

LIGHT MEASUREMENT MADE EASY

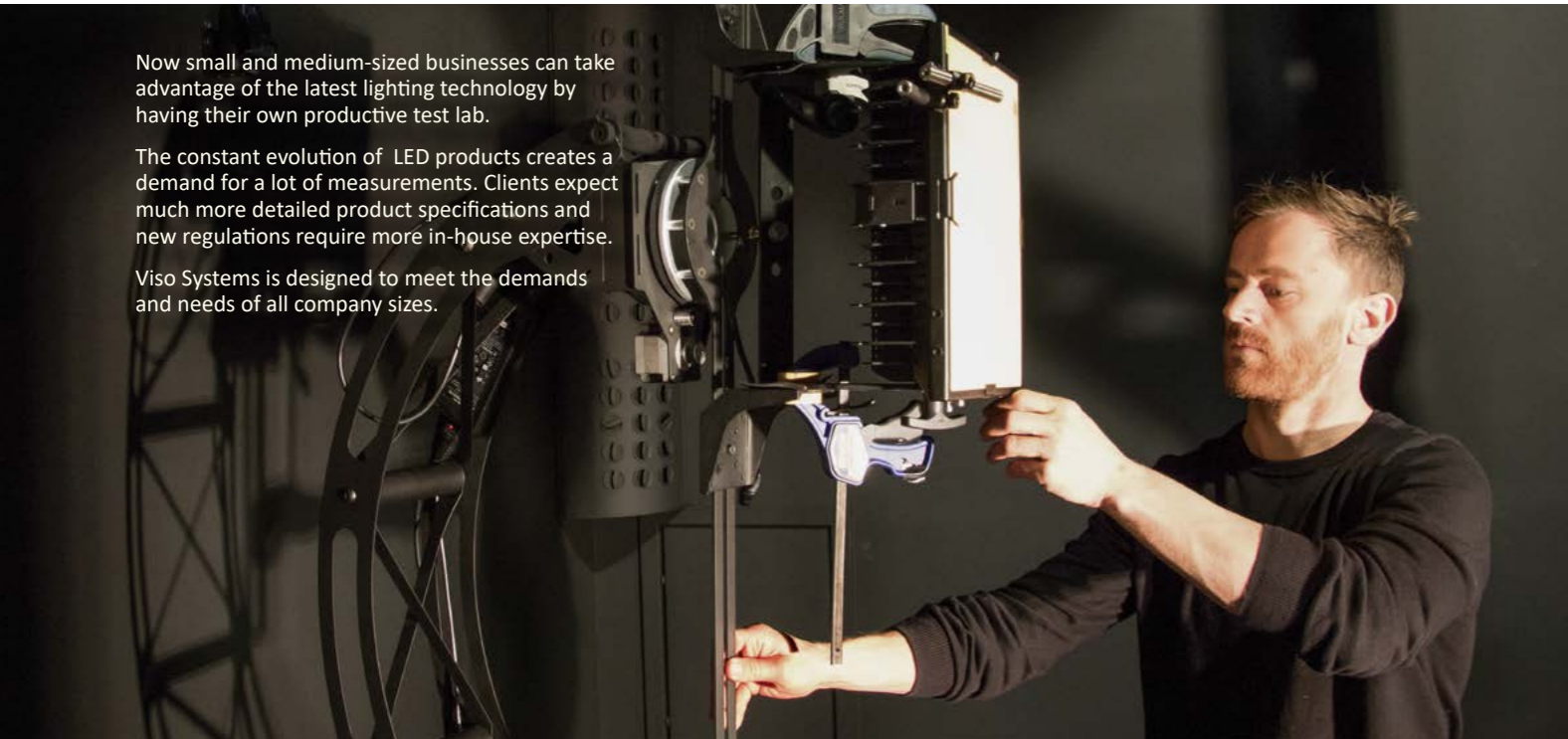
DESIGN YOUR OWN TEST LAB WITH SCANDINAVIAN EXPERTISE

From Copenhagen, Denmark, we will support you in designing and creating a productive light measurement lab. Our customers span from general, architectural, horticultural, and automotive lighting to UV lighting and more.

Now small and medium-sized businesses can take advantage of the latest lighting technology by having their own productive test lab.

The constant evolution of LED products creates a demand for a lot of measurements. Clients expect much more detailed product specifications and new regulations require more in-house expertise.

Viso Systems is designed to meet the demands and needs of all company sizes.

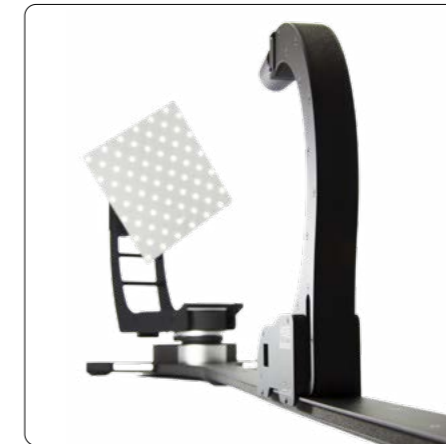


THREE MEASUREMENT SOLUTIONS



LabSpion

For any light sources **up to 45 kg (100 lbs)**. Spectrometer sensor with built-in laser distance detector on tripod.



BaseSpion

For medium-sized light sources **up to 9 kg (20 lbs)**. Spectrometer sensor slides on table-top rail.



LightSpion

Portable measurement laboratory for small light sources **up to 4 kg (9 lbs)**. Fold-out spectrometer sensor.

VISO SYSTEMS

Since 2006, Viso Systems has been at the forefront of developing and manufacturing some of the most innovative light measurement solutions in the world.

We have eliminated the need for the old integration sphere and replaced it with a single system for all testing requirements.

We eliminate the complexity of light measurement by providing smart and user software.

DESIGN

We develop and improve our products every day - and preferably in interaction with our customers. Your inputs and ideas are important to us. Close dialogue with the users ensures that our systems are always suitable for your tasks and meet new requirements.

Viso Systems equipment is suitable for many different applications, such as general lighting, horticulture and LED components. We help our clients customize equipment, installation and reports to suit specific needs.

PRODUCTION

All production and development takes place at Viso Systems headquarters and at our network of experienced suppliers.

Our products are assembled, meticulously tested and certified before shipment. Delivery time is usually only 2-3 weeks.

ONE SOFTWARE FOR ALL

The Viso Light Inspector software is the most intuitive light measurement software solution on the market.

The software provides you with a perfect overview of all your measurement data in real-time. We know that fast measurements with smart data production is crucial for your business.

Make your IES/LDT and create fully customized reports in PDF and Excel.

Frequent updates based on customers needs.

Light Inspector

The software works with all Viso products and makes measurements easy.



The LabSpion® gives you the capability to measure the full range of lamps from small LED chips to very large panels and streetlight up to 45 kg (100 lbs).

The fast spectrometer sensor and a built-in power analyzer give you fast and comprehensive measurements and ensures that all data is measured quickly, making older types of equipment such as integration spheres redundant.

MEASURE IN 30 SECONDS

- Lumen
- Peak candela value
- Color temperature, CCT
- Spectrum, CRI, TM30, CQS
- Beam angle
- Detailed angular field distribution
- Power and power factor
- Lumen per watt
- Radiometrical units
- Horticultural units
- ... and much more



