

### Service life of different lamps

**Incandescent lamp E14 / E27** approx. 1,000 hrs

**Halogen low voltage (no name)** 500 - 2,000 hrs

**Halogen low voltage (name-brand product)** 2,000 - 4,000 hrs

**T5 (Ø16mm) fl uorescent lamp (6-13W)** approx. 7,000 hrs

**T2 (Ø 7mm) fl uorescent lamp** approx. 8,000 hrs

**T8 (Ø26mm) fl uorescent lamp (magnetic ballast)** approx. 13,000 hrs

**Energy-saving lamp** 4,000 - 19,000 hrs

**T8 (Ø26mm) fl uorescent lamp (electronic ballast)** approx. 20,000 hrs

**T5 (Ø16mm) fl uorescent lamp (14-80W)** approx. 24,000 hrs

**LED (depending on style, control, cooling...)** 10,000 - 100,000 hrs & up

[http://www.hera-online.de/fileadmin/user\\_upload/LED\\_Folder\\_engl.pdf](http://www.hera-online.de/fileadmin/user_upload/LED_Folder_engl.pdf)

## Luminous colour/Colour temperature

Light can be defined as electromagnetic waves. Our conception of both light and colour refers to electromagnetic waves of a frequency that is visible to the human eye.

Waves of other frequencies have no colour.

Most are described by names which identify what they are used for.

The entire frequency range of electromagnetic waves is called the electromagnetic spectrum. This spans seamlessly from the lowest energy, long waves, e.g. radio waves, to the energy-rich, ultra-hard X-rays and gamma rays that come from a radioactive source. The visible light region occupies a very narrow portion of the electromagnetic spectrum. It corresponds to the wavelengths 400 nm (violet) to 750 nm (red).

## What is light anyway?

### Light source Colour temperature

**Candle** 1,500 K

**Incandescent lamp (40W)** 2,680 K

**Incandescent lamp (100W)** 2,800 K

**Halogen lamp** 3,000 K

**Fluorescent tube (warm white)** 3,000 K

**Fluorescent tube (cool white)** 4,000 K

**Xenon/arc lamp** 4,500 - 5,000 K

**Midday sun** 5,500 - 5,800 K

**Fluorescent tube (daylight)** 5,600 - 7,000 K

**Overcast sky** 6,500 - 7,500 K

**Blue sky** 8,000 - 12,000 K