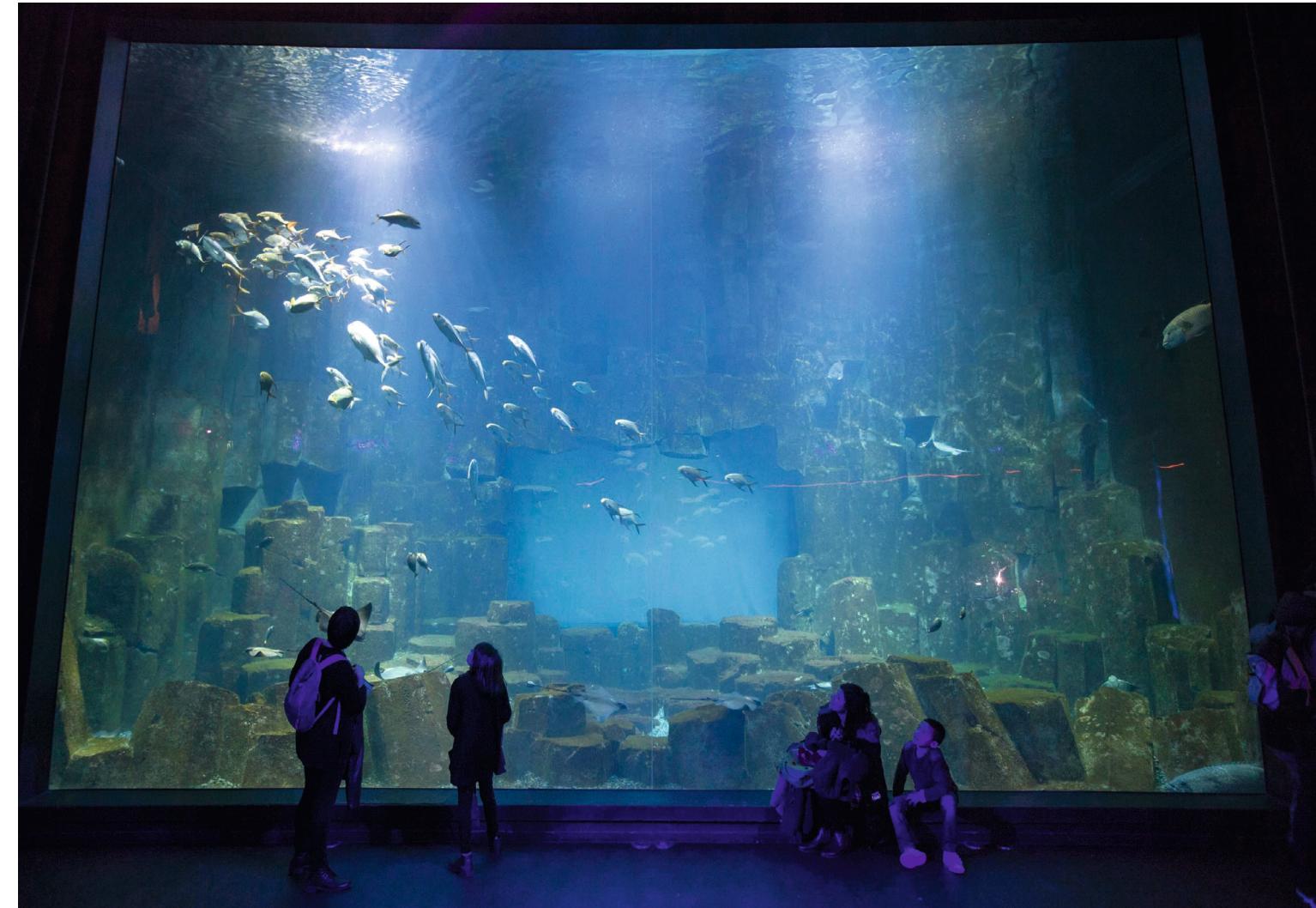
Square versions
for 2 or 3 LED boards
240 W / 400 W



Separate driver module

NEPTURION® LED model variety & features:

- Standard versions for healthy fish keeping and dynamic & dramatic lighting sceneries, featuring CCT switch between 5 800K, 10 000K, 16 000K and 20 000K+
- Optional DALI versions with full flexibility
- Power levels up to 400 W
- Choice of beam angles (25°, 60°, 85°)
- Individual safety power switch at driver module
- Separated driver module away from water area:
 - no mains voltage above water
 - lower weight above the tank
- All LED modules and driver boxes are pre-installed with cables and/or watertight connectors:
 - safe and easy plug & play connections



NEPTURION® LED coral

LED luminaires for healthy coral growth

Coral reefs are one of the great wonders of marine life. Their lively and colourful inhabitants constitute a fundamental contrast to the slow, majestic movements of large fish in the deep blue ocean. It is, therefore, a centre piece of many aquariums.

