Application Note
LIGHT MEASUREMENTS IN HORTICULTURAL LIGHTING

GEAR UP FOR GROWTH

Viso light measurement systems are the only solutions on the market which gives you comprehensive light readings – plus the ability to export the measurement files – in only 30 seconds.

Viso systems use a unique, superfast, spectrometer-sensor technology, making it perfect for horticultural lighting measurement.

The Light Inspector software allows you to easily switch between photometric and horticultural calculation mode, thereby making it easier than ever to generate complete measurement reports on your horticultural lighting products.
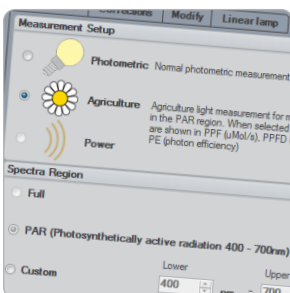
Read more here.

- **PPF**
- **PPFD**
- **Efficiency µmol/Joule**
- **Beam angle**
- **Detailed angular field distribution**
- **Power**
- **Power factor**
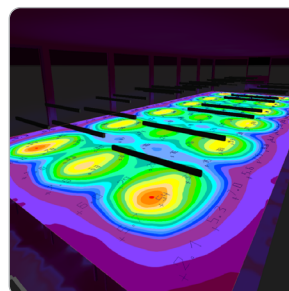- **Export to: IES and LDT in PPFD**
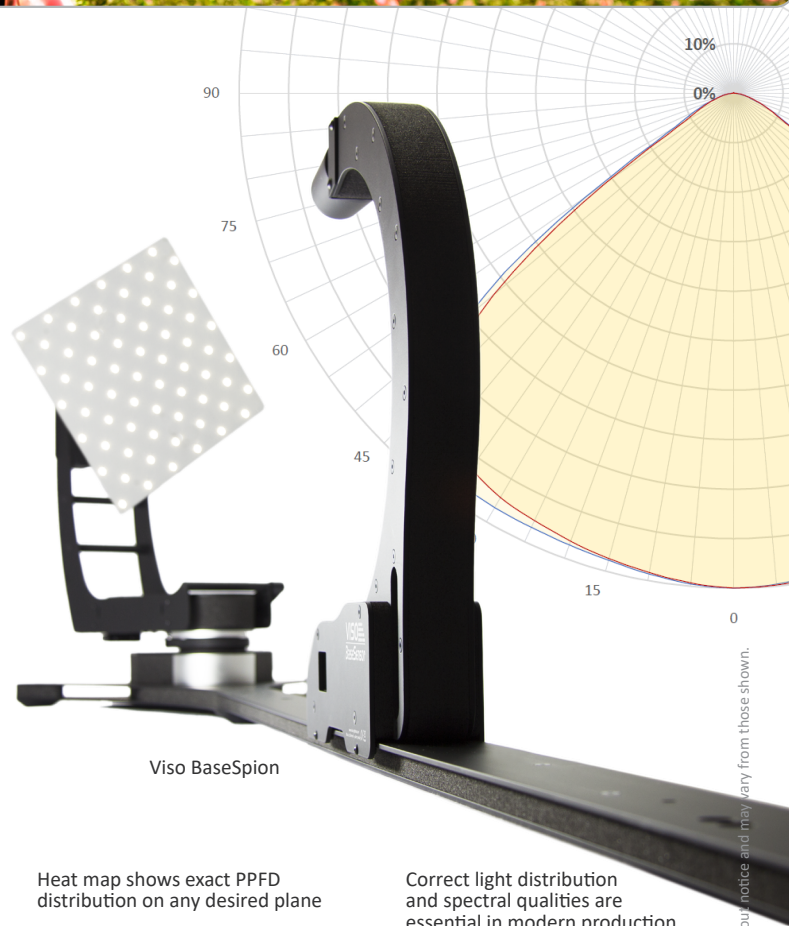
Viso BaseSpion

Switch between photometric and horticultural mode on any measurement

Import your PPFD IES file into Dialux or AGI32 and design greenhouse lighting systems

Heat map shows exact PPFD distribution on any desired plane

Correct light distribution and spectral qualities are essential in modern production

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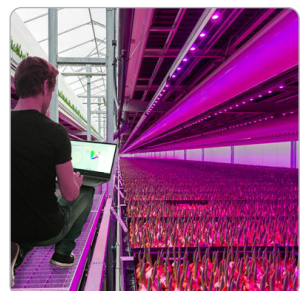
ALL IN ONE MEASUREMENT

Data sheets for streetlighting Fixtures includes lots of information about the emitted light. Goniometers from Viso Systems capture all information with a single measurement

GREEN POWER

Using the spectrometer sensor and a built-in power analyzer, Viso's unique technology enables fast measurements and makes other equipment, such as integration spheres, obsolete.

SPECIAL OUTPUTS

Horticultural lighting is the standard term used when lights are used for growing plants. Instead of lumen, data is displayed in PPF value, which consist of number of photons radiated by a light source in the photosynthetically active wavelength interval 400-700 nm. As all Viso measurement solutions use fast spectrometer sensors, the PPF can be calculated for any of your measurements.

You might think this kind of data is not necessary for general lighting applications, but if you work on illuminating open spaces like hotel lobbies, which include plants in the architecture, you might be required to specify PPF values.

Viso technology even allows you to generate 3D files in PPFD (photon flux density) as IES and LDT files. This way, you can use existing lighting CAD software, such as DIAL, Relux and AG132, to create your horticultural light planning.

LabSpion

For large light sources. Spectrometer sensor with built-in laser distance detector on tripod.

Max. 150 cm / 25 kg

LightSpion

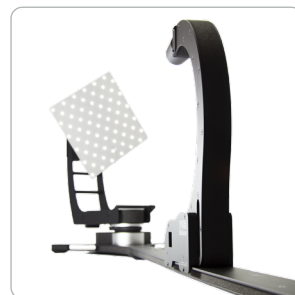Portable measurement laboratory for small light sources. Fold-out spectrometer sensor.

Max. 8 cm / 1 kg

BaseSpion

For small and medium-sized light sources. Spectrometer sensor on table-top rail.

Max. 54 cm / 9 kg

CHOOSE THE RIGHT SYSTEM

The BaseSpion and LabSpion systems are especially well suited to measurement of growth lighting products. Fast spectrometer sensors is the technology behind all Viso light measurement systems. Hence, all data is based on full-spectrum goniometer measurements.

Measuring is fast: One full plane (= two C-planes) in a 5° resolution is measured in just 20 seconds. As all data is generated by the Viso system, there is no need for subsequent integrating sphere measurements.

A built-in power analyzer keeps track of DUT warm-up and power feed. The LabTemp accessory connects directly to the power analyzer. All data is stored in the same measurement file.

Light Inspector

The Light Inspector software works with all Viso systems and makes measurements easier than ever.

Fully graphical workflow

USER-FRIENDLY SOFTWARE

The Viso Light Inspector software is the strongest and most intuitive light measurement software solution in the market. The user-friendly dashboard provides you with a perfect overview of your measurements - and in real-time. The software handles automatic goniometer setup and measurement. The Light Inspector has extensive output options and connect directly to MATLAB, LabVIEW, etc.