The 2-axis goniometer gives you a full 3D light distribution



Just plug in the USB cable and everything is fully integrated

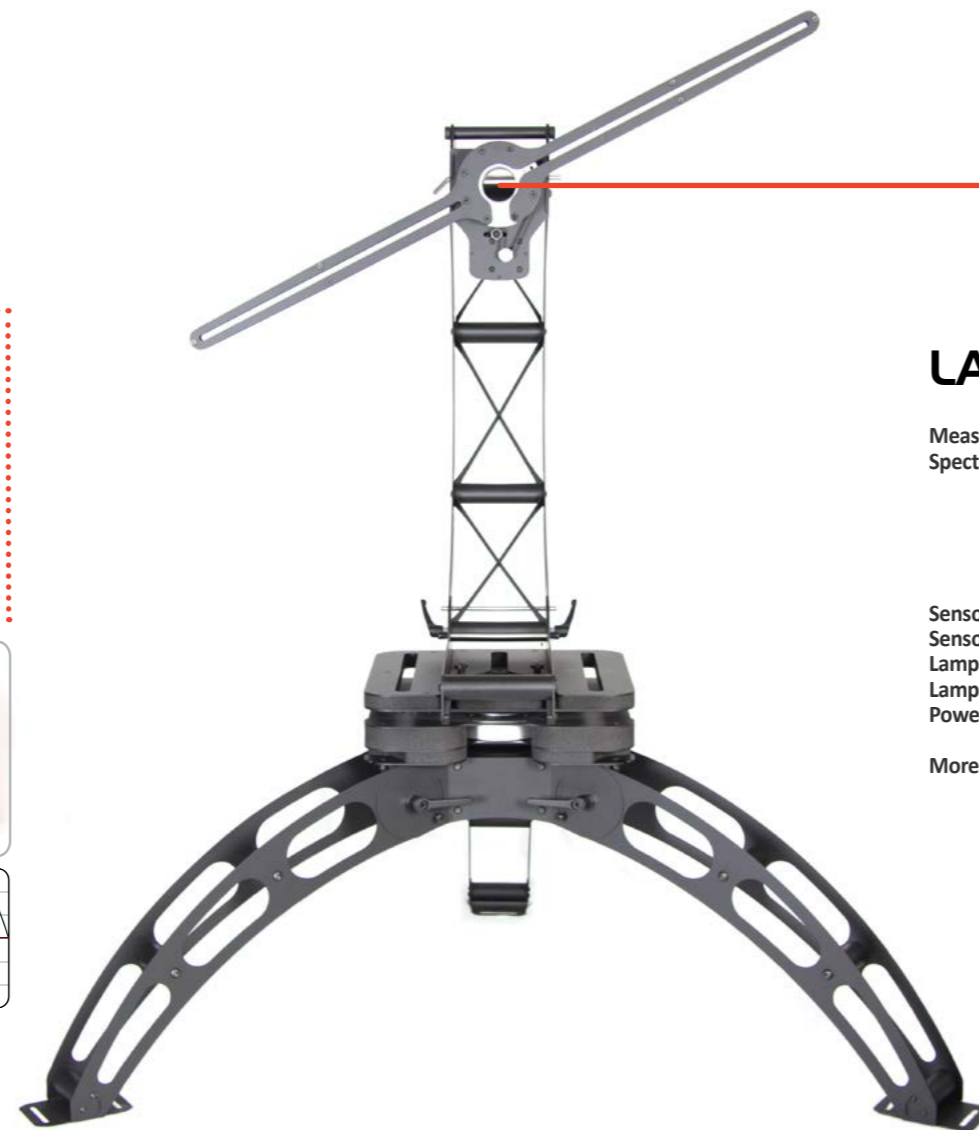


The main board easily slides into allowing a quick update



The distance is easily detected with the integrated laser

EASY CONNECTIVITY



LABSPION SPECIFICATIONS

Measurement method	Far field, type C horizontal
Spectrometer ranges	VIS (standard) 360 – 830 nm Also available in UV-VIS 200 – 830 nm UV-VIS-NIR 200 – 1100 nm VIS-NIR 360 – 1100 nm<
Sensor distance range	70 cm → 25 m (2.3 ft → 80 ft)
Sensor distance setup	Manual
Lamp diameter range	0 – 1.5/2.0 m at 2-axis (4.9 / 6.6 ft)
Lamp maximum weight	25 kg / 45 kg (55 lbs / 99 lbs)
Power supply input	90 to 260 VAC, 50/60 Hz

More specifications in page 20 – 21



BASESPION

The BaseSpion® is the perfect solution for any mid-size laboratory that wants advanced light measurements in a compact system. It is the best solution for LED chips, modules, panels, downlights, bulbs and spots up to 9 kg (20 lbs).

The BaseSpion is a great tool that allows you to measure all medium-sized lighting products. The 2-axis goniometer enables the system to measure full 3D distribution fields of any light source and gives lighting professionals comprehensive IES and LDT simulation files.



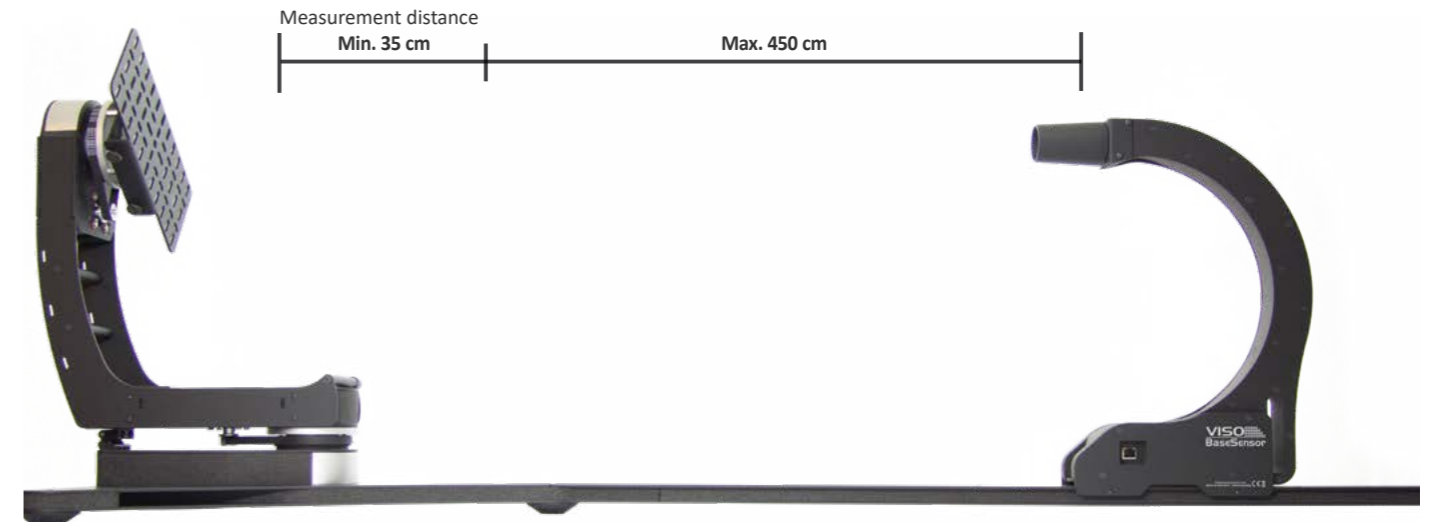
COMPACT

The BaseSpion is a professional laboratory table-top light measurement system. It offers fully automated multiple C-plane measurements. The design of the system makes it very flexible to work with in any lighting laboratory. The goniometer drivers and the power analyzer are all built in. Simply connect via USB to any PC and get results in just 30 seconds

BASESPION SPECIFICATIONS

Measurement method	Far field, type C horizontal
Spectrometer range	VIS (standard) 360 – 830 nm Also available in UV-VIS 200 – 830 nm UV-VIS-NIR 200 – 1100 nm VIS-NIR 360 – 1100 nm
Sensor distance range	35 cm to 450 cm (14" – 14.7 ft)
Sensor distance setup	Automatic detector on rail
Lamp diameter range	0 – 54 cm (0 – 21.5")
Lamp maximum weight	9 kg (19.8 lbs)
Power supply input	90 to 260 VAC, 50/60 Hz

More specifications in page 22 – 23



The universal light source bracket easily clicks onto the goniometer



Before measurement, simply slide, align and lock the light source to the center



The base lock makes it easy to align the light source with sensor



The automatic sensor positioning system ensures accurate distance



LIGHTSPION

The portable Viso LightSpion® enables you to fully measure any small light source in just 30 seconds. It measures all the photometric data and no expert knowledge is required.

The LightSpion is the only portable system in the market that includes a spectrometer sensor and a built-in power analyzer. It is a lightweight, professional measurement solution, making it easy to take it with you anywhere you go.



TAKE YOUR TEST LAB ANYWHERE

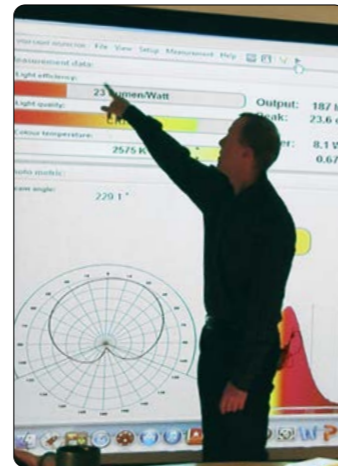
The LightSpion is designed to measure small, symmetrical light sources such as household lamps and LEDs.

An omni-directional reference lamp is included to enable verification of the calibration at any time.

The LightSpion includes a bracket that enables the system to measure sections of linear lamps, such as LED strips and tubes. The full length of the light source is typed into the Viso Light Inspector to provide the full photometric data.



A linear lamp bracket is included to measure long light sources, get lumen per meter or per foot.



Train your staff and students in lighting technology by bringing your test lab to any seminar or lecture. There, you can show your light measurements in real-time, providing the audience with a hands-on understanding of lighting technology.