However, keeping a healthy coral reef in a tank is a technical and biological challenge. The diversity of species that meet at the reef requires a well-balanced tuning of nutrients, temperature and light conditions. Coral reef lighting always involves a compromise of the requirements of the coral itself, the species of fish and the expectations of visitors.

As part of its new **NEPTURION® LED series** BLV is offering special coral versions with an exclusive spectrum, providing optimum lighting conditions for a stunning reef tank.



Square version
270 W



Square version
400 W

NEPTURION® LED coral:

- Coral versions with exclusive spectrum for healthy coral growth
- Standard version with on/off switch, DALI version for full flexibility optional
- Choice of beam angles (25°, 60°, 85°)
- Separated driver module away from water area



NEPTURION® LED circular light

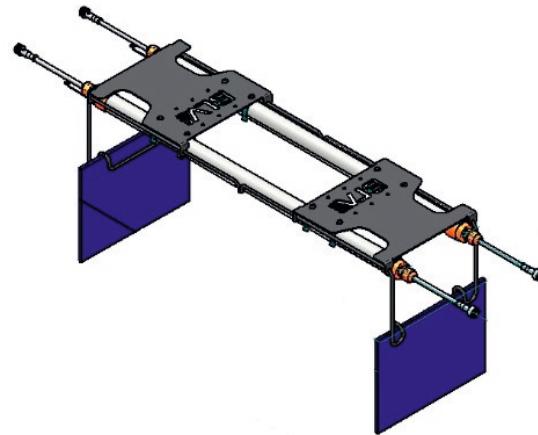
LED luminaires for breeding tanks

As a new product category, BLV offers lighting solutions for behind-the-scenes applications, primarily coral and fish breeding tanks.

Coral farming in domestic aquariums is becoming increasingly important as natural stocks are protected and threatened. Fish reproduction also takes place in virtually every aquarium, ensuring healthy stock and easy replacements.

With the new **NEPTURION® LED circular light series**, BLV offers a lighting solution as replacement for the widely used fluorescent tubes. The LED circular lights are available in two different lengths and two spectrums. They are installed extremely quickly using a simple click system and the flexible clip-on brackets on the pool edge can be flexibly adapted to the respective length. Protection class IP67 ensures longevity and extreme safety above the pool.

With a life expectancy of 50 000 hours this solution is extremely cost-saving not only in terms of energy consumption but also in terms of maintenance.



NEPTURION® LED circular light

for coral and fish breeding tanks

- Ideal for replacement of fluorescent tubes
- Two different lengths and spectra available
- IP67
- Easy and fast installation via click mechanism
- Lifetime of up to 50 000 hours



NEPTURION® MH lamps

More than two decades of outstanding success

For many years, the **BLV NEPTURION®** brand has been known for highest quality and reliability. The traditional product range comprises a wide range of models and power settings that are used around the world to optimally simulate underwater light conditions.



NEPTURION® MH HIT DE

- Double-ended metal halide lamp
- Power levels from 70 W to 250 W
- Various colour temperatures available: 10 000 K, 14 000 K, 16 000 K, 20 000 K+
- Excellent service life of up to 10 000 h

NEPTURION® MH HIT E40

- Single-ended metal halide lamp
- Power levels from 250 W to 1 000 W
- Various colour temperatures available: 10 000 K, 14 000 K, 16 000 K, 20 000 K+



Picture: Pedro A. Pino

Forests Underwater, Oceanário de Lisboa [The world's biggest natural aquarium](#)

Illuminated by BLV NEPTURION® MH HIT DE lamps



AMALION® plant lighting for indoor-green and plant installations

Plants are an important element of most zoo, park and aquarium concepts. Installations of different sizes range from small flower containers in entrances and refreshment areas to entire habitats.

The aim of such areas is to create a particular pleasant atmosphere and to engage visitors in a natural experience. However, to keep indoor plants healthy over a long time they need light. Since natural daylight is not always sufficiently available, and opening hours may reach also into the night hours, additional artificial light is required.

Finding a lighting which keeps your plants healthy without compromising the atmosphere of your exhibition can be a challenge. Designated plant lightings are usually pink, designed to stimulate extensive growth, but are disturbing to the human eye. White light, on the other hand, is pleasing for the visitors, but inefficient when it comes to photosynthesis.

