

# Looking at LIGHTING

FROM THE  
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LIGHTING TYPE	CHARACTERISTICS	USES
Normal output (NO) fluorescent bulbs	<p>Inexpensive</p> <p>Energy-efficient</p> <p>Produce little heat</p> <p>Wide range of color temperatures</p>	Planted tanks, reefs
High output (HO) fluorescent bulbs	<p>Nearly twice as much light as standard fluorescent bulbs</p> <p>Thin bulbs allow multiple bulbs to be used in sleek canopies</p> <p>Not compatible with standard fluorescents because shorter in length</p> <p>Available in entire range of spectrum</p> <p>Contain less mercury than standard bulbs</p> <p>Reduce potential for hazardous material contamination</p>	Planted tanks needing high light, small polyp stony corals
Very high output (VHO) fluorescent bulbs	<p>More than twice as much light as standard fluorescent bulbs</p> <p>Need to be accompanied by a cooling fan in most cases</p> <p>Require a ballast</p> <p>Moisture-resistant end caps not interchangeable with standard fluorescent lights</p>	Planted tanks (but need to be used with another plant-friendly bulb), reefs

Compact fluorescent tubes	<p>Small</p> <p>Twice the light of standard fluorescent bulb</p> <p>Available in entire range of the spectrum</p> <p>Single bulbs do not produce much heat</p> <p>Ideal for small tanks needing high light</p> <p>Multiple bulbs often need cooling fans</p>	Planted tanks, nano-reefs
Actinic lights	<p>Enhanced lighting in the blue end of the spectrum</p> <p>Replicates deep water, where the red and yellow end of the spectrum is unable to penetrate.</p>	Reef tanks with blue-water corals and fish
Metal halide lamps	<p>Energy-efficient, gas-discharge lamp</p> <p>Available from 3000 to 20,000K</p> <p>Produce a lot of heat, so must be suspended a foot above the aquarium and accompanied with a cooling fan</p>	Deep planted tanks, reef tanks
Light-emitting diodes (LED)	<p>Long-lasting</p> <p>Energy-efficient</p> <p>Some available with changeable color temperature</p>	Nocturnal lighting for reefs, primary lighting for tanks with lighting needs being equal to a single VHO bulb
Incandescent lights	<p>High heat</p> <p>Small amount of light</p>	Terrestrial plant use, fish-only tanks
Natural light (indirect sunlight)	<p>Direct sunlight may overheat the tank</p> <p>Can be enhanced with reflective substrate, such as quartz or light-colored gravel (in sparsely planted tanks only)</p>	Planted tanks

Reflectors are not lights, but reflectors come in the form of reflective gravel or hoods that help your lights become more efficient by reflecting light heading away from the tank back toward it.

Specific animals and plants may need certain lighting requirements — make sure to research the light needs of your animals and plants.