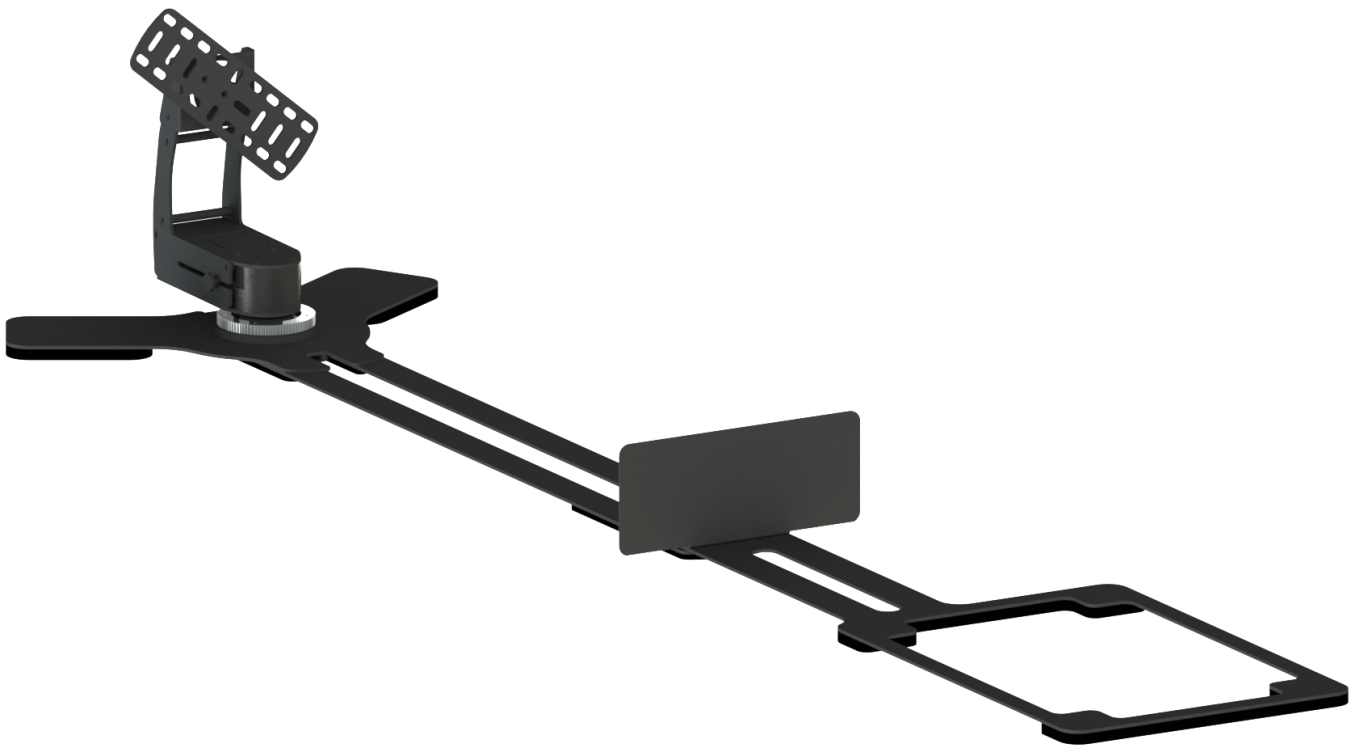


VISO SYSTEMS

LightSpion Extender

User Guide

Revision: 24-08-2022



Congratulations on purchasing your new Viso Systems LightSpion Extender. Before using this product, please read the Safety Information.

This manual contains descriptions and troubleshooting necessary to install and operate your new Viso Systems product. Please review this manual thoroughly to ensure proper installation and operation.

For news, Q&A and support at Viso Systems, visit our website at www.visosystems.com

Other manuals in this series for which the latest version can be downloaded from www.visosystem.com, include:

- LightSpion User manual
 - Light Inspector User Guide (Software)
-

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1. Safety Information

Warning! This product is not for household use.