The water protected case is exceptionally lightweight (6 kg)



The built-in power analyzer gives you power information instantly



Quick and easy, the system is pre-calibrated and ready to be used



The LightSpion is operated from your own PC with Light Inspector software installed



LIGHTSPION SPECIFICATIONS

Measurement method	Far field, type C horizontal
Spectrometer range	350 – 800 nm
Sensor distance range	66 cm (with extender 115 and 182 cm)
Sensor distance setup	Manual
Lamp diameter range	0 – 8 cm (3.15") and with extender 22 cm (8.7")
Lamp maximum weight	1 kg (2.2 lbs) and with extender 4 kg (8.8 lbs)
Power supply input	90 to 260 VAC, 50/60 Hz

More specifications in page 22 – 23



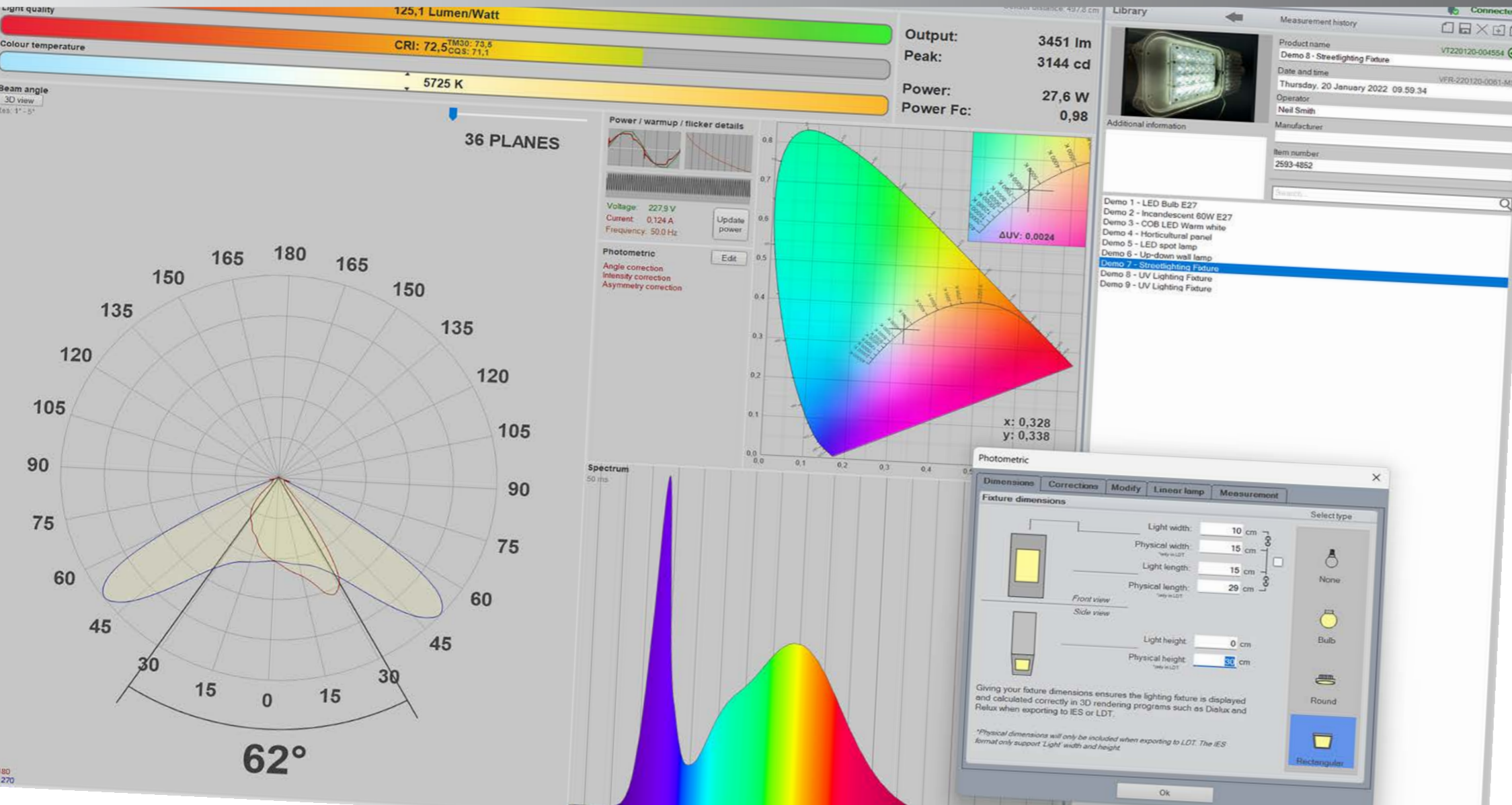
Reference lamp included. Check your calibration any time

LIGHTSPION EXTENDER



LIGHT INSPECTOR SOFTWARE

The Viso Light Inspector® is the most intuitive goniometer interface and software system on the market. It is included in all Viso Light measurement products. All measured data is shown in real-time. Photometric results are displayed graphically to give you a fast overview.



PACKED WITH FEATURES

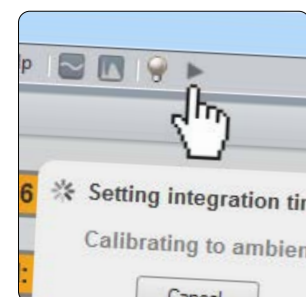
- User-friendly graphical interface
- Automatic goniometer setup
- Graphical power analyzer
- Real-time measurement data view
- Detailed angular distribution
- Add product image and description
- Make your own measurement templates
- Fully **customized pdf reports** - your design
- IES/LDT and lots of special exports (XLS, XML, GLDF)
- Direct export to **ready-to-upload EPREL zip files**
- Connect directly to MATLAB, LabVIEW, etc.
- Compatible with Windows 7, 8, 10 and 11

EXPORT

PDF

LDT
IES

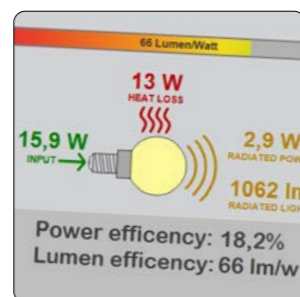
EXCEL



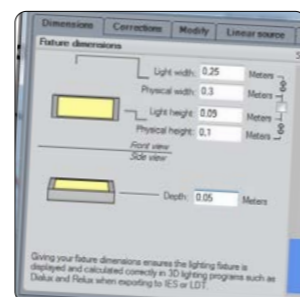
One click starts the fully automatic setup and the measurement cycle



Comprehensive color quality data results, including CRI, CQS and TM30 values



Real power efficiency can be calculated using the radiated spectral energy



Easily add dimensions to your light sources and luminous areas

THE SOFTWARE

The software gives you a great real-time overview of measurements. The user friendly functions of the software allows you to analyze and generate your results in every detail.

The software supports various measurement styles:

- Photometric units (light for human vision)
- Radiometrical units (UV and infrared)
- Horticultural units (green house lighting)
- Dose units (for UV exposure)

REPORT DESIGNER

Design your report templates in your own company style. No need to cut and paste or ask any other department to customize a report for a unique look. Use Viso's Report Designer to export directly to the client or to your website in the format you desire.



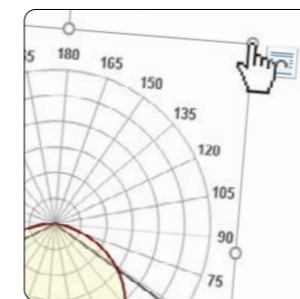
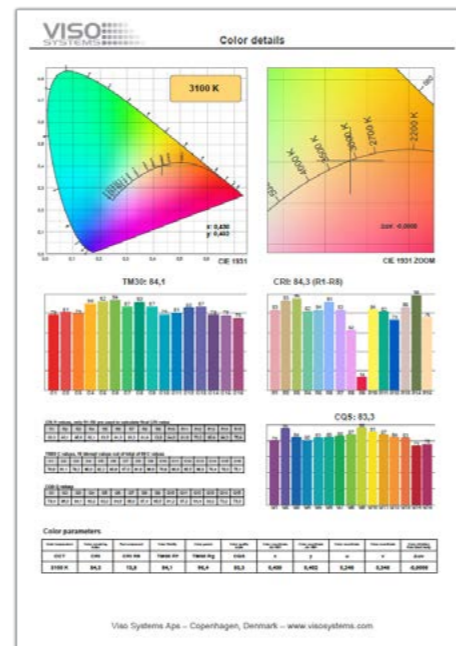
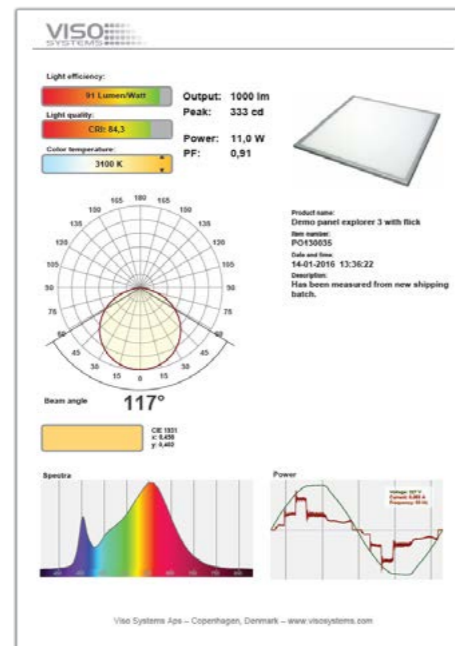
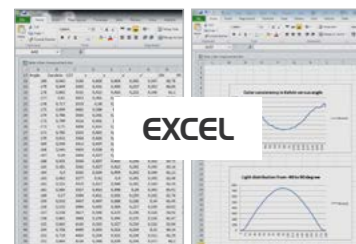
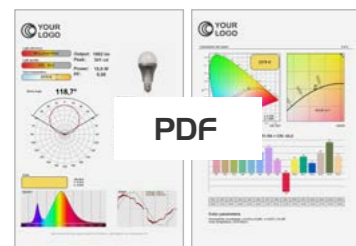
LOTS OF EXPORT OPTIONS

