

daytime® – 02 / 03
a brand of Waltron GmbH

Matrix
Modular LED-System
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matrix customized
Matrix LED-modules –
Light colours, Wavelength,
Colour temperature

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daytime® – Innovative LED lighting systems "Made in Germany"

Inspired by the many new lighting possibilities originating in LED technology, our mission is creating innovative, adaptable LED lighting systems that enhance the beauty of animals and plants, especially in aquariums and terrariums, and highlight them brilliantly in their scene. Our product developers expect all our components to meet the strictest requirements, thus leaving nothing to chance. A top priority is excellent colour reproduction with maximum efficiency, longevity and ease of use.

Right from the start, we've taken a unique, innovative approach to the daytime® brand. That's because our notion of perfect animal and plant lighting requires the mastery of the most cutting-edge technology and of the key physical and biological parameters related to lighting technology. We are continually taking advantage of new research results, in close collaboration with the leading technology partners. We also implement state-of-the-art testing methods along with comprehensive laboratory and practical tests with the support from Vivaristik's specialists. This enables us to turn groundbreaking ideas and genuine passion into fundamental solutions.

Our entire development and manufacturing processes are kept in-house, in compliance with all valid standards and guidelines. All stages of the development and production of all daytime® products are subject to compulsory and comprehensive quality control.

In summary: We create precious LED lighting systems with the best utility value. We take advantage of our theoretical expertise and practical experience to optimize the natural lighting that is ideal for flora and fauna.

Your plants and fish deserve only the very best! This is, and will remain, our goal.

Your daytime® team





Office, production and logistics



Mechanical processing



Assembling and functional testing



Sales and technical staff







Details



- High-end customizations: with modules added by the aquarium owner
- Modules can be placed at any position using the piercing contact and screw slot
- 20% more heat dissipation using lateral heat conducting surfaces



- CNC-milled module housing made of anodized aluminium (resistance to seawater according to DIN EN 81249-1)
- Crystal-clear polyurethane potting delivers excellent resistance for aquariums – with proven long-term effectiveness! (Seawater, vents, humidity, etc.)
- SEOUL SEMICONDUCTOR
 SMD LED 5630, max. 180 lumens/watt
- LUMILEDS LUXEON Color Line SMD-LED 3535L



- Integrated inline adapter system (universal adapter set) with rubber non-slip contact surfaces
- CNC-milled head pieces made of solid anodized aluminium
- All screws are V4A stainless steel (rust-free, seawater resistant)



- Professional IP67 connector system from Binder, made in Germany
- Very flexible silicone cable (uncoloured "natural")
- Including a special tool for module assembly/disassembly and for fixing the inline adapter system in place

matrix video instructions you will find on youtube.de







- Incl. removable protective screen made of polycarbonate
- Increasing the cleaning comfort



 Continuous T-slot on top side to receive flexible mounting sets, e.g. matrix wire suspension set



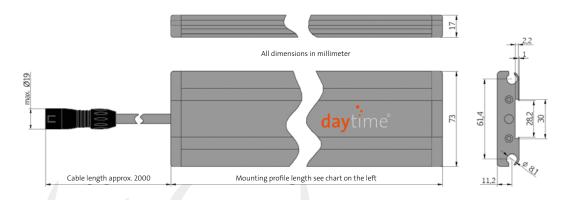
 Lateral slots to receive optional available "Glare Protection" profile

Technical specifications

Designation (size)	Length of mounting profile	Max. number of modules
matrix20.0	16,6 cm	1 pc 10 watts
matrix30.0	25 cm	2 pc 20 watts
matrix40.0	35 cm	3 pc 30 watts
matrix50.0	45 cm	4 pc 40 watts
matrix60.0	55 cm	5 pc 50 watts
matrix70.0	65 cm	6 pc 60 watts
matrix80.0	75 cm	7 pc 70 watts
matrix90.0	85 cm	8 pc 80 watts
matrix100.0	95 cm	9 pc 90 watts
matrix110.0	105 cm	10 pc 100 watts
matrix120.0	115 cm	12 pc 120 watts
matrix130.0	125 cm	13 pc 130 watts
matrix140.0	135 cm	14 pc 140 watts
matrix150.0	145 cm	15 pc 150 watts
matrix160.0	155 cm	16 pc 160 watts
matrix170.0	165 cm	17 pc 170 watts
matrix180.0	175 cm	18 pc 180 watts
matrix190.0	185 cm	19 pc 190 watts
matrix200.0	195 cm	20 pc 200 watts
matrix210.0	205 cm	22 pc 220 watts
matrix220.0	215 cm	23 pc 230 watts
matrix230.0	225 cm	24 pc 240 watts
		24 pc 240 watts
		24 pc 240 watts
		24 pc 240 watts
matrix400.0	395 cm	24 pc 240 watts

Concerning a profile length of more than 2 meter we recommend using the wire suspension or a middle support (e.g. a glass partition) to avoid any bending which could lead to visual irregularities.