Read this manual before installing and operating the LabSpion, follow the safety warnings listed below, and study all the cautions in the manual.

1.1. Preventing electric shocks



Make sure the power supply is always grounded.

Use a source of AC power that complies with the local building and electrical codes, that has both overload and ground-fault protection.

If the controller or the power supply are in any way damaged, defective, wet, or show signs of overheating, disconnect the power supply from the AC power and contact Viso Service for assistance.

Do not install or use the device outdoors. Do not spray with or immerse in water or any other liquid.

Do not remove any covers or attempt to repair the controller or the power supply. Refer any service to Viso.

2. Disposing of this Product



Viso Systems products are supplied in compliance with Directive 2012/19/EU on waste - electrical and electronic equipment (WEEE) together with the RoHS Directive 2011/65/EU with amendments 2015/863. Help preserve the environment! Ensure that this product is recycled at the end of its lifetime. Your supplier can give details of local arrangements for the disposal of Viso Systems products.

3. Introduction

About the LightSpion Extender

The LightSpion Extender expands the ability of LightSpion to measure the light sources with a diameter of up to 220mm. The device is easily connected to the previously installed LightSpion and gets detected by the Light Inspector software automatically.

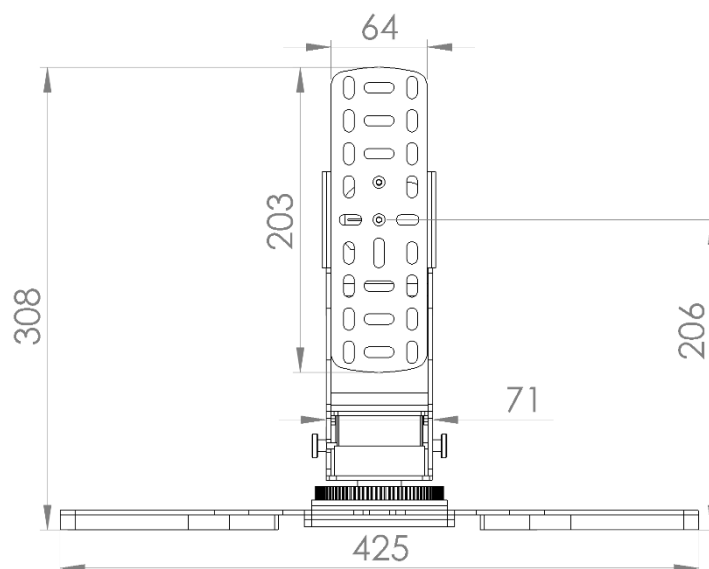
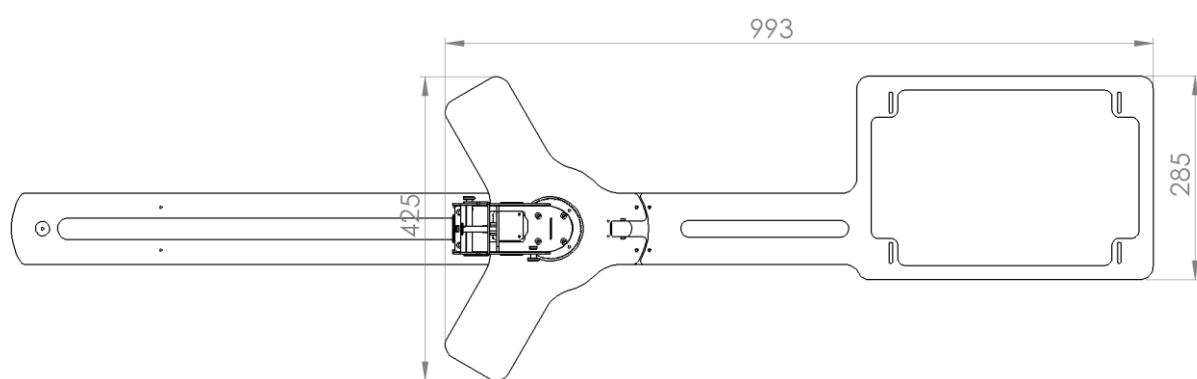
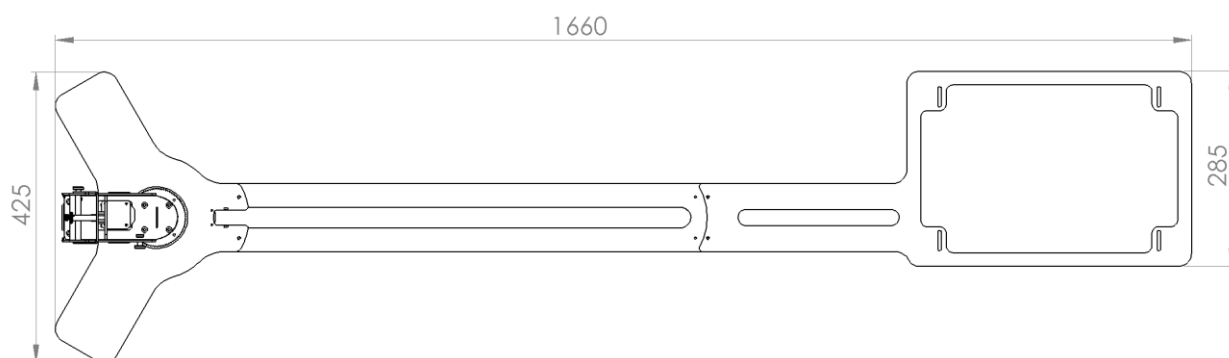
About this document

