The lamp consists of a glass bottle with a cavity in it into which the induction coil is placed. The glass vessel has a gas filling similar to a conventional fluorescent lamp and the phosphor coating on the inside of the lamp is also similar.

The induction coil in the centre of the lamp is fed from a high frequency generator.

An alternative architecture for this type of lamp is to have the induction coil wrapped around a toroidal lamp. Figure 61 shows a lamp of this type.

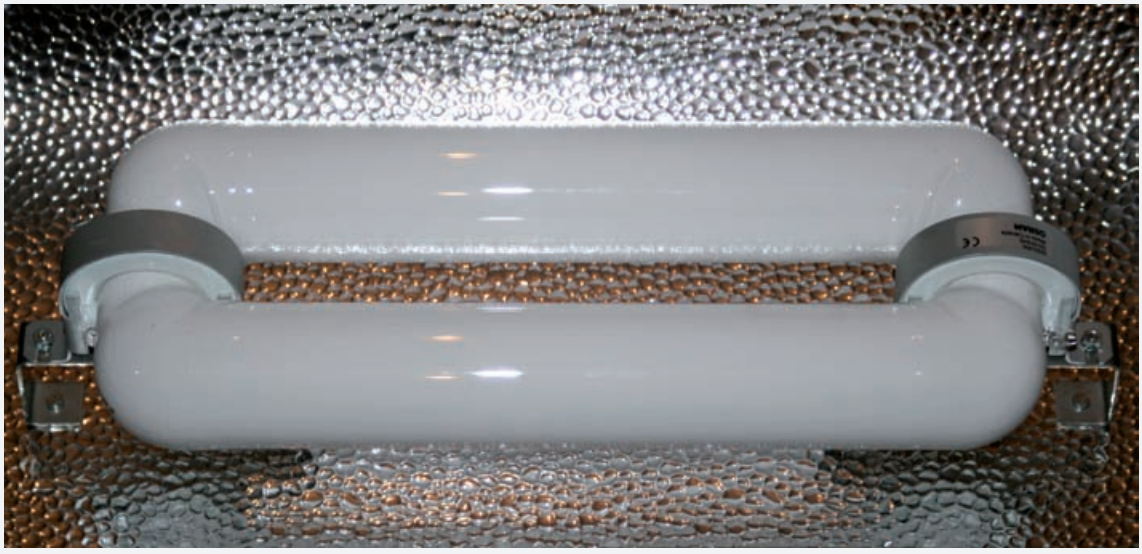

Figure 61 (inbuilt in a custom luminaire)
Standard induction lamp, depending on manufacturer shape, size and socket may vary – External coil type induction lamp.

NOTE 1 Induction type lamps cannot be used if exact directional focused light is required, due to the large physical size of the system.

Induction lamps have many of the same properties as fluorescent lamps. They are, however, slightly less efficient. The big advantage with this type of lamp is its long life. This is because here are no electrodes to fail and the inside of the lamp does not get coated with material that has been vaporised away from the electrodes. A number of lamps of this type have rated lives of 100,000 hours. These lamps are more expensive than conventional fluorescent lamps so they tend to be used in places where it is difficult to change lamps and thus long life is an important requirement.