Light Inspector allows you to make several kinds of outputs - scientific and for marketing:

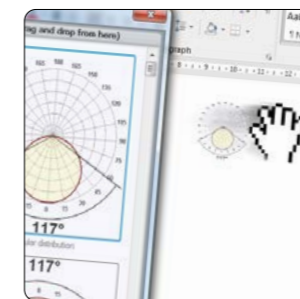
- Light distribution IES and LDT files (universal or custom)
- Raw data as .csv or MS Office Excel spreadsheets
- PDF standard reports
- EU: Direct export to EPREL zip file - ready to upload to the EPREL database
- Customized reports based on your own templates. The Light Inspector allows you to design your own PDF report templates using Microsoft Office Word as an editor. Everything you can design in MS Word, you may include - even embedded MS Excel spreadsheets or custom graphics and logos

EXPORT TO

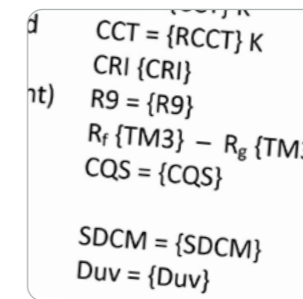
PDF REPORT DESIGNER



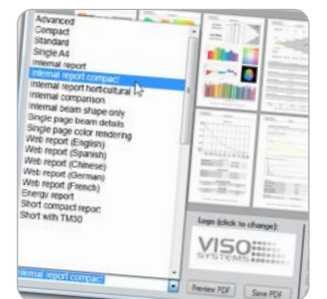
Simply add, move and/or resize with any photometric data diagram (vector graphics)



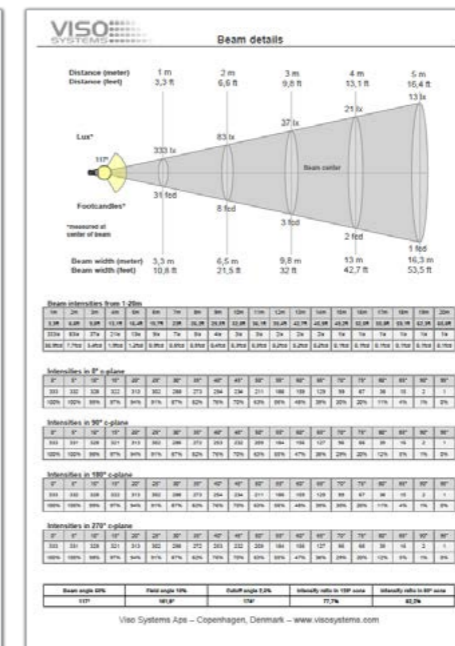
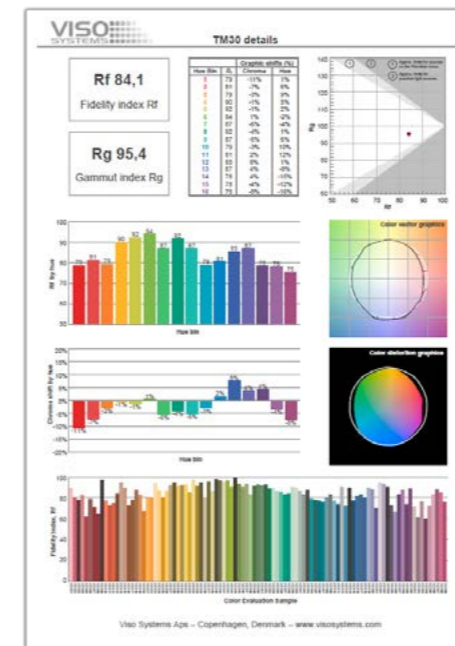
Extensive library of diagrams with any photometric data just drag and drop



Use keywords to place photometric values anywhere and create tables



An unlimited number of PDF templates can be saved and selected with preview

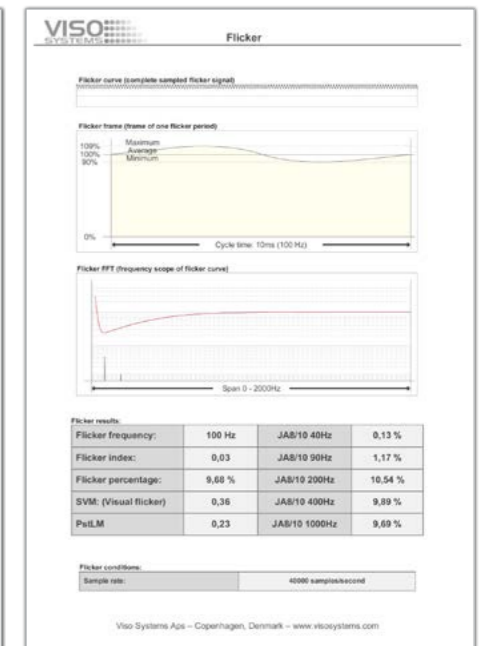
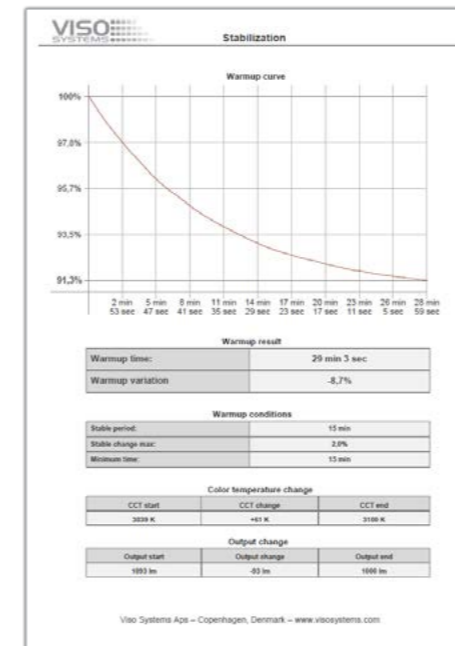
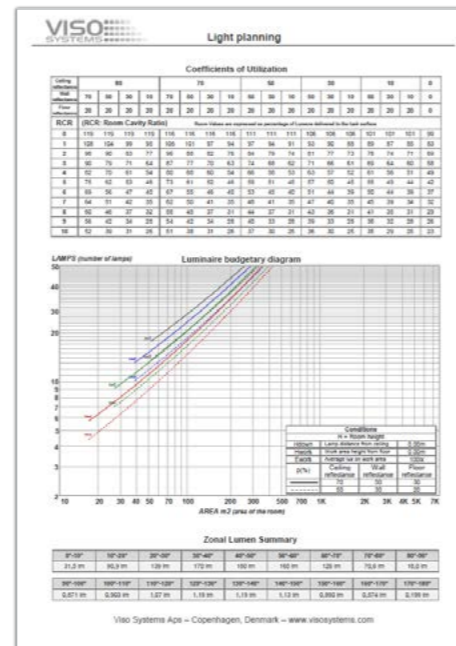


UGR

Glare Evaluation According to UGR

Room size	X	Y	Viewing direction at right angles to light axis	Viewing direction parallel to lamp axis							
2H	2H	15,1	16,5	15,4	16,7	17,0	15,1	16,4	15,4	16,7	16,9
	4H	16,7	17,9	17,1	18,2	18,5	16,6	17,8	17,0	18,1	18,4
	6H	17,3	18,5	17,7	18,8	19,1	17,2	18,4	17,6	18,7	19,0
	8H	17,7	18,8	18,1	19,1	19,4	17,7	18,7	18,0	19,0	19,4
4H	2H	17,8	18,9	18,2	19,2	19,5	17,8	18,8	18,2	19,1	19,5
	4H	17,9	18,9	18,3	19,2	19,6	17,9	18,8	18,2	19,2	19,6
	6H	18,6	19,3	19,0	19,7	20,1	18,5	19,2	19,0	19,6	20,1
	8H	19,2	19,8	19,7	20,2	20,7	19,2	19,8	19,7	20,2	20,7
8H	2H	19,5	20,0	20,4	20,8	21,0	19,4	19,9	19,9	20,4	20,8
	4H	19,6	20,0	20,1	20,5	21,0	19,6	20,0	20,1	20,5	21,0
	6H	19,8	19,8	19,8	20,2	20,7	19,2	19,7	19,7	20,2	20,7
	8H	19,5	20,0	20,0	20,4	21,0	19,5	19,9	20,0	20,4	20,9

