

quartz–iodine lamp

Wolfram (tungsten) filament high-intensity incandescent lamp containing iodine in a quartz envelope. Used primarily as a source of visible radiation.

Notes:

1. In halogen lamps, the quartz envelope is closer to the filament than the glass used in conventional light bulbs. Heating the filament to a high temperature causes the tungsten (wolfram) atoms to evaporate and combine with the halogen gas. These heavier molecules are then deposited back on the filament surface. This recycling process increases the life of the tungsten (wolfram) filament and enables the lamp to produce more light per unit of input energy. Consequently, halogen lamps are used in a variety of applications, including automobile headlights.
2. Halogens other than iodine may be used in these lamps.

Source:

PAC, 2007, 79, 293 (*Glossary of terms used in photochemistry, 3rd edition (IUPAC Recommendations 2006)*) on page 407