

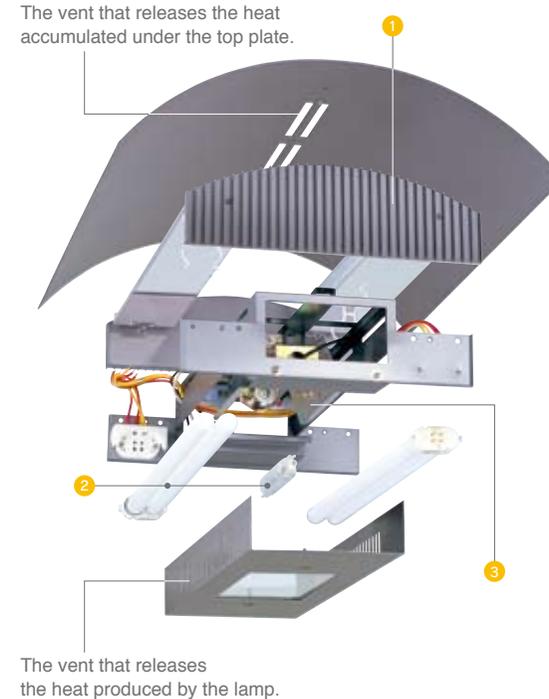
What is the ADA's lighting system?

An original lamp specially developed for growing aquatic plants with excellent light penetration and color rendering abilities. In addition, the stylish lighting unit adorns the aquarium beautifully.



Using a lighting system best suited for individual tank is essential for growing aquatic plants beautifully.

Superior design of lighting unit that realizes an ideal lighting condition.



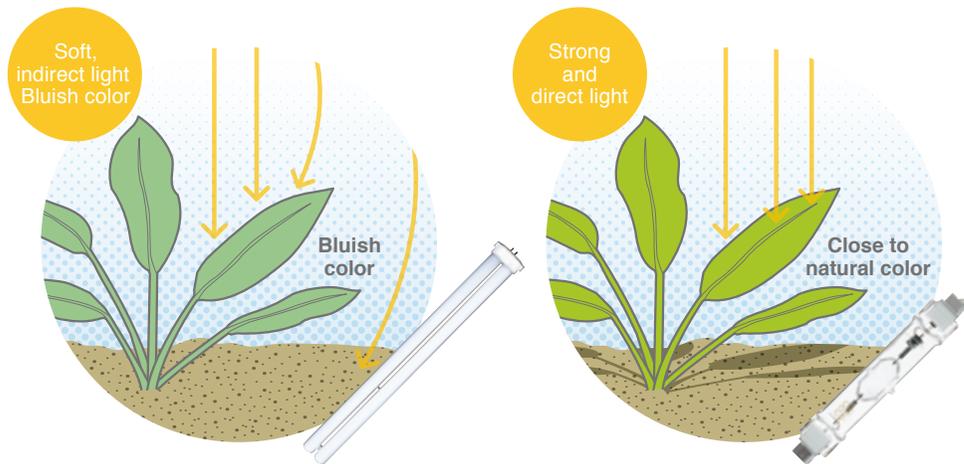
1 Heat sink with high heat conductivity
Aluminum heat sink releases heat produced by the lamp promptly.

2 Originally developed special lamp for growing aquatic plants
Equipped with a metal halide lamp modulated with the wavelength most effective for growing aquatic plants.

3 Reflector that diffuses light effectively
The embossed reflector panel diffuses the light effectively, enhancing the lamp's performance.

Lighting options for aquatic plants.

There are two types of lamps, **fluorescent lamp** and **metal halide lamp**, with different color rendering effects. All of ADA's lamps are developed for **growing healthy aquatic plants and enhancing their appearance.**



FLUORESCENT LAMP

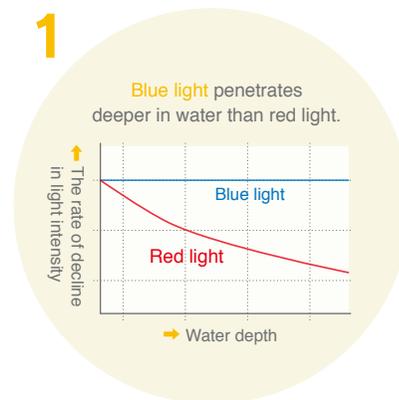
Multiple lamps are required to provide a sufficient amount of light. The bluish color renders delicate and airy impressions.

METAL HALIDE LAMP

A single metal halide lamp can provide sufficiently light intensity. The lamp produces close-to-natural color and tends to cast a shadow.

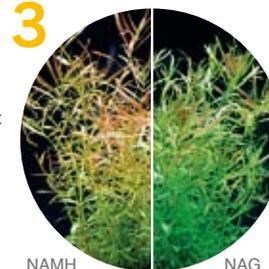
The light that is suitable for aquatic plants living underwater and has excellent color rendering ability produces beautiful aquatic plants.

1



The light reaches aquatic plants more efficiently as ADA's lamps include the blue spectrum that transmits well underwater.

3



2



The unique "new green phosphor" used in ADA's fluorescent lamp brings out the green colors of aquatic plants vividly.