These guidelines describe the installation process of the LightSpion Extender and the alignment of light sources to be measured.

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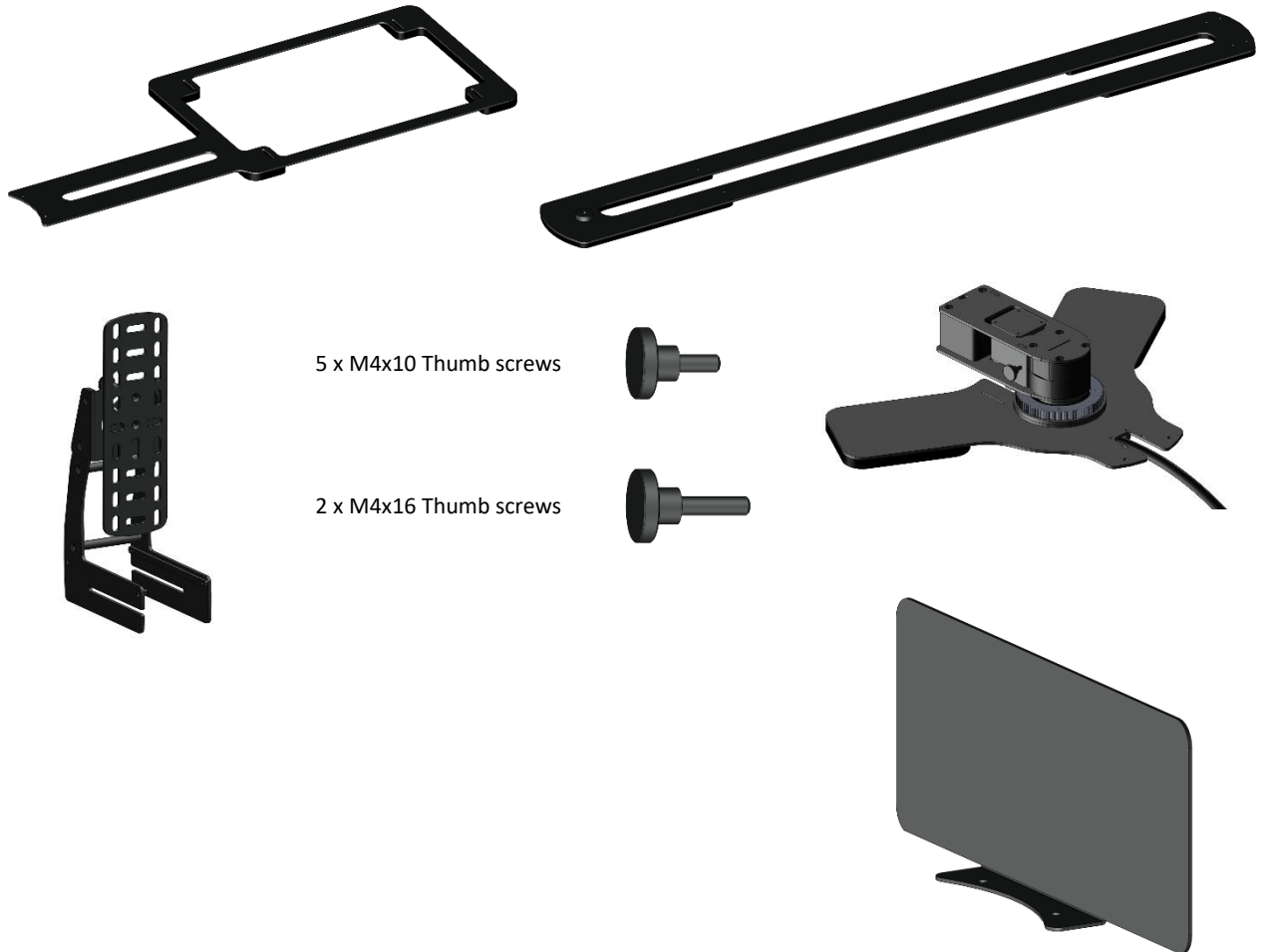
All rights reserved. No part of this manual may be reproduced, in any form or by any means, without permission in writing from Viso Systems ApS, Denmark. Information subject to change without notice. Viso Systems ApS and all affiliated companies disclaim liability for any injury, damage, direct or indirect loss, consequential or economic loss or any other loss occasioned by the use of, inability to use or reliance on the information contained in this manual.