- Available in 39 standard lengths (matrix20 to matrix400).
- Ideal for tank widths between 20 and 400 cm.
- Usable with up to 24 matrix LED modules each 10 watts

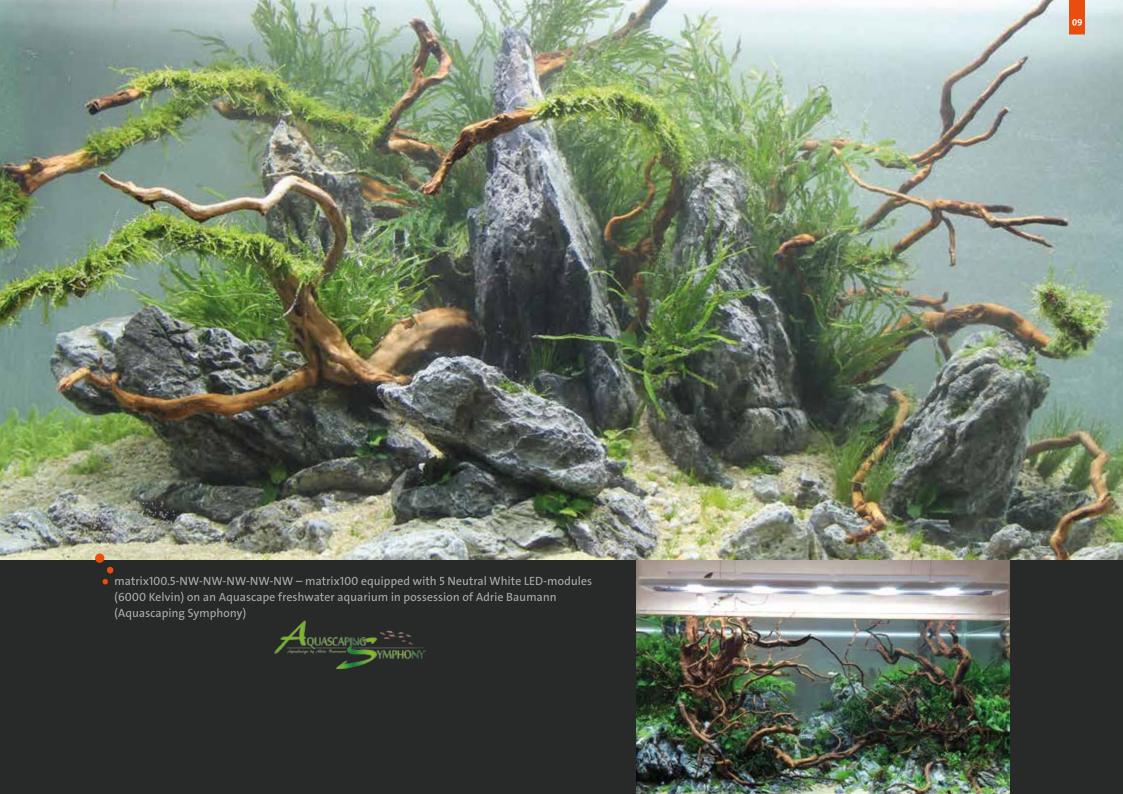


At least 1 cm must be considered because of cable bending.





Detailed information concerning matrix LED-modules you will find on pages 12/13.

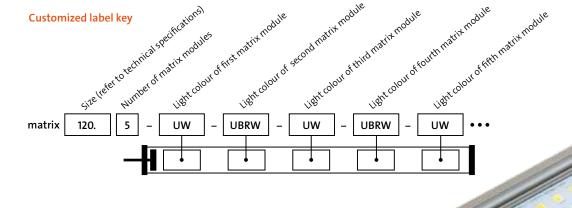


With 7 light colours/colour temperatures combined with up to 24 matrix LED modules and any desired lighting length (from 16 to 400 cm), we have customized illumination available to fit almost any aquarium.