The BLV AMALION® lighting solution combines the best of both worlds: it offers a spectrum that stimulates photosynthesis, but prevents excessive and unnatural growth, so that plant installations maintain the designed shape. At the same time it blends harmoniously into the general lighting with its CCT of 4 000K und thus creates a visual calm and light atmosphere for visitors, animals and employees.

AMALION® LED product series

for indoor green, botanical gardens, butterfly houses etc.

The **AMALION® series** offers a range of different luminaires to provide your plants with optimum light, based on the type of plant installation and the structural conditions. All of them are offering a neutral white light with a CCT of 4000 K and a superb colour rendering of CRI 95. The light spectrum and μmol output are optimised for balanced plant growth – μmol indicates the amount of photosynthetically active radiation emitted by a light source that plants are able to use in the process of photosynthesis.



*Linear version
for 1, 2 or 3 LED boards
120 W / 240 W / 400 W*



*Square versions
for 2 or 3 LED boards
240 W / 400 W*

AMALION® LED toplight & wallwasher luminaires

Linear and square shaped luminaires for direct ceiling mounting and suspended mounting

- Anodised aluminium body with clear glass cover, IP65
- Power levels from 120 W to 360 W
- Choice of beam angles: 25°, 60°, 85° and special wallwasher optics for uniform illumination of green walls



AMALION® LED product series for smaller plant installations and accent light

For smaller plant installations, tub plants or desired accent lighting the **AMALION® series** offers likewise a series of suitable solutions.

AMALION® LED low bay luminaires

Ideal for the exposure of plant installations in tubs, ground installations and terrariums & paludariums

- Optical system consisting of lens and reflector for optimum homogeneous light distribution
- Power levels 60 W and 100 W



AMALION® LED downlights, track spotlights and pendant lights

For solitary plants, small green walls, terrariums & paludariums

- 25 W
- Various designs
- Exchangeable, high quality glass reflector lamps with a choice of beam angles (12°, 25°, 40°)





UV Master lighting for reptile enclosures and bird aviaries

Tropical and exotic animals have always fascinated visitors and no zoo can live without. However, keeping these animals requires a species-appropriate environment in which they not only feel comfortable, but can lead a healthy life. A very important aspect is the adequate supply of UV-A and a certain part of UV-B light. UV-B light is vital for many dayactive animals. Among other things, it plays a fundamental role in the body's own vitamin D3 production. Without vitamin D3, calcium from the intestine cannot be absorbed and is therefore not available to the organism. The result is a calcium deficiency. It is therefore crucial that animals from southern regions, which by nature have a high need for UV, receive additional light to keep them healthy.

UV-B light

Promotes the formation of vitamin D3 and prevents calcium deficiency which can lead to rickets, a condition in which the bones become soft and fragile. It also helps to harden shells.

UV master solutions

Our UV master solutions are tailored to the needs of different species like reptiles, day and night active animals, birds and others. They are available in two basic versions:

- **“Skylight”** providing a high dose of UV-B radiation, suitable for short exposure times and in addition to existing general lighting
- **“Daylight”** providing a lower dose of UV-B radiation in combination with a visible spectrum with high CRI, suitable for continuous general lighting

UV Master product series

For healthy animals

Depending on the species and the environment, different lighting solutions are available to provide animals in zoos and terrariums with an adequate level of UV-A and UV-B light for supporting vitamin D3 production, healthy growth and life. Here are two examples of UV projectors:

LIH UV Master Junior 150 W

Projector with UV-A and UV-B radiation for sun simulation



LIH UV Master 1000 W

Projector with UV-A and UV-B radiation for sun simulation



Description

- Robust luminaire housing made of die- cast aluminium, powder-coated, IP65/66
- Choice of highly efficient reflectors made of anodised ultra-pure aluminium
- Front glass permeable for UV-A and useful parts of UV-B radiation
- Integrated ballast (ECG or LLCG)
- Complete with UV emitting metal halide lamp



