



Lamp Intensity versus Lamp Life

Halogen Bulbs

All SCHOTT Halogen cold light sources (including the ACE, DCRIII, KL 1500 LCD, KL 2500 LCD and KL 200) allow the user to adjust light intensity from zero to the full rated voltage of the lamp. However, voltage to the lamp effects lamp life. As a rule of thumb, a 10% reduction in voltage of most halogen lamps increases the anticipated life time to 400%. SCHOTT recommends using the minimum intensity setting needed to maximize the life of the lamp.

The Halogen Cycle is the operating principle of all Quartz Halogen lamps. At full voltage, the temperature of the glass envelope is hot enough to keep evaporated tungsten (thrown off from the filament) from collecting on the glass surface. The tungsten is cycled back to the filament and thus increases its lifetime. As voltage is reduced, the temperature of the glass envelope also decreases, which might effect the halogen cycle. For this reason the lamp life might not be increased as expected when the voltage is dimmed below 75%.

All types of quartz Halogen bulbs used in SCHOTT cold light sources (DDL, EKE, EJA, EFR and ELC) operate in the same manner.

Metal Halide Bulbs

The SCHOTT MHR-50 Light Source uses a Metal Halide lightbulb rated at 50 watts. Due to its electronical balast, the Metal halide lightbulb can only be dimmed between 40-60 watts. Reduction of intensity also increases life-time, with a 40 watt setting up to 3500 hours.

Product improvements may result in specification
or feature changes without notice.

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