There are various adapter systems (holders) and one adapter profile available that aquarium owners can use for many Juwel® aquariums.

These components, together with custom LED lighting available at specialty shops, can be used to design a lighting solution perfectly tailored to your requirements.

On special demand lights will be shipped with mounted LED-modules.



Concerning a profile length of more than 2 meter we recommend using the wire suspension or a middle support (e.g. a glass partition) to avoid any bending which could lead to visual irregularities.



matrix LED-modules – Light colours, Colour temperature, Wavelength

The daytime® matrix LED modules are available in 7 standard light colours/colour temperatures.

You can combine modules with different light colours (white, blue, red) within one matrix light to achieve best results.

We can meet almost all aquarium lighting requirements: from warm white to actinic blue light and combinations of these 7 different standards.

Please contact us directly if these standard combinations do not meet your needs! Our strength lies in creating solutions for unique customer requirements. We call this customization!





Warm White 4.000 K

- A warm white light
- Promotes optimal, healthy plant growth
- Accentuates red plant colours
- Suitable for freshwater aquariums
- PAR (photosynthetic active radiation): 4.73 µmol/s/watt
- LED efficiency up to 180 lumens/watt
- Power 10 watts





Neutral White 6.000 K

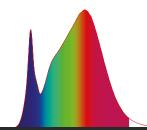
- Neutral and natural colour reproduction
- Promotes optimal, healthy plant growth
- Suitable for freshwater aquariums
- PAR (photosynthetic active radiation): 4.50 µmol/s/watt
- LED efficiency up to 180 lumens/watt
- Power 10 watts

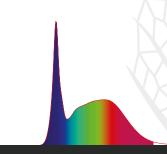


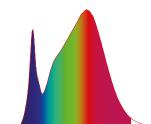


Ultra White 8.000 K

- · Cool white "daylight"
- Promotes optimal, healthy plant growth
- · Suitable for fresh and marine water aquariums
- PAR (photosynthetic active radiation): 4.30 µmol/s/watt
- LED efficiency up to 180 lumens/watt
- Power 10 watts











www.ilumetrix.de







These shown aquarium photos are for orientation. The real impression depends on the plants and fish as well as on the chosen modules.













- Brilliant white-blue light with increased red content
- Increase the colour brilliance in your aquarium
- Creates good fluorescence effects
- Suitable for fresh and marine water aquariums
- Perfect for African cichlids from Lake Malawi and Lake Tanganyika
- The ratio of blue to red to white LEDs is 1:1:2.
- PAR (photosynthetic active radiation):
 4.26 μmol/s/watt
- LED efficiency up to 110 lumens/watt
- Power10 watts



Ultra Blue White 1:1 440-455 nm + 8.000 K

- Brilliant blue-white light
- Increase the colour brilliance in your aquarium
- Creates good fluorescence effects
- Suitable for fresh and marine water aquariums
- Suitable for African cichlids from Lake Malawi and Lake Tanganyika
- The ratio of blue to white LEDs is 1:1.
- PAR (photosynthetic active radiation):
 4.06 μmol/s/watt
- LED efficiency up to 100 lumens/watt
- Power 10 watts



Ultra Blue White 3:1 440-455 nm + 8.000 K

- Brilliant blue-white light
- Increase the colour brilliance in your aquarium
- Creates enhanced fluorescence effects
- Suitable for fresh and marine water aquariums
- The ratio of blue to white LEDs is 3:1.
- PAR (photosynthetic active radiation): 3.94 µmol/s/watt
- LED efficiency up to 70 lumens/watt
- Power 10 watts



Royal Blue 440-455 nm

- Suitable for fresh and marine water aquariums
- Perfect for corals
- Creates outstanding fluorescence effects
- PAR (photosynthetic active radiation): 3.81 µmol/s/watt
- Power 10 watts













Adapter sets

Various adapter sets and adapter/design mounting profiles are available for installing the daytime® matrix into your aquarium (refer to the separate section for more details).

Please do not hesitate to contact us if you cannot find a satisfactory solution for your aquarium. We're eager to develop special solutions – customized for you!