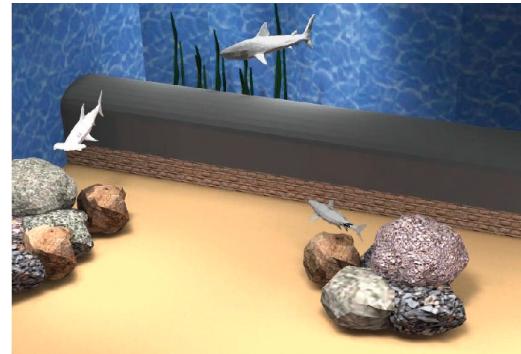
Light planning for aquatic life

Careful preparation for best results

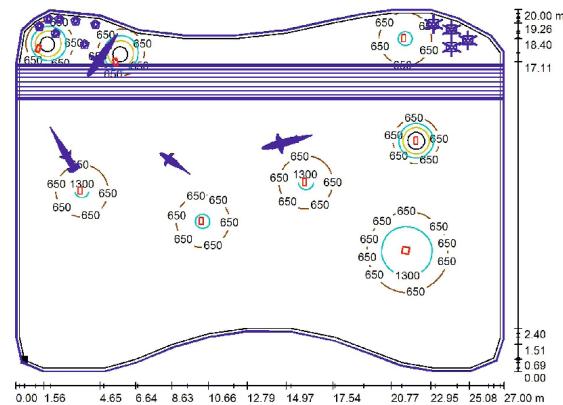
Today, most zoological gardens are more than biological collections; they are sites of natural experiences for visitors. In order to meet all aspects, careful light planning is a must and we at BLV work together with engineers, biologists and sales staff to provide the best possible solution to our customers. Together with our customers we carefully analyse the particular location on-site and evaluate the biological conditions and visual expectations. Based on the data we set up a light plan – individualised and customized.

Example of a light plan for a shark tank with tunnel

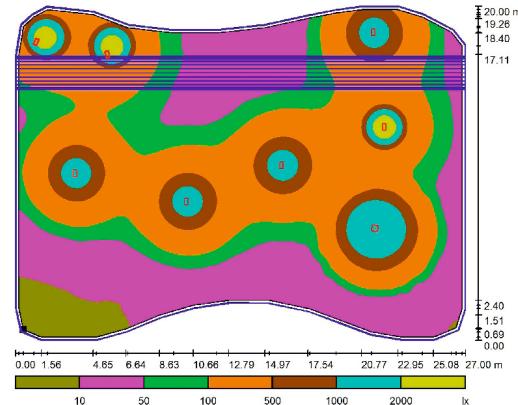
- Positioning and calculation of number and type of luminaires / NEPTURION®
- Simulation of different beam angles and light intensities
- Definition of ideal lighting control via integrated light management system



Shark tank visualisation



Simulation of lux levels



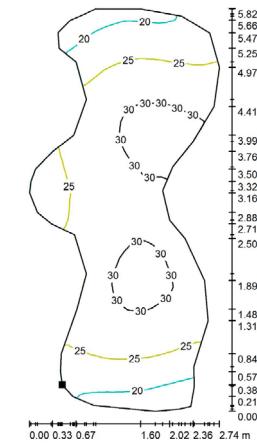
Light distribution in lux

Example of a light plan for a butterfly house

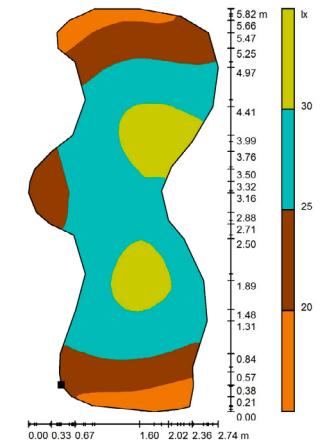
- Positioning and calculation of number and type of luminaires / AMALION®
- Simulation of ideal beam angles and light intensities optimised for a butterfly habitat
- Calculation of lux levels



Butterfly house visualisation



Simulation of lux levels



Light distribution in lux

Flexible and individual control via DALI

The standard NEPTURION® series for aquarium lighting offers you the possibility of selecting your preferred colour of light for your freshwater or salt water tanks by simply switching through pre-set CCTs of 5 800 K, 10 000 K, 16 000 K and 20 000 K+

Enjoy full flexibility and simulate day sequences of the respective habitat, e.g. sunrise, clear sky, clouds, sunset etc. when choosing the optional NEPTURION® or AMALION® DALI version. The front end system (DALI control and programming) to be provided by the customer.

Product overview

NEPTURION®, AMALION®, UV Master

NEPTURION® LED luminaires for fish tanks



NEPTURION® LED luminaires for coral tanks



Range of single-ended and double-ended MH lamps



AMALION® LED wallwasher & toplights



AMALION® LED pendant & low bay luminaire



AMALION® LED downlights & track spotlights



UV Master projectors



BLV NEPTURION® around the globe



A bit of BLV history

Our first lamp in the aquarium lighting segment dates back to 1992, when a BLV developer recognized this niche targeted by only a few companies and designed a lamp optimised specifically for coral breeding. The development was aimed at the high light levels near the equator, which reach approx. 100 000 lux around noon, ensuring optimal coral growth.

BLV entered the market successfully with a 400 W screw-in version. A few years later, the company launched the now widely used 10 000 K version, which was a milestone achievement. The high constancy of the light colour with no distortion that was achieved through internal engineering expertise gave BLV the pole position within a very short time.