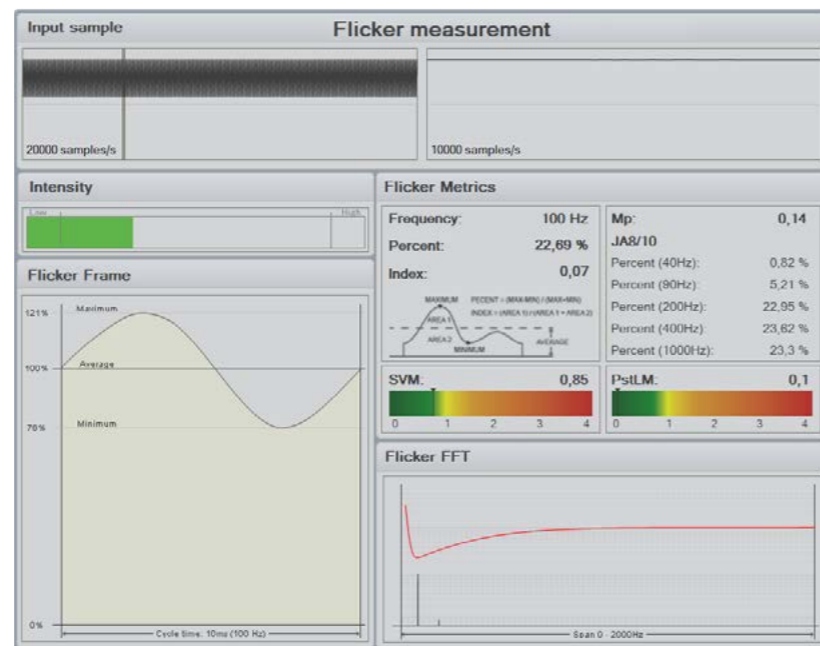
Corrected glare indices referring to 1000 lm total luminous flux



LabFlicker® is the first flicker measurement instrument to integrate seamlessly with your light measurement system, making it simpler than ever to collect all photometric data into your reporting automatically.

RESULTS

SVM, PstLM
Percent FlickerW
Flicker index
Flicker frequency
MP (Assist)
JA8/10 (Title 24)



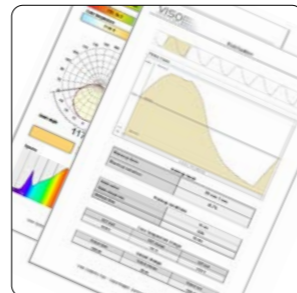
Connects directly to your PC via USB allowing for a fast, real-time preview



OLED display gives live flicker results during measurement



An ultra-fast 350.000 samples/sec photo sensor gives you precise data



Seamless integration with Viso pdf-reporting: All photometrics in one output

The unique LabRail® system together with LabSpion goniometer is a complete light measurement solution. Setting the sensor distance has never been easier

LABRAIL PROVIDES PERFECT ALIGNMENT

The LabRail system combines your full-size LabSpion goniometer with a rail-based sensor system.

A 12 m (39.4 ft) rail is standard - but both shorter and longer rails are available. The rail assembly is suspended from the ceiling in the laboratory.

Sensor movement along the rail is motorized. The sensor distance can be optimized for all sized light sources.

Owners of LabSpion systems may replace the standard tripod arrangement with the LabRail upgrade kit.



The integrated laser measures the distance to the light source automatically

GO ANYWHERE IN 5 SECONDS

- Repositioning the sensor in only 5 seconds
- Perfect alignment every time
- No cables
- Free up your floor space
- Automatic positioning
- Suspension from ceiling

SPECIFICATIONS

Sensor distance range	35 cm (14") to 12,000 cm (39.4 ft) (standard)
Sensor distance setup	Automatic
Power supply input	90 to 260 VAC, 50/60 Hz

More specifications in page 21

LabDisc

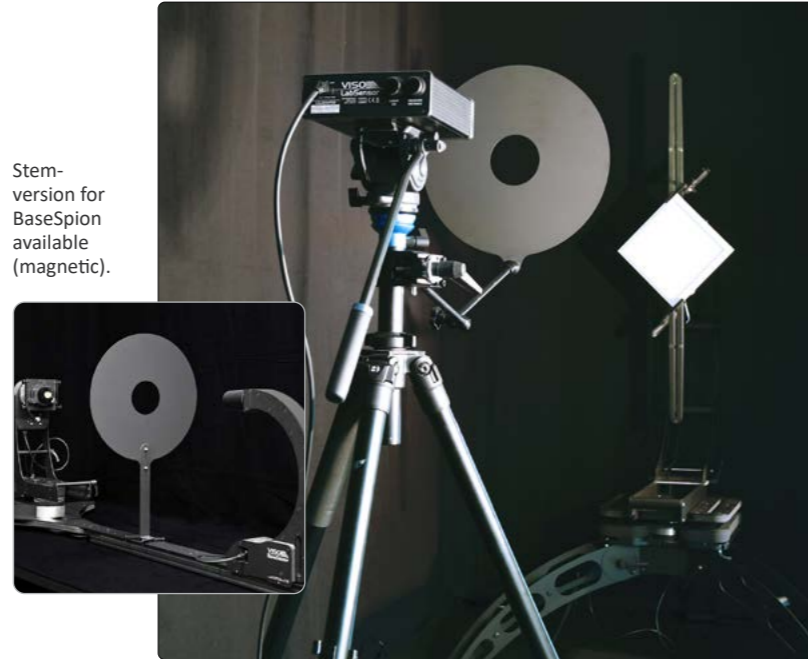
REMOVES STRAYLIGHT

LabDisc is an accessory to Viso LabSpion and BaseSpion light measurement systems. This adjustable baffle reduces straylight errors to a minimum by restricting your sensor's field of view.

The perfect darkroom does not exist. Although all lab surfaces are black, a small amount of light is always reflected.

This stray light can reach your sensor and interfere with your result. Therefore, it is important to avoid stray light from lab surfaces.

LabDisc removes all stray light from side walls, ceiling and floor. In addition, LabDisc reduces stray light from the rear wall to a minimum.



Stem-version for BaseSpion available (magnetic).

LightInterface

CONTROLS YOUR LAMP DURING MEASUREMENT

Many light sources are dimmable or color tunable. LightInterface allows the Light Inspector software to communicate with your device driver in all common protocols (DMX, DALI2, and 0-10V).

Measure your light source in a specific setting, or create special tuning protocol with several settings with the LightInspector software.

With LightInterface, you can control your light sources throughout your measurement cycle, set up special measurement protocols, and save several measurements of the same light source to special files. Product launch in 2023.

Plot your dimmer and tunable color curves.



LabTemp

RECORDS TEMPERATURE THE EASY WAY

Measure and record your device temperature and ambient temperature in your lab. LabTemp is a hub with one internal and three standard external temperature probes. LabTemp connects to Viso LabSpion and BaseSpion.

The LabTemp hub is attached to the goniometer with strong permanent magnets. The internal sensor captures ambient temperature data on any Viso BaseSpion and LabSpion while measuring light. The external probes can capture the temperature in specific points of interest. It is easy to install and use. No extra software, no extra power supply and no extra data cables. Ambient temperature control is mandatory in CIE S 025/E:2015 guidelines



LabTarget

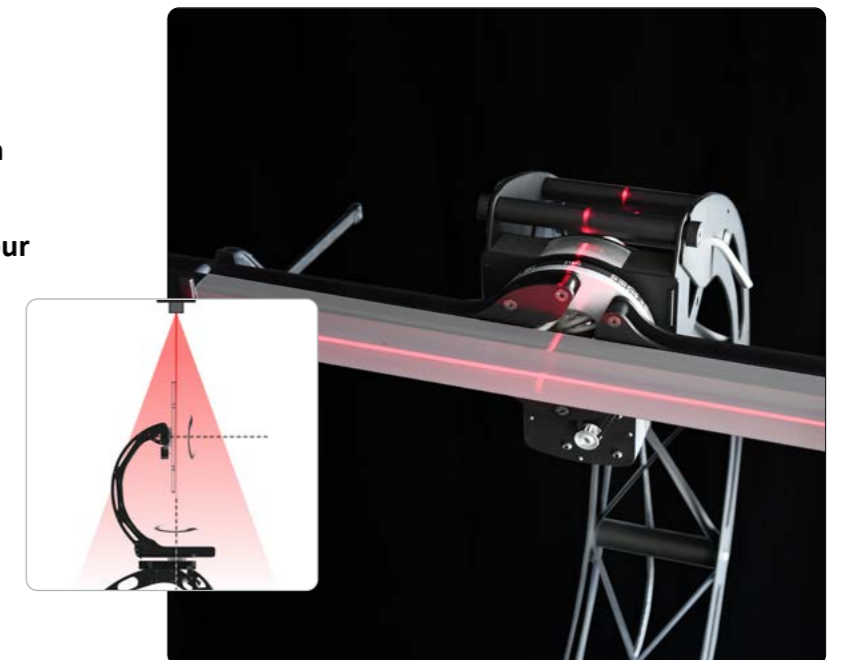
PERFECT AND FAST ALIGNMENT

LabTarget is a Viso LabSpion and BaseSpion accessory. This vertical, cross-beam laser is mounted in the ceiling above your goniometer and makes it simple to align your light source perfectly with the rotational center.