Universal adapter set

- belongs to each light
- · For installing on tank rims, for tanks with inner glass strips



Swing adapter set

- For open aquariums
- For installing on tank rims
- The light outlet is approx. 60 mm above the tank rim



Insertion/screw-on adapter set

- For covers with tiered supports
- For covers with screw channels (e.g. the STRATOS from Giesemann)
- For tanks with inner glass strips



T8 adapter Set

• For mounting into existing T8 lamp sockets (tube holder)



T5 adapter Set

• For mounting into existing T5 lamp sockets (tube holder)



The dimension between tube holder centre and lower lamp edge is 45 mm. These two adapters do not work with JUWEL® aquariums. Our adapter profiles (see page 17) are the perfect solution for JUWEL®

matrix adapter videos you will find on our youtube channel



- For attaching to horizontal, magnetic surfaces
- Max. holding force of 14 kg (with 2 magnets)



- High-quality wire suspension made of stainless steel
- For hanging the matrix above your aquarium
- Adjustable height





Combinations

Designation	Length of ¹⁾ mounting profile	Max. number of modules	matrix adapter sets combination / suitable for aquarium width				
			Universal ²⁾	Swing	Insertion/screw-on	T8 (Tube ø26m)	T5 (Tube ø16mm)
matrix20.0	16,6 cm	1 pc 10 watts	20-30 cm	20-30 cm	23-30 cm		
matrix30.0	25 cm	2 pc 20 watts	28-38,4 cm	25-38,4 cm	28-38,4 cm		
matrix40.0	35 cm	3 pc 30 watts	38-48,4 cm	35-48,4 cm	38-48,4 cm		
matrix50.0	45 cm	4 pc 40 watts	48-58,4 cm	45-58,4 cm	48-58,4 cm	438 mm 5W	438 mm 24W
matrix60.0	55 cm	5 pc 50 watts	58-68,4 cm	55-68,4 cm	58-68,4 cm		517 mm 13W
matrix70.0	65 cm	6 pc 60 watts	68-78,4 cm	65-78,4 cm	68-78,4 cm	590 mm 18W	549+590 mm 24+28 W
matrix80.0	75 cm	7 pc 70 watts	78-88,4 cm	75-88,4 cm	78-88,4 cm	742 mm 25W	742 mm 35W
matrix90.0	85 cm	8 pc 80 watts	88-98,4 cm	85-98,4 cm	88-98,4 cm	895 mm 30W	849+895 mm 39+45 W
matrix100.0	95 cm	9 pc 90 watts	98-108,4 cm	95-108,4 cm	98-108,4 cm		
matrix110.0	105 cm	10 pc 100 watts	108-118,4 cm	105-118,4 cm	108-118,4 cm	1047 mm 38W	1047 mm 54W
matrix120.0	115 cm	12 pc 120 watts	118-128,4 cm	115-128,4 cm	118-128,4 cm		1149 mm 28+54W
matrix130.0	125 cm	13 pc 130 watts	128-138,4 cm	125-138,4 cm	128-138,4 cm		1200 mm 54W
matrix140.0	135 cm	14 pc 140 watts	138-148,4 cm	135-148,4 cm	138-148,4 cm		
matrix150.0	145 cm	15 pc 150 watts	148-158,4 cm	145-158,4 cm	148-158,4 cm	1500 mm 58W	1449 mm 80W
matrix160.0	155 cm	16 pc 160 watts	158-168,4 cm	155-168,4 cm	158-168,4 cm		
matrix170.0	165 cm	17 pc 170 watts	168-178,4 cm	165-178,4 cm	168-178,4 cm		
matrix180.0	175 cm	18 pc 180 watts	178-188,4 cm	175-188,4 cm	178-188,4 cm		
matrix190.0	185 cm	19 pc 190 watts	188-198,4 cm	185-198,4 cm	188-198,4 cm		
matrix200.0	195 cm	20 pc 200 watts	198-208,4 cm	195-208,4 cm	198-208,4 cm		



