



Aquarium - Fresh and Saltwater

Background

With the exception of a few species, fish do not require special light for health. In fish only tanks, one would want to provide lighting that minimizes the growth of algae while maximizing the color of the fish. In tanks containing coral and plants, the spectral distribution of the light becomes a factor. For the coral and plants to survive, there must be adequate amounts of light in the blue and red regions of the spectrum to allow for photosynthesis. The light should also be of sufficient intensity for plant respiration. The amount of light should be tempered, however, as too much light could startle the fish. Typical setups have alternating 12 hour periods of light and dark. To prevent fish startling, a blue actinic lamp is used before the more white light source is turned on.

Freshwater Aquariums

Fish Only

- High CRI
- Color temperature usually around 5000K
- Do not want too much light or heat to cause algae growth
- Sometimes use 2 colors, one actinic in the mornings and evenings, white light during the day to minimize startling

Plant and Fish

- High CRI
- Light should have blue and red spectral components
- 2-5W/gal depending on plant species
- Often mix full spectrum with actinic lamps to supplement blue part of spectrum

Saltwater Aquariums

Fish Only

- see above

Plant/Coral Only

- Color temperatures are much higher, around 10,000K - actinic bulbs
- Corals typically absorb more in the blue part of the spectrum
- 5W/gal
- In deep tanks metal halide lamps are typically used

Plant/Coral and Fish

- Combine actinic with full spectrum lamp

Aquarium Lighting Offering

Freshwater

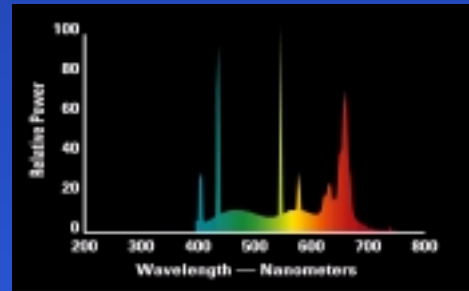
Applications:

- Fresh water aquariums with no plants or plants with low to medium light requirement.

Benefits:

- Brings out the best color in all fresh water aquariums.
- Enhances red, blue, yellow, and greens.
- Long Life fluorescent lamp.

F14T8/AR/FR	41373
F15T8/AR/FR	22907
F20T12/AR/FR	22908
F30T8/AR/FR	41374
F40T12/AR/FR	22909



Fresh&Salt Water

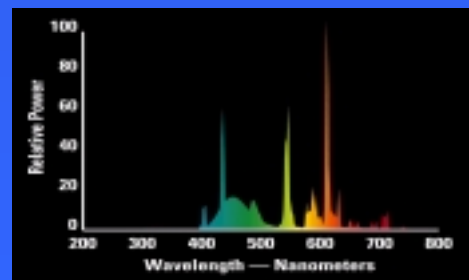
Applications:

- Fresh or Salt water aquariums with a broad range of live plants.
- Marine fish and invertebrate aquariums.

Benefits:

- The F&S spectrum concentrates all the light energy in areas which are used by plants and corals.
- High light output for plant growth
- Long Life fluorescent lamp.

F14T8/AR/FS	40903
F15T8/AR/FS	22910
F20T12/AR/FS	22911
F30T8/AR/FS	40904
F32T8/AR/FS	92882
F40T12/AR/FS	22914
F55BX/AR/FS	45851



Application Bulletin

Aquarium Lighting Aquarium Lighting Offering

Salt Water

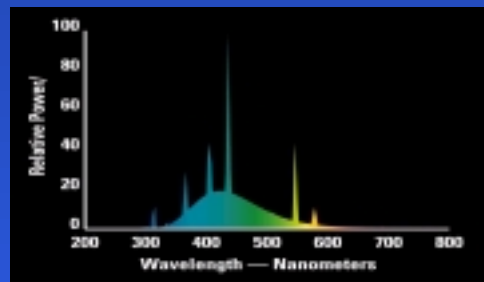
Applications:

- Saltwater and fresh water nocturnal viewing.
- Use with F&S in marine systems to enhance the color of blue fish and to fluoresce corals.

Benefits:

- Produces a gentle blue light which reduces fish startling when lights are turned on or off
- Improves the health of deep water coral.
- Long Life fluorescent lamp.

F14T8/AR/SA	41375
F15T8/AR/SA	22920
F20T12/AR/SA	22922
F30T8/AR/SA	41376
F40T12/AR/SA	22923



Full Spectrum

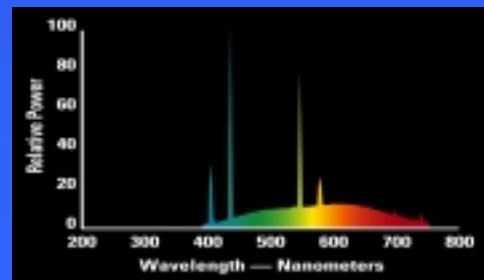
Applications:

- All purpose light for aquariums and terrariums.
- Full spectrum fluorescent for reptiles and fish.

Benefits:

- Simulates a visible daytime light spectrum.
- 5000K color temperature at 90CRI.
- Long Life fluorescent lamp.

F14T8/AR/SR	41377
F15T8/AR/SR	22904
F20T12/AR/SR	22905
F30T12/AR/SR	41378
F40T12/AR/SR	22906



For further information please see the IES Lighting Handbook or visit your local aquarium store.