LabTarget is the first vertical, double-plane laser level on the market. Install the LabTarget above your Viso LabSpion or BaseSpion light measurement systems and make light source alignment easier than ever.

The laser beam is on when your light measurement system is on, and turns off automatically during measurements

LabTarget is included in Vis LabRail.



Labarazzi

UNIQUE FLICKER GENERATOR

Labarazzi is a special tunable light source that can generate flicker, i.e. temporal light artifacts. Use Labarazzi for calibrating flicker testers, for testing the flicker immunity of cameras and for teaching and demonstration.

Viso Systems Labarazzi is the only commercially available TLA generator in the world. Labarazzi is a professional laboratory and demo light source that generates precise temporal light artifacts (TLA). The Labarazzi includes a 1100 lumen LED light source.

The Labarazzi offers 26 preset flicker signals with different waveform, frequency, percent flicker, duty cycle, modulation depth, PstLM and SVM. Design custom TLA waveforms with the Light Inspector.



Cali-T50

REFERENCE LAMP (VIS)

Get your own custom calibration lamp. The Cali-T50 is dedicated to VIS and VIS-NIR sensors (wavelength range 360-1100 nm).

The Cali-T50 is a tungsten irradiance reference lamp with an auto ramp-up power supply. This reference lamp can be used to recalibrate/verify your calibration at any time without the need for external support. It is easily mounted in the center bracket of the LabSpion or BaseSpion. The Cali-T50 is included in LabSpion VIS/VIS-NIR. All CALI-T50/ CALI-DT300 light sources are traceable to PTB 2302 Blackbody radiator - the PTB national primary standard for spectral irradiance calibration lamps.



REF-800

FAST CALIBRATION CHECKUP

This lamp can be used to regularly check that your calibration still holds. The set consists of a COB LED on a large heat sink and a dedicated driver. The REF-800 is characterized using your particular sensor with every factory (re)calibration.

This special Viso reference light source (Reference 800) is included in all new Viso light measurement systems. The purpose for supplying this item is to facilitate quick tests of whether the spectrometer properties have drifted, indicating that recalibration is needed. With The REF-800 you avoid wearing on your calibration lamp such as CALI-T50.



Cali-DT300

REFERENCE LAMP (UV-VIS-NIR)

Get your own custom calibration lamp. The Cali-DT300 is dedicated to UV-VIS and UV-VIS-NIR sensors (wavelength range 200-1100 nm).

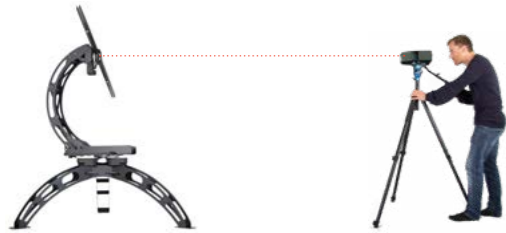
The CALI-DT300 is an irradiance reference lamp containing two calibration light sources – a deuterium lamp for UV calibration, and a tungsten lamp for visible light calibration.

This reference lamp can be used to recalibrate/verify your calibration at any time without the need for external support.

The Cali-DT300 is included in LabSpion UV-VIS/UV-VIS-NIR and BaseSpion UV-VIS/UV-VIS-NIR.



TECHNICAL SPECIFICATIONS



LabSpion VIS

Standard version

LabSpion UV-VIS

LabSpion UV-VIS-NIR

LabSpion VIS-NIR



LabRail for LabSpion

Physical Dimensions

As standard version

Shipping Weight	90 kg (198 lbs)
Dimensions (L x W x H)	190 x 190 x 162.5 cm (6.2 x 6.2 x 5.3 ft)
Weight	78 kg (172 lbs)
Sensor Distance Range	0.5 to 50 m (1.6 to 160 ft)-
Sensor Distance	≥ Light Source Length x 10 (Min. x 8)
Sensor Distance Set-Up	Laser Range Finder, ±2 mm
Light Source Diameter Range	0 – 1.5 m (0 – 4.92 ft) @ 2-Axis
Light Source Diameter Range, High Tower	0 – 2.0 m (0 – 6.56 ft) (@ 2-Axis)
Light Source (DUT) Maximum Weight	25 kg (55 lbs)
Light Source (DUT) Maximum Weight, Enforced	45 kg (99 lbs)

Electrical Specifications

As standard version

Power Supply Input	90 – 260 VAC, 50/60 Hz
Power Analyzer Voltage Range	90 – 260 VAC < ±0.5 V
Power Analyzer Current Range	0 – 3 A (Average ±0.5 mA)
Power Analyzer Power Range @ 230 V	0 – 600 W (Average: ±0.1 W)
Power Analyzer Power Range @ 110 V	0 – 300 W (Average: ±0.1W)
Power Analyzer Sample Rate	70,000 Samples/sec

Photometric Specifications

	Far Field	Far Field
Illuminance, Lux at Sensor (Equal to cd @ 1 m)	0.20 – 200,000 lux < ±2,5%	0.40 – 400,000 < ±2,5% lux
Max intensity @ 1.0 m	0.2 – 200,000 cd < ± 2,5%	0.40 – 400,000 cd < ± 2,5%
Max intensity @ 20.0 m	80 – 80,000,000 cd < ± 2,5%	160 – 160,000,000 cd < ± 2,5%
Flux Range, Min. Distance (Lambertian Distribution)	0.63 – 630,000 lm @ 1.0 m	Radiated spectral energy In W/nm Irradiance in μW/cm ² or W/m ² (all directions) 3D UV-VIS radiation field
Flux Range, Max. Distance (Lambertian Distribution)	250 – 250,000,000 lm @ 20.0 m	
Flux accuracy	VIS ±4 %	VIS ±4%, UVA/B ±5%, UVC ±6.5%
Color Temperature Range	1,000 K – 10,000 K < ±35 K	1,000 K – 10,000 K < ±35 K
Color Rendering Index	Up to 100 < ±0.7	Up to 100 < ±0.7
Resolution, Standard	5 Degrees/Step (Auto-Detect)	5 Degrees/Step (Auto-Detect)
Resolution, Highest	0.1 Degrees/Step (Auto-Detect)	0.1 Degrees/Step (Auto-Detect)
Number of c-planes	2 – 72 (max. 144) automatical	2 – 72 (max. 144) automatical
Spectrometer Type	Ibsen Photonics FREEDOM	Ibsen Photonics FREEDOM
Custom Viso	(High Sensitive Transmission Grating)	(High Sensitive Transmission Grating)
Spectrometer Range	360 – 830 nm (1024 pixels)	200 – 850 nm (2048 pixels)
Spectrometer Detector	Hamamatsu S11639-01	Hamamatsu S11639-01
Calibration	Fully Calibrated Plug-and-Play Solution	Fully Calibrated Plug-and-Play Solution
Re-calibration	Min. Every Two Years	Min. Every Two Years

As standard version

As standard version

Shipping Weight	35 kg (77 lbs)
Dimensions (L x W x H)	25 x 25 x 160 cm (0.8 x 0.8 x 5.3 ft)
Weight	30 kg (66 lbs)
Sensor Distance Range	0.5 to 12 m (1.6 to 39.4 ft)
Sensor Distance	Standard up to 12 m (39,4 ft) (can be extended)
Sensor Distance Set-Up	Laser Range Finder, Automatical, ±2 mm