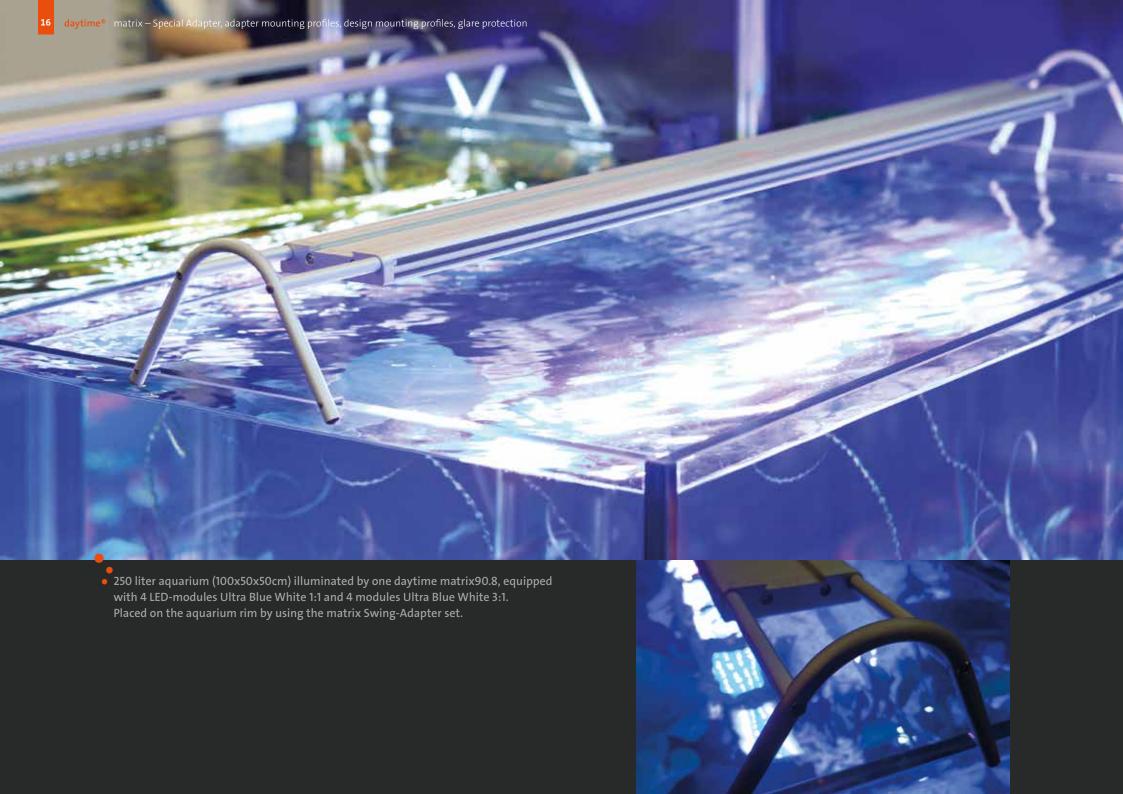


For a cable bend of the connection line, you must at least allow for 1 cm.

Concerning a profile length of more than 2 meter we recommend using the wire suspension or a middle support (e.g. a glass partition) to avoid any bending which could lead to visual irregularities.

²⁾Included in the scope of delivery of a matrix (inline adapter system)





Special Adapter



Tetra AquaArt 100/130 adapter set

 To easily install the matrix LED system into Tetra AquaArt aquariums



Giesemann Sphera adapter set

 To easily install the daytime matrix LED system into the Giesemann covers of the Sphera line



Aquatlantis adapter set

 To easily install the daytime matrix LED system into the main Aquatlantis aquariums









Glare protection



Glare Protection

- Optional accessory: profile rail
- Covers the light source in order to reduce the unwanted glare of the viewer in a sitting position

Adapter mounting profiles

The simple yet professional lighting solution for your JUWEL® aquarium. Our innovative adapter profile makes it possible for you to retrofit your existing aquarium with daytime's® modern LED aquarium lights. Fast, simple and safe — and customized for the needs of your aquarium inhabitants!



Design mounting profiles

For an elegant installation over open aquariums. Available in any customized length, in black glossy or white glossy, either for on-top placement or hanging (pendant) installation with adjustable height.





Here, you can find the suitable profile:



Adapter profile for JUWEL® aquariums

All company, brand names and trademarks are the property of their respective owners; they are used for identification purposes only. The compatible products described here are not original accessories of the associated manufacturers.



The Pendant design profiles

 For an elegant installation with wire suspension over open aquariums.



The Top design profiles

 For an elegant installation over open aquariums.

