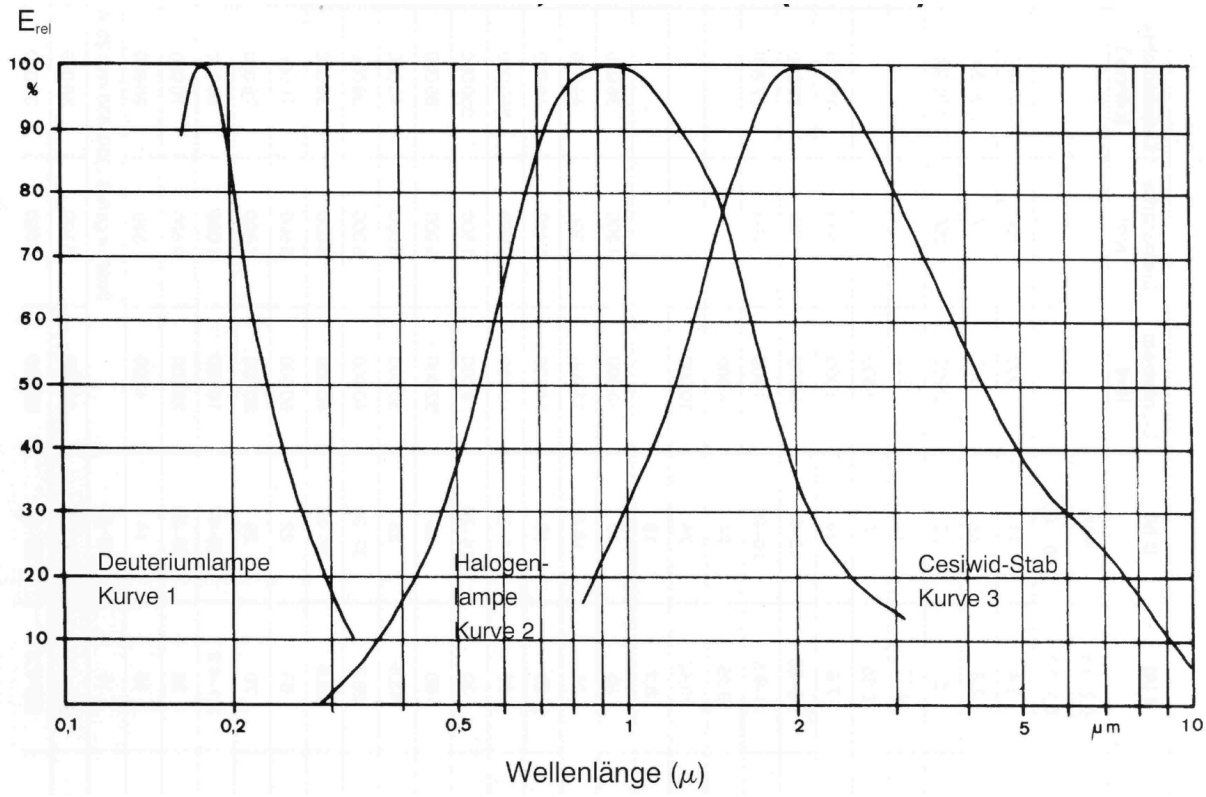
INFRARED SOURCES

Typical Emission spectra from DEUTERIUM LAMPS, HALOGEN LAMPS, CESIWID GLOW BAR



Cesiwid glow-bar

Cesiwid glow-bars are round rods with a thin resistance incandescent part in the middle and thicker metallized ends for the supply connections. The rods are made of silicon carbide. By varying the current through the glow bar it is possible to set the temperature of the part from 1000 to 1500 K.
Cesiwid glow-bars represent a very good grey body with an emissivity of 0.8.
A Cesiwid glow-bar of 150 W power has an incandescent dimension of 4x25mm . The lifetime is about 2000 hours.
The typical emission spectra of Cesiwid glow-bars standardized with the maximum emission is represented in Curve 3.

Halogen lamps

Halogen lamps emit intense white light. The tungsten filament of the lamp is in a quartz bulb. The current flow heats the filament to a temperature of ca 3300K. Due to the high temperature of the filament, tungsten vaporizes and produces an internal bulb blackening. In order to reduce the vaporisation of the tungsten, a small proportion of halogens (iodine and bromine compounds) is added to the filling gas (N2, Air, Kr, Xe). During lamp operation the
halogen-tungsten-cyclic-process
occurs (combination of tungsten with halogen) near the walls of the bulb and re decomposition of the components occurs close to the filament.
This results in an efficient light source with long lifetime, small size, constant colour temperature and constant light intensity.
The typical emission spectra of halogen lamps standardized with the maximum emission is represented in curve 2.

Deuterium lamps

Deuterium arc lamps are low pressure lamps. A gas fill pressure of a few mbars produces a continuous spectrum from 190nm to 40Onm. The small luminous spot dimensions, high luminance and spectral characteristics of Deuterium arc lamps make them particularly suitable as light sources for fluorospectrophotometers-spectrophotometers - and also as UV standard light sources. The typical emission spectra of Deuterium lamps standardized with the maximum emission is represented in curve 1.