ADA developed the world's first lamp for growing aquatic plants with the above properties.

Why does ADA offer a pendant type lighting system?

With a pendant light fixture, the light intensity can change depending on the **installation position** of the fixture. When using a metal halide lamp that is very intense, the **amount of light** should be adjusted with the height of the lamp depending on the type aquatic plants.



The distance from water surface is important.

Use a special stand and install the light fixture at the most ideal position.



Aquarium that requires high intensity light



For layouts composed primarily with light aquatic plants

Suitable for plants that prefer intense light, such as Riccia and stemmed plants.



Aquarium that requires medium intensity light



In the case that light is too intense at the height of 30cm

Provides a sufficient amount of light for a standard, planted aquarium layout.



Aquarium that requires low intensity light



For layouts composed primarily with shade aquatic plants

Suitable for plants that can be grown with a low light, such as Cryptocoryne and ferns.

Table for the required units of Solar series light fixtures

Tank size	Recommended number of light fixtures					
	Solar Mini	Solar I	Solar II	Grand Solar I	Grand Solar II	Grand Solar 250
Mini S·M	1	—	—	—	—	—
60cm	—	1	1	—	—	—
90cm	—	1-2	—	1	—	1

*Distance from the water surface: Solar II, Grand Solar II•10–15cm / Solar I, Grand Solar I, Grand Solar 250•30–40cm
*Grand Solar 250 is suitable for a marine reef aquarium that requires especially intense light.

Original simple design.

The **aesthetic value** of a light fixture is just as important as its **design that optimizes the performance** of a lamp.

To **enhance the beauty of an aquarium** is an important feature required for a good aquarium lighting system.



Solar I

A built-in diffusion-type reflector maximizes the light distribution of a metal halide lamp. It is the flagship model for a standard 60 to 90cm aquarium.

Equipped with a single 150W Metal Halide Lamp
*Also available in white.



Solar II

A standard model most suitable for someone's first planted aquarium with a 60 cm tank.

Equipped with two 36W fluorescent NA lamp



Solar Mini

Mini model specially designed for a Cube Garden Mini aquarium tank. The swivel design of the light makes routine trimming and maintenance of an aquascape easier.

Equipped with a single 27W fluorescent
*Black model is also available.



Grand Solar I

The highest class model equipped with both fluorescent lamps and a metal halide lamp, and the lighting time can be controlled independently for each type of lamp.

A combination of a 150W metal halide lamp and two 36W fluorescent NA lamps



Grand Solar II

The model optimizes the characteristics of NA Lamp 36W Twin, and provides soft light to aquatic plants.

Equipped with 4 units two NA Lamp 36W Twin



Grand Solar 250

The high-powered model is ideal for a large, tall tank or a reef aquarium tank that requires intense light.

Equipped with a single 250W metal halide lamp

*Please refer to the previous page for the corresponding tank size for each model.

A pendant type light fixture is great for an **open-top aquarium**, too.

The **Pendant type lighting system** enables you to enjoy an open-top aquarium with driftwood and the emersed-grown leaves of aquatic plants emerging from the water surface.



There are various ways to enjoy **aquatic plants**.



Enjoy the Amazon

The cluster of Echinodorus emerging from the water surface evokes an image of one of the shores of the Amazon.

Enjoy the flowers of aquatic plants

Many aquatic plants produce cute flowers above the water surface.



Enjoy the rustic appearance of stem plants.

Stem plants growing vigorously out of the water surface can create the scenery of a waterfront with a rustic flavor.

A summary of basic knowledge of lighting systems.

To provide a sufficient amount of light for a sufficient amount of time is an important requirement for a good lighting system. Because a lighting system is an electrical appliance, it should be used properly without exceeding its capacity.

1

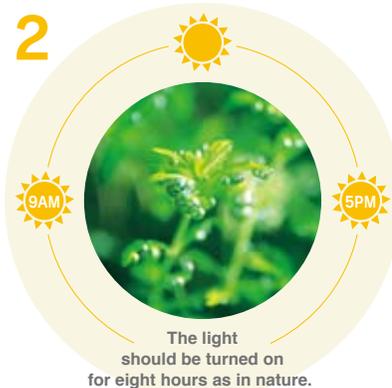
Insert the plug into the power outlet marked as "LIGHT."



Do not exceed the current rating of a timer

The inrush current of Solar I is approximately 6A (about 600W). Only one unit can be connected to a NA Control Timer.

2



The light should be turned on for eight hours as a general rule

The appropriate lighting period is 8 to 10 hours. CO₂ should be supplied during the lighting period to enhance the growth of aquatic plants.

3



Replace the lamp once a year

Both Metal halide lamps and Fluorescent lamps should be replaced after one year of use as a general rule. Record the date of lamp replacement for future reference.

4



Keep the glass shield clean

A dirty glass shield reduces the intensity of the light. Keep it clean by wiping the dirt off with a cloth when it is not turned on (when it is not hot).

Proper lighting promotes photosynthesis and grows healthy, beautiful aquatic plants.



Streaming bright light grows
aquatic plants beautifully.

Products for keeping living
organisms need to be
obtains from a reliable store.

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