As standard version

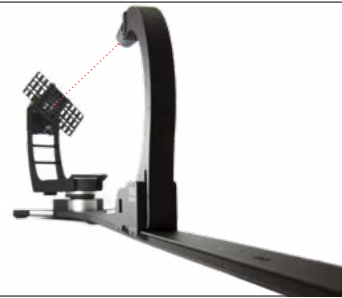
As standard version

90 – 260 VAC, 50/60 Hz

As preferred LabSpion version

	Far Field	Far Field
Illuminance, Lux at Sensor (Equal to cd @ 1 m)	0.40 – 400,000 < ±2,5% lux	0.40 – 400,000 < ±2,5% lux
Max intensity @ 1.0 m	As UV-VIS version	As UV-VIS version
Max intensity @ 20.0 m	NIR ±4%, VIS ±4%, UVA/B ±5%, UVC ±6.5%	VIS ±4%, NIR ±4%
Flux Range, Min. Distance (Lambertian Distribution)	1,000 K – 10,000 K < ±35 K	1,000 K – 10,000 K < ±35 K
Flux Range, Max. Distance (Lambertian Distribution)	Up to 100 < ±0.7	Up to 100 < ±0.7
Flux accuracy	5 Degrees/Step (Auto-Detect)	5 Degrees/Step (Auto-Detect)
Color Temperature Range	0.1 Degrees/Step (Auto-Detect)	0.1 Degrees/Step (Auto-Detect)
Color Rendering Index	2 – 72 (max. 144) automatical	2 – 72 (max. 144) automatical
Resolution, Standard	Ibsen Photonics FREEDOM	Ibsen Photonics FREEDOM
Resolution, Highest	(High Sensitive Transmission Grating)	(High Sensitive Transmission Grating)
Number of c-planes	200 – 1100 nm (2048 pixels)	360 – 1100 nm (2048 pixels)
Spectrometer Type	Hamamatsu S11639-01	Hamamatsu S11639-01
Spectrometer Range	Fully Calibrated Plug-and-Play Solution	Fully Calibrated Plug-and-Play Solution
Spectrometer Detector	Min. Every Two Years	Min. Every Two Years
Calibration		
Re-calibration		

TECHNICAL SPECIFICATIONS



BaseSpion VIS

Standard Version

BaseSpion UV-VIS

BaseSpion UV-VIS-NIR

BaseSpion VIS-NIR

LightSpion



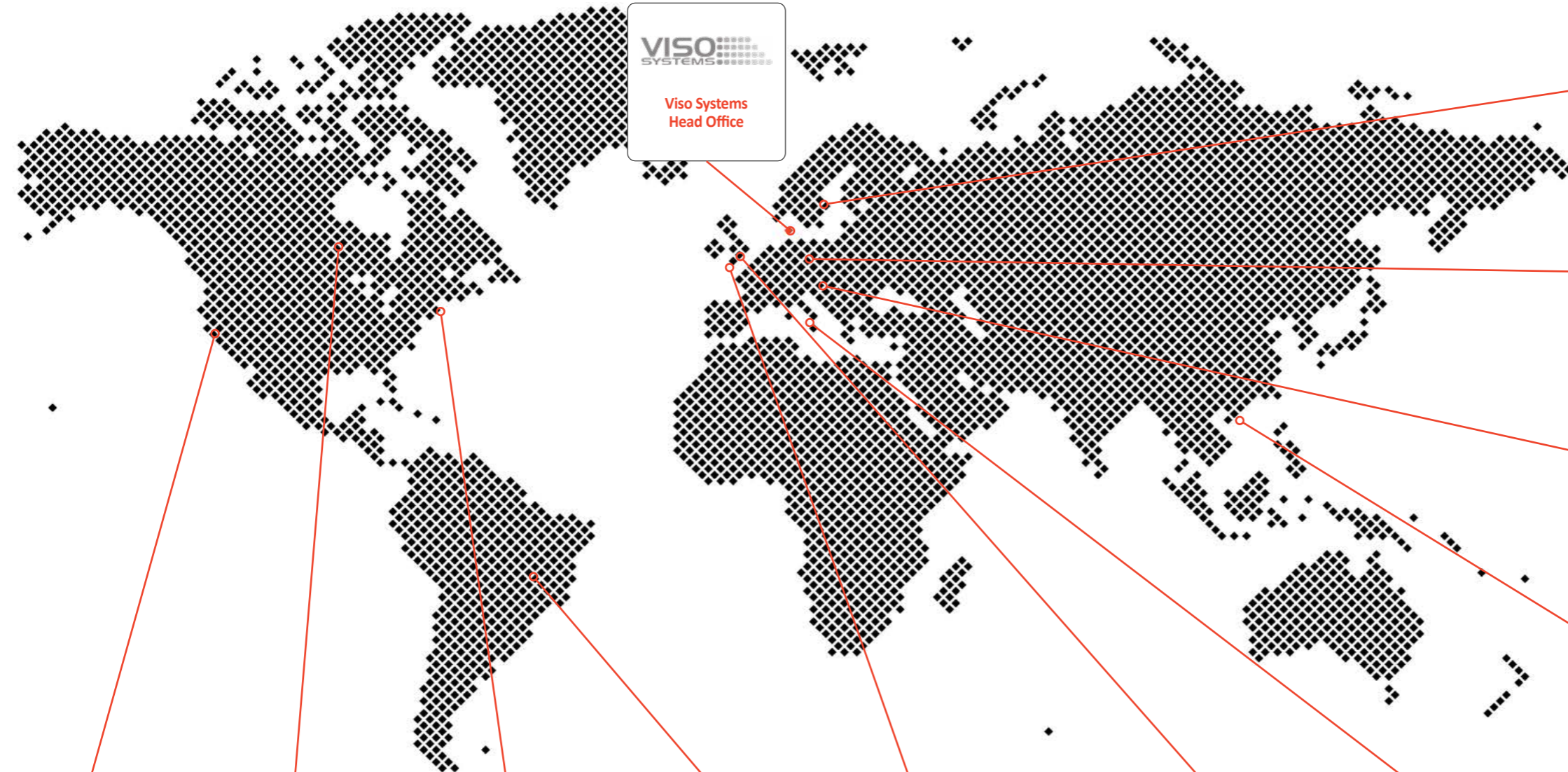
Extender for LightSpion



	As standard version		As standard version	As standard version	As standard version	As standard version
Physical Dimensions						
Shipping Weight	42 kg (93 lbs)				7 kg (15.4 lbs)	9 kg
Dimensions (L x W x H)	205-500 x 56 x 55 cm (6.7-16.4 x 2 x ft)				43x11.5x33.5 cm (17.1x4.5x33.5")	100 x 36 x 21 cm
Weight	38 kg (84 lbs)				6 kg (13.2 lbs)	7 kg
Sensor Distance Range	0.35 – 4.5 m (1.15 – 14.8 ft)				66 cm (26"), fixed	66, 115 and 182 cm
Sensor Distance	≥ Light Source Length x 10 (Min. x 8)				Fixed	Fixed (Three Settings)
Sensor Distance Set-Up	Automatic Detector on Sensor Rail				-	Manual input
Light Source Diameter Range	0 - 54 cm (1.8 ft)				0 – 8 cm (3.15") @ single-axis	0 - 22 cm
Light Source (DUT) Maximum Weight	9 kg (19.8 lbs)				1 kg	4 kg
Electrical Specifications						
Power Supply Input	90 – 260 VAC, 50/60 Hz				90 - 260 VAC, 50/60 Hz	
Power Analyzer Voltage Range	90 – 260 VAC < ±0.5 V				90 - 260 VAC < ±0.5 V	
Power Analyzer Current Range	0 – 3 A (Average ±0.5 mA)				0 – 3 A (Average ±0.5 mA)	
Power Analyzer Power Range @ 230 V	0 – 600 W (Average: ±0.1 W)				0 – 600 W (Average: ±0.1 W)	
Power Analyzer Power Range @ 110 V	0 – 300 W (Average: ±0.1W)				0 – 300 W (Average: ±0.1W)	
Power Analyzer Sample Rate	70,000 Samples/sec				70,000 Samples/sec	
Photometric Specifications						
Measurement Method	Far Field	Far Field	Far Field	Far Field	Far Field	Far Field
Illuminance Range, Lux at Sensor @ 1 m	0.2 – 200,000 <±2,5% lux	0.40 – 400,000 <±2,5% lux	0.20 – 200,000 <±2,5% lux	0.20 – 200,000 <±2,5% lux	10 - 10,000 lux	
Intensity Range, Min. Distance	0.0245 – 24,500 cd <±2,5% @ 0.35 m	0.050 – 29,000 cd <±2,5% @ 0.35 m	As UV-VIS version	As UV-VIS version	0.5 – 50,000 candela ±4% @ 66 cm	
Intensity Range, Max. Distance	4 – 4,050,000 cd <±2,5% @ 4.50 m	8 – 8,100,000 cd <±2,5% @ 4.50 m				
Flux Range, Min. Distance (Lambertian Distribution)	0.08 – 75,000 lm @ 0.35 m	Radiated spectral energy In W/nm Irradiance in μW/cm ² or W/m ² (all directions) 3D UV-VIS radiation field			10 - 50,000 lm @ 66 cm (3.15")	
Flux Range, Max. Distance (Lambertian Distribution)	12.7 – 12,700,000 lm @ 4.50 m					
Flux accuracy	VIS ±4 %	VIS ±4% UVA/B ±5%, UVC ±6.5%	NIR ±4%, VIS ±4%, UVA/B ±5%, UVC ±6.5%	VIS ±4%, NIR ±4%	LED ±4%, other types ±7.8%	
Color Temperature Range	1,000 K – 10,000 K < ±35 K	1,000 K – 10,000 K < ±35 K	1,000 K – 10,000 K < ±35 K	1,000 K – 10,000 K < ±35 K	1,000 K – 10,000 K < ±35 K	
Color Rendering Index	Up to 100 < ±0.7	Up to 100 < ±0.7	Up to 100 < ±0.7	Up to 100 < ±0.7	Up to 100 < ±0.7	
Resolution, Standard	5 Degrees/Step (Auto-Detect)	5 Degrees/Step (Auto-Detect)	5 Degrees/Step (Auto-Detect)	5 Degrees/Step (Auto-Detect)	7.5 Degrees/Step (Auto-Detect)	7.5 Deg./Step (Auto-Detect)
Resolution, Highest	0.1 Degrees/Step (Auto-Detect)	0.1 Degrees/Step (Auto-Detect)	0.1 Degrees/Step (Auto-Detect)	0.1 Degrees/Step (Auto-Detect)	0.1 Degrees/Step	0.1 Degrees/Step
Number of c-planes	2 – 72 (max. 144) automatical	2 – 72 (max. 144) automatical	2 – 72 (max. 144)	2 – 72 (max. 144)	2 (standard) – 8 (manual)	2-8
Spectrometer Type	Ibsen Photonics FREEDOM	Ibsen Photonics FREEDOM	Ibsen Photonics FREEDOM	Ibsen Photonics FREEDOM	STS Ocean Optics	
Custom Viso	(High Sensitive Transmission Grating)	(High Sensitive Transmission Grating)	(High Sensitive Transm. Grating)	(High Sensitive Transm. Grating)		
Spectrometer Range	360 - 830 nm (1024 pixels)	200 - 850 nm (2048 pixels)	200 - 1100 nm (2048 pixels)	360 - 1100 nm (2048 pixels)		
Spectrometer Detector	Hamamatsu S11639-01	Hamamatsu S11639-01	Hamamatsu S11639-01	Hamamatsu S11639-01	Panavision ELIS-1024	
Calibration	Fully Calibrated Plug-and-Play Solution	Fully Calibrated Plug-and-Play Solution	Fully Calibrated Plug-and-Play	Fully Calibrated Plug-and-Play	Fully Calibrated Plug and Play	
Re-calibration	Every Two Years	Every Two Years	Every Two Years	Every Two Years	Every Two Years	

