



St-Series Mercury Lamps from Heraeus Noblelight



Absorption and reflection measurements in photometers are mostly performed at fixed wavelengths. For this purpose medium pressure mercury lamps offer several advantages. The spectrum shows narrow lines in the UV as well as in the visible range.

For quasi-monochromatic measurements the spectrum can be limited to one line with just a simple filter technique. Furthermore the single lines have a high irradiance and high-resolution measurements can be performed with conventional techniques. Heraeus St-series mercury lamps are stabilised medium pressure lamps especially developed for analytical applications. They are used in photometers, polarimeters, fluorimeters and other equipment. The emission lines have narrow bands, virtually monochromatic spectrum at constant, well reproducible wavelengths. Consequently, they are particularly suitable for absorption measurements.

St-series mercury lamps are stabilised by the geometry of the gas discharge, resulting in an accurate position of the arc. As a result, the noise is very low - in the order of 0.1%. The most favourable values of drift and noise are achieved when only the middle part of the light arc is used as the light source.

The guaranteed operating life for all St-lamp types is 1000 hrs with a reduction of the output of max. 50%. The normal useful operating life can be between 2000 to 4000 hrs.

St-lamps should be mounted with the base down and an inclination from the vertical of less than $\pm 20^\circ$. In DC operation, the lamp must be connected so that the anode is at the bottom.

MANUFACTURER SAFETY WARNING

UV radiation damages skin and eyes. Always wear protective glasses, gloves and clothing.

PERKIN ELMER POLARIMETERS

Heraeus Noblelight St-series mercury lamps are used as light source in several polarimeter models from Perkin Elmer. The following instruments utilize St 46 or St 75 mercury lamps:

| Instrument-/Model-Type | Heraeus Lamp Type |
|--------------------------|-------------------|
| Perkin Elmer 141 / 141MC | St 75 |
| Perkin Elmer 241 / 241C | St 75 |
| Perkin Elmer 243 | St 75 |
| Perkin Elmer 341 | St 46 |
| Perkin Elmer 343 | St 46 |

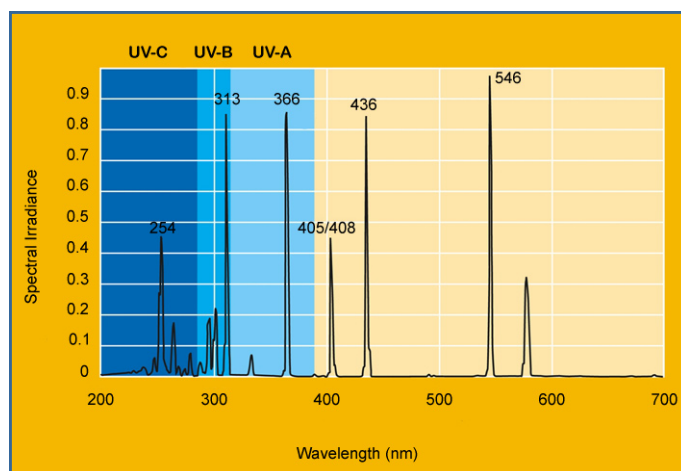


Image above: St 46 mercury lamp line spectrum

TECHNICAL INFORMATION

| Lamp Type: | St 46 | St 49/1 | St 75 |
|---|-------------|------------|------------|
| Part No.: | 56001333 | 45000124 | 56001171 |
| Total Length (mm): | 90 | 136 | 120 |
| Light Center (mm): | 43.5 ± 0.5 | 85.0 ± 3.0 | 51.0 ± 0.5 |
| Arc Length (mm): | 11.5 | 25 | 20 |
| Outer Bulb Ø (mm): | 19 | 22 | ohne |
| Base: | Noval EF 80 | E 27 | Ba 20 d |
| Type of Current: | DC | AC | DC |
| Wattage (W): | 33 | 35 | 80 |
| Ignition Voltage (V): | 330 | 230 | 800 |
| Lamp Voltage (V): | 55 ± 5 | 40 ± 5 | 88 ± 7 |
| Lamp Current (A): | 0.6 | 1.0 | 0.9 |
| Luminous Intensity (cd): | 95 | 24 | 220 |
| Luminance (cd cm ⁻²): | 380 | 56 | 530 |
| Radiance UV-A (mW sr/cm ²): | 510 | 68 | 680 |
| Radiance UV-B (mW sr/cm ²): | 480 | 72 | 840 |



St-Series Mercury Lamps from Heraeus Noblelight

ORDER INFORMATION

| Type | Part No. |
|---------|----------|
| St 46 | 56001333 |
| St 49/1 | 45000124 |
| St 75 | 56001171 |

Current prices at: www.msscientific.de/line_sources_pdfpricelist.pdf.