Converter, distributor and adapter cables

The converter is the motor of the lighting. The daytime[®] matrix LED lighting is available with various power levels between 40 and 240 watts. When used with the distributor, two matrix LED lights are supplied simultaneously with a converter.

Make sure that the total capacity of the lighting does not exceed the rated power of the converter being used. The maximum permissible power is 240 watts (regardless of the number of occupied positions).

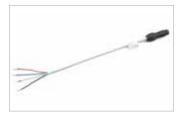
The converter, distributor and LED lighting have plug-in (Plug & Play: PnP) connectors that require no tools to connect them securely.

Customized solutions for your requirements. Please contact us!



2-way matrix distributor

 For connecting and operating two matrix lights with one converter or light controller. Load capacity: max. 240 watts



Adapter cable: 5-pin female connector + wire-end ferrules

• Enables a matrix to be connected directly to a light controller from a third-party manufacturer



Adapter cable: 5-pin male connector + wire-end ferrules

 For directly connecting and operating a light controller from a third-party manufacturer with the daytime 24 V converter.





- Converters are protected low-voltage power supplies, in compliance with DIN EN 61347-2, for operating daytime® LED systems.
- Choose the right converter for your light(s)!



Extension cable for matrix 1.0 m

• Extends the matrix cable by 1 metre.



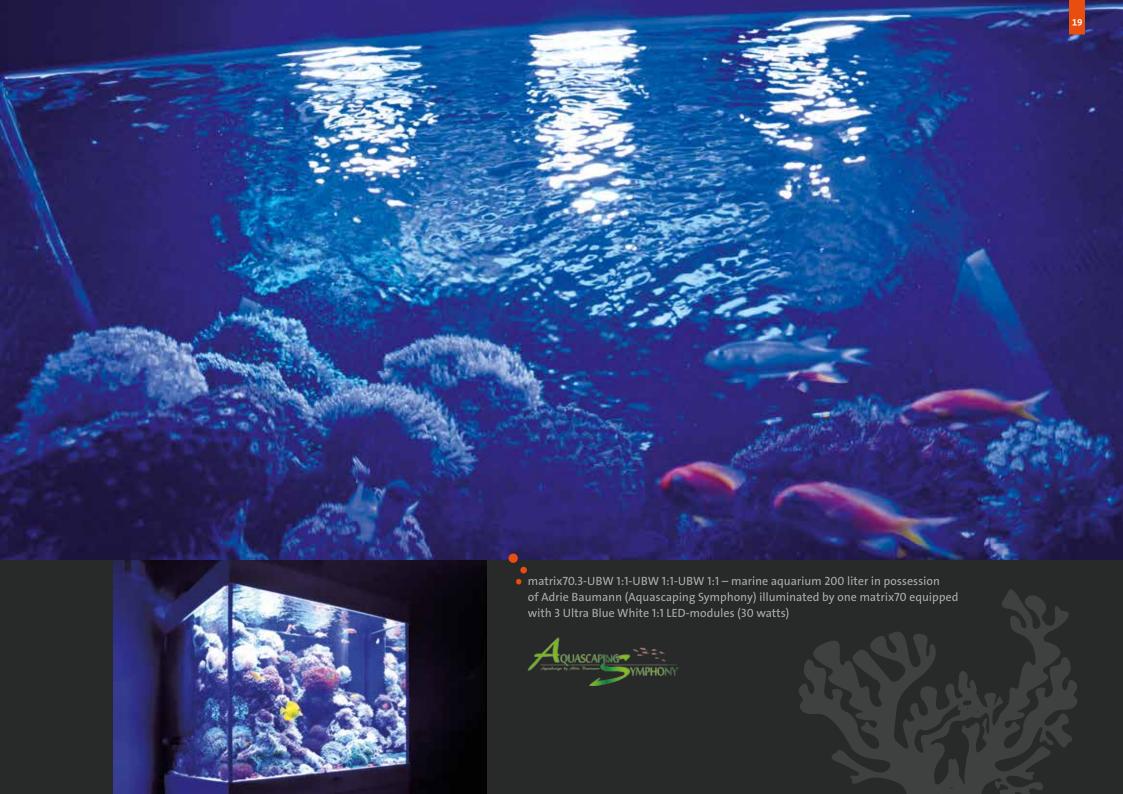
Adapter cable set for GHL LEDControl4 V2.00

 Plug & Play adapter set for easily connecting and operating a daytime matrix LED system with the established ProfiLux aquarium computers from the manufacturer GHL. (The GHL LEDControl4 V2.00 is also required!)