4. Dimensions



5. Packaging and weight

5.1. Extender Package Content



- Case Plate
- Slider Plate
- Tower
- Base
- Straylight Plate /Slider plate
- 5 x M4x10 Thumb screws
- 2 x M4x16 Thumb screws

6. Shipping Packages

	Shipping packages	Shipping dimensions	CBM	Weight
1	Extender	106 x 35 x 22 cm	0.082	9 kg

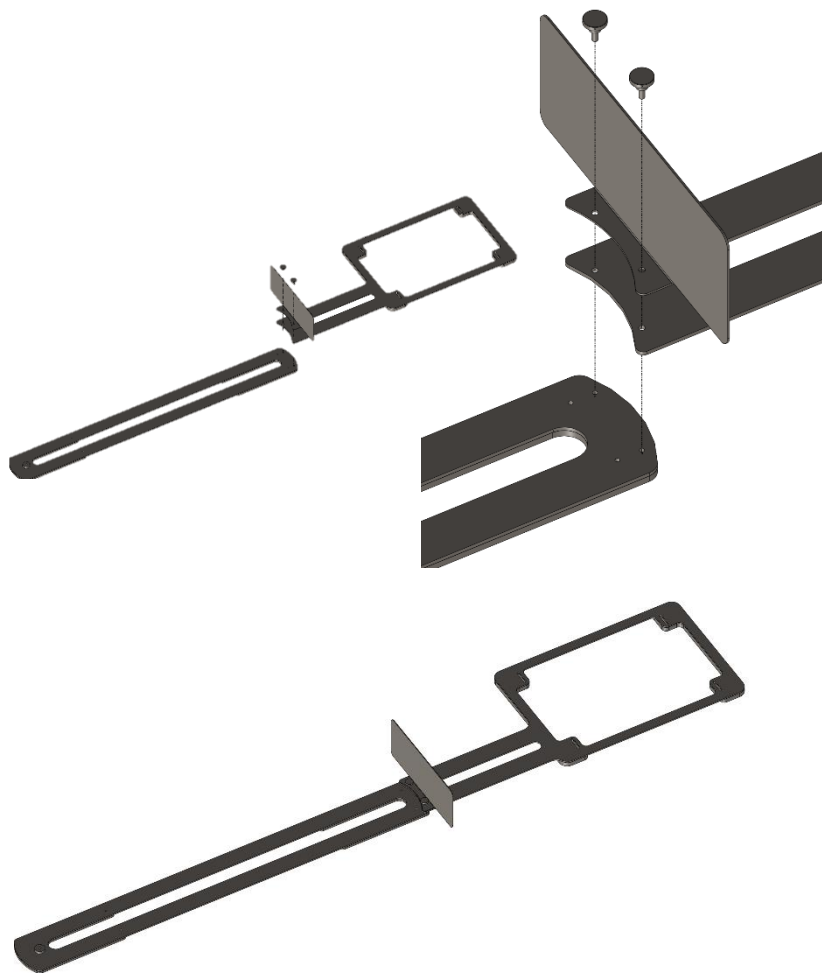
Total shipping weight: 9 kg.