AROUND THE WORLD

The Viso measurement solutions are being used by hundreds of customers around the world. Below is reference to a few of our customers including their experience using the systems. You can read the full customer reviews on www.visosystems.com/review



Håkan Jordanson
Nokalux, Sweden

- LabSpion has reduced our measurement time significantly to an average of 8 minutes per fixture
- Before we paid €800 for a measurement at a external lab
- The quality of our lighting fixtures has increased as we can test faster



Stephan Meyer
Korona, Germany

- The use of LED technology required us to do much more measurements to maintain development schedules
- The LightSpion + Extender also made it possible for us develop solution of specialized high-end projects
- Before, it took two weeks to get a single measurement done by an external lab and would cost €650



Robert Francij
Molto Luce, Austria

- With LabSpion we are faster in the engineering phase, so we are able to bring the products to market more quickly
- We primarily use the system for measuring prototypes, i.e. efficiency of reflectors



John Cheung
Retc, Hong Kong

- BaseSpion and LabSpion allows us measure 50 lamps per week
- Viso help us to save time so we can focus on quality aspects
- The system was paid back in less than one year



Matt Samuel
LEDRA Brands, USA

- The LabSpion allows us to create our own IES files, that are published on our website
- Before we outsourced ALL of our photometric testing, which was a costly and time consuming process
- We use Viso daily to assist with product development



Daniel Silverstein
Liteline, Canada

- With the LabSpion we now measure more than a dozen fixtures per week
- Colour versus angle is very helpful and a unique feature
- Reduced cost from using external labs means the system was paid back in less than 1 year



Carlton Jones
Fraen, USA

- Since 2018, LabSpion has produced hundreds of accurate measurements for us
- The LabSpion just works. Durable, easy to use, accurate, and versatile
- We can design, prototype, test, tool, mold our complex plastic lenses and reflectors better, faster and cheaper.



Martin Nähr
Stella, Brazil

- The LabSpion makes it possible to quickly compare our products for both quality control and for competitive purposes
- Fast product comparisons have improved our sales process



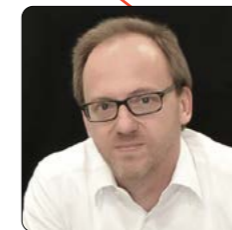
Daniel Mahdavi
Orluna, UK

- The LightSpion system saves us waiting 2-4 weeks for IES files from an external lab
- With our own system we can run thermal improvements, beam shape improvements, and LED selection
- R&D is faster and we are able to prototype accurately



Matthew Earnshaw
ACDC, UK

- With the LightSpion + Extender we can now turn around any measurement in few minutes
- Before we had to ship our fixtures and pay £300 per measurement
- The system was paid back in 1-2 weeks, due to quantity of measurements



Matteo Botner
Botlighting, Italy

- After developing an internal test facility, we have been much quicker and more effective in selecting materials and partners
- Customers appreciate that the company has the right instruments for R&D. This has improved our reputation in the market

CUSTOMER SUPPORT

Installation takes less than two hours and you will be able to use your equipment from day one. As you work more with light measurements, questions will probably arrive. Viso Systems take pride in assisting you as fast as possible.

GETTING FAST ANSWERS

- Call your local distributor
- Call Viso Systems' head office
- Send us an email - info@visosystems.com
- Check the online Viso Q&A section at www.visosystems.com/q
- Check the most up-to-date manuals at www.visosystems.com/support



CONTACT

Our worldwide network of partners will be able to support you with any questions you might have. We look forward to assisting you.

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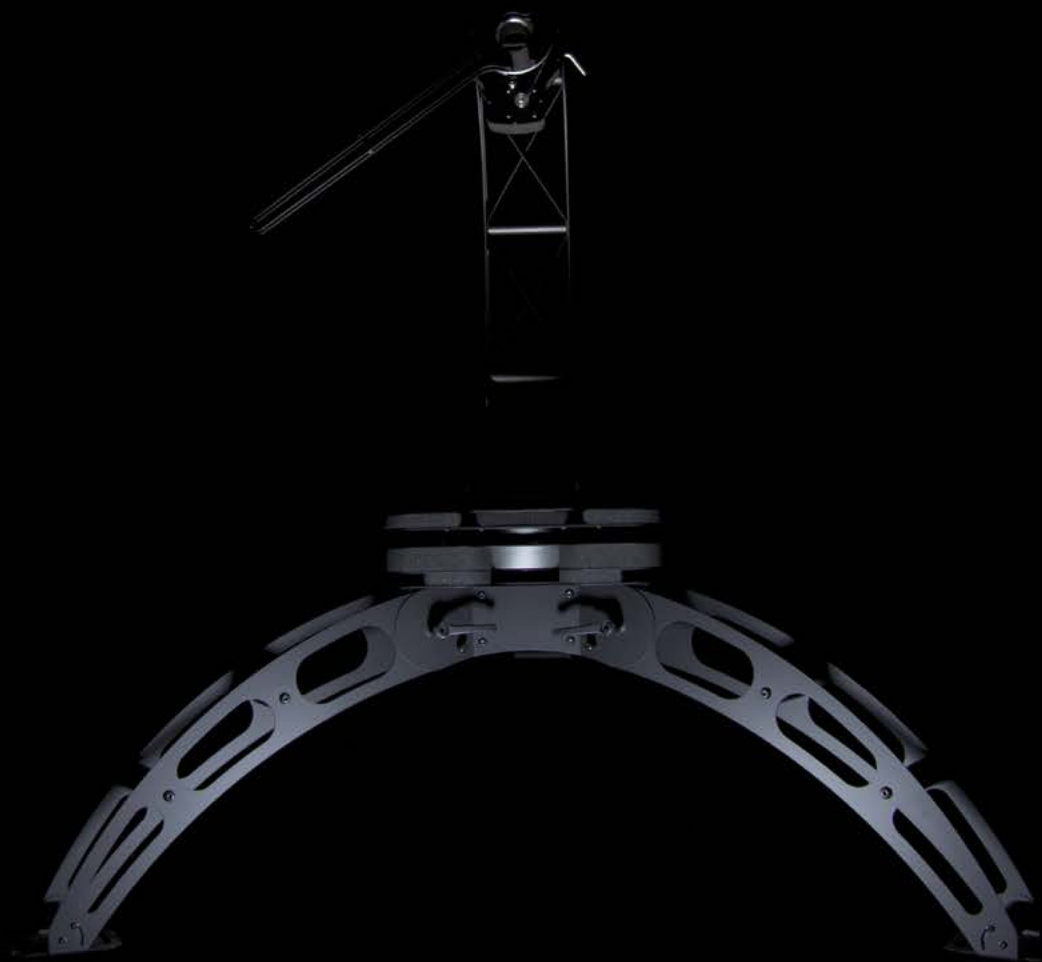
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