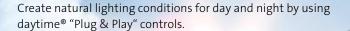


Details on our website







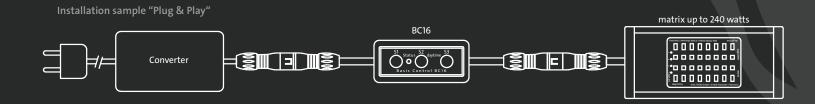






Basic Control BC16 single-channel for matrix

- Sunrise and sunset simulating natural lighting conditions for day and night
- Adjustable in six steps from 0 to 60 minutes
- Three switching times: day, night, pause
- Easy to operate and program: directly at the device, using three buttons and a status LED
- Separately adjustable brightness level for each day or night light
- Demonstration mode with constantly changing day and night light
- Can be dimmed manually in real time
- Internal 24-hour clock (with about 15 minutes of power reserve)
- Shapely high-end enclosure with comfort control buttons
- Plug & Play the controller is simply inserted between the converter and the lighting, can also be retrofit!
- Operates the daytime® matrix lighting with up to 240 watts (24 matrix LED modules)
- Outstanding price-performance ratio





Glossar

SMD

SMD refers to the method for attaching electronic components on the circuit boards. SMD stands for Surface Mounted Device (e.g. for the components placed on the surface of the board). It is also known as SMT: Surface Mounted Technology. This method is carried out exclusively with computer-controlled placement/attachment machines.

Lumen (Im)

The lumen is the physical unit of the luminous flux (light quantity) in the visible range. This unit is based on the sensitivity of the human eye; the luminous flux values of differently coloured light sources differ significantly even when they have the same energy content. So, in particular for red and blue LEDs, the energy content of the transmitted light (PAR value) or the wavelength is specified instead of the luminous flux.

Lux (lx)

Lux is the unit of illumination intensity based on a point-shaped light source. This is expressed in Im/m2. A cloudless night with full moon can achieve a maximum of 1 lx. A bright sunny day, however, can reach 100,000 lx.

CRI

The CRI (Colour Rendering Index) indicates the quality of the colour reproduction, in relation to a reference light source of the same colour temperature. A high colour rendering index is not equivalent to a good reproduction of all colours. Good CRI values are > 80.

Light colour

The light colour primarily reflects the subjective colour impression made by the human eye. This means that light colours such as warm white, neutral white or daylight can also be generated in the white light range. These names already allow a rough orientation towards the colour temperature.

Colour temperature

The colour temperature is used to quantitatively determine the colour impression of a light source. The colour temperature is specified in K (Kelvin); it is based on the temperature of the Plank radiator in combination with the light emitted. The spectral compositions may vary significantly at the same colour temperature.

Colour location

Normally, the colour location is represented in a simplified 2-dimensional chart by the x and y coordinates in the CIE colour triangle.

Efficiency

Efficiency is a key parameter for evaluating and comparing the effective energy consumption of an LED in the white light range. This value is specified in Im/W. The higher this value, the more energy-efficient the light source.

Spectrum

Light visible to the human eye is usually composed of different wavelengths in the range of 380 to 780 nm. By shifting the spectral components, almost any desired light colour may be generated.

Lifespan

The lifespan of an LED indicates the time period after which the LED still supplies 70% of its initial output. This is not equivalent to the failure of the LED.

IP67

This designation indicates the degree of protection of an electrical device. The numerical combination stands for the degree of protection against the penetration of foreign bodies (the first digit) and against the penetration of water (the second digit). The higher the value of the respective digit, the higher the protection and better the seal. IP67 = International Protection; 6 = dust-proof; 7 = protection against intermittent submergence.

LED

LED is an abbreviation for Light Emitting Diode. The wavelength of the light emitted is dependent on the material of the semiconductor (diode) being used.

Kelvin (K)

This is a physical unit of temperature. Also refer to "Colour temperature".

Visit us on en.daytime.de and find lots of additional helpful information.



daytime® website



daytime® on youtube...



... and on facebook

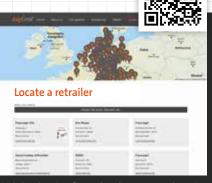




Determine the lighting needs of your aquarium online – quick and convenient



Help- & needful details for download



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