The shipment is done in a total of 1 package

7. Installation

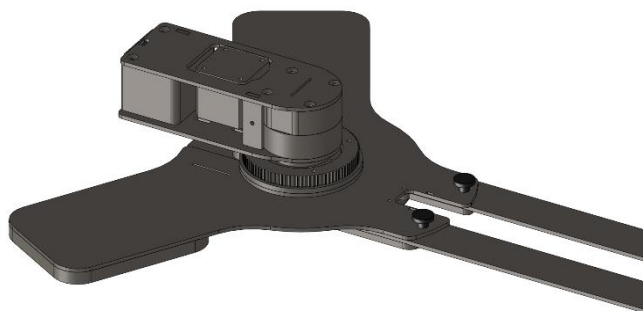
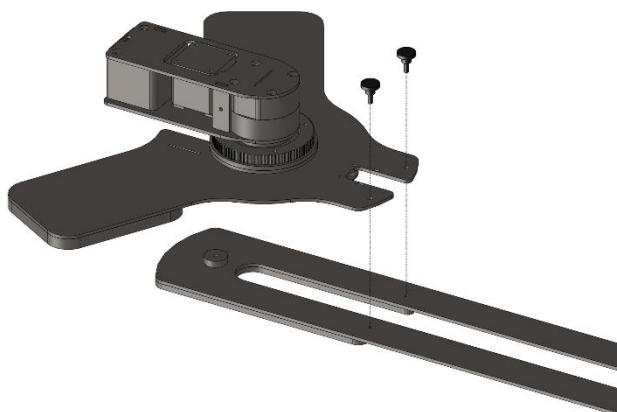
7.1. LightSpion Case Plate and Slider Plate

Assemble the Case Plate and Slider Plate with 2 x M4x10 thumb screws supplied with the Extender



7.2. Installing the Gonio Base

The Base is installed using the supplied 2 x M4x10 thumb screws. Slide the Base into the Slider plate and fix with the two screws.



Slide on the tower from the front



Mount the two M4x16 thumb screws for locking the Tower

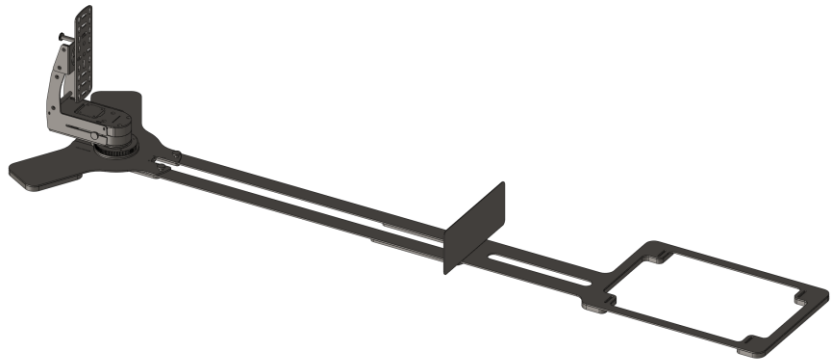


8. Configuration

The Extender Base can be set in two positions depending on the light source to measure.

Long configuration

The full goniometer-sensor length of 181 cm allows the measurements of light sources up to 220 mm in diameter



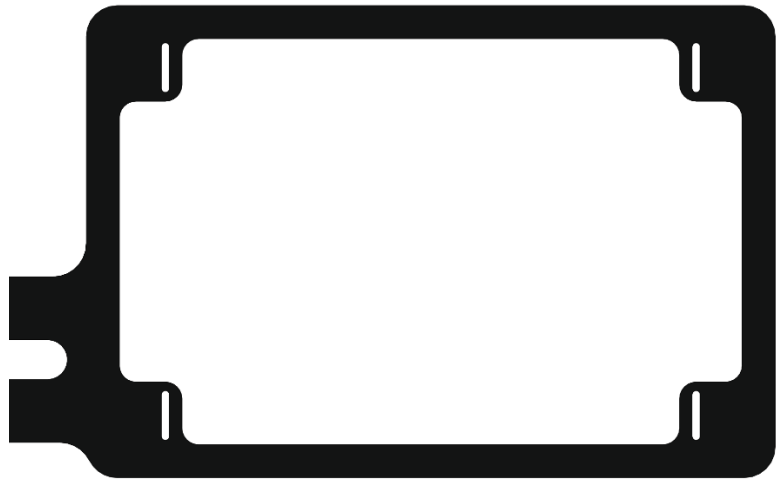
Short configuration

The reduced goniometer-sensor length of 114 cm allows the measurements of light sources up to 135 mm in diameter. This configuration can be useful when measuring smaller light sources and/or of low power, where a shorter distance will increase the sensitivity of the sensor. In this position you should remove the Straylight Plate.



LightSpion alignment

The Extender base plate comes with alignment points and a visual outline for the LightSpion ensuring that the LightSpion is fixed at the right location for accurate measurements.



The alignment points clicks into bottom of the LightSpion as shown below



9. Connecting the Extender

The extender is connected via unplugging the built-in goniometer and connecting the RJ45 of the Extender goniometer.

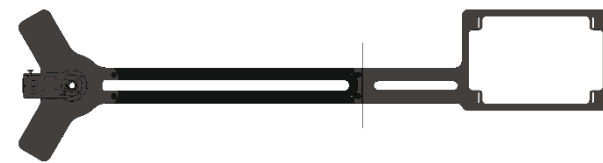
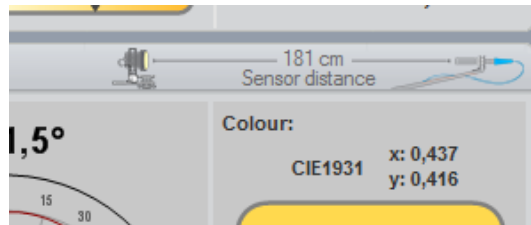
The power going to the built-in goniometer lamp holder must also be unplugged and connected to the Extender instead.

Always carefully depress the small plastic lock on the lower of the RJ45 plug before attempting to pull it out.

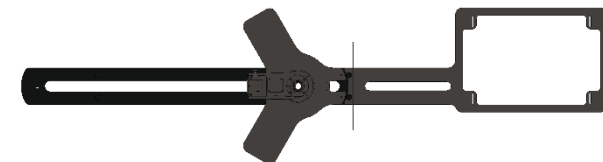
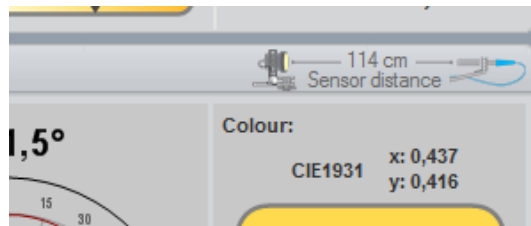


The Light Inspector software will automatically detect the Extender. Various configurations can be seen in the photometric window.

Long configuration:

