PRODUCT LEAFLET

# REFERENCE LAMPS

**Different kinds of reference lamps are included in every new Viso light measurement system.**
**Reference lamps can be used to check you calibration status.**
**Some can also be used for custom calibrations in your own lab**

All Viso systems are delivered pre-calibrated. Viso recommends calibration every year (minimum every two years). It is possible to make a custom calibration of the spectrophotometer if desired. Having your own calibration light source is even more interesting if your Viso system is to be certified by an official agency, which will perform its own calibration and afterwards issue certification documents.

## CALI-T50

CALI-T50 is a custom calibration lamp with a defined spectral intensity distribution intended for VIS (350-850 nm), and VIS-NIR (350-1100 nm) calibrations.

All CALI-T50 light sources are traceable to Viso's calibration lamp.

The CALI-T50 includes soft start electronics that expands the life time of the light source. Further, the suitcase contains a dedicated and precise power supply to the light source to ascertain optimal calibration conditions.

CALI-T50 is part of standard LabSpion VIS and LabSpion VIS-NIR system packages. CALI-T50 can be added as an accessory to BaseSpion and LightSpion systems.

### SPECIFICATIONS

| | |
|---|---|
| Lamp type | 50 W Tungsten Halogen |
| Lamp file | Spectral intensity distribution uW/cm2/nm @0.5 m for each wavelength |
| Dimensions (case) | 300 x 250 x 120 mm |
| Weight | 4 kg |

Link to user manual | Link to website

## CALI-DT300

CALI-DT300 is a custom calibration lamp with a defined spectral intensity distribution intended for UV-VIS (200-850 nm), and UV-VIS-NIR (200-1100 nm) calibrations. The CALI-DT300 contains two light sources - tungsten and deuterium.

All CALI-DT300 light sources are traceable to Viso's calibration lamps.

The CALI-DT300 includes soft start electronics that expands the life time of both light sources. Further, the cabinet contains a dedicated and precise power supply to the light sources to ascertain optimal calibration conditions.

CALI-DT300 is part of standard UV-VIS BaseSpion/LabSpion and BaseSpion/LabSpion UV-VIS-NIR system packages.


### SPECIFICATIONS

| | |
|---|---|
| Lamp type | 50 W Tungsten Halogen + 30 W Deuterium |
| Lamp file | Spectral intensity distribution uW/cm2/nm @0.5 m for each wavelength |
| Dimensions | 320 x 350 x 110 mm |
| Weight | 7 kg |

Link to user manual | Link to website

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For more information - check www.visosystems.com
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# REF800 FAST CHECK LAMP

A special Viso reference light source (Reference 800) is included in all new Viso light measurement systems.

The purpose of supplying this light source is to facilitate quick tests of whether spectrometer characteristics have changed over time, indicating the need for recalibration. With the REF-800 you avoid wear and tear on your calibration lamp such as the CALI-T50.

The light source has its own power supply and both are marked with identical calibration date and number.

Immediately after the factory calibration of your system, the reference light source is measured and a certificate is issued. The certificate is part of the delivery. The certificate can also be downloaded from the Viso website using the calibration number on the labels.

**SPECIFICATIONS**

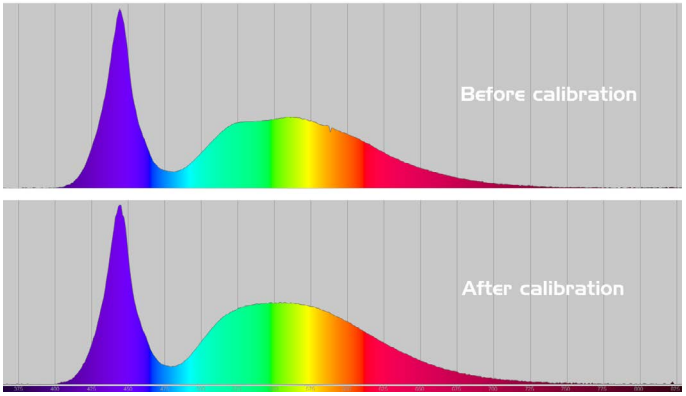
| | |
|---|---|
| Lamp type | COB LED 800 lm 3000 K |
| Lamp file | Spectral intensity distribution uW/cm2/nm @0.5 m for each wavelength |
| Dimensions (lamp) | 70 mm x Ø80 mm |
| Weight | 0.5 kg |

Link to website

# CALIBRATION IS ESSENTIAL

Light measurement systems need to be calibrated regularly. That goes for handheld devices too. All light measurements systems gradually change in time.

This is a result of physical deterioration, temperature variation and contamination. Consequently, regular maintenance is essential for realistic uncertainty estimates.





# RECOMMENDATIONS

Viso Systems generally recommends that sensors are recalibrated every year or as a minimum every other year.

All Viso systems are delivered pre-calibrated. Further, it is possible to make a custom calibration of the spectrometer if desired.

All Viso sensors have two memory areas where calibration data can be stored. The first memory area contains the factory calibration. This can only be edited by Viso. The second memory area contains a custom calibration. This can be changed by the user as many times as desired.

# LET VISO HELP

Let Viso Systems help you with your recalibrations.

Just send your sensor alternatively your LightSpion suitcase to Copenhagen for recalibration. Remember to include original reference lamps.

Expect 1-2 weeks lead time including UPS freight. Naturally, our goal is to keep your lab down-time as low as possible! Send your service request directly to Viso headquarters (info@visosystems.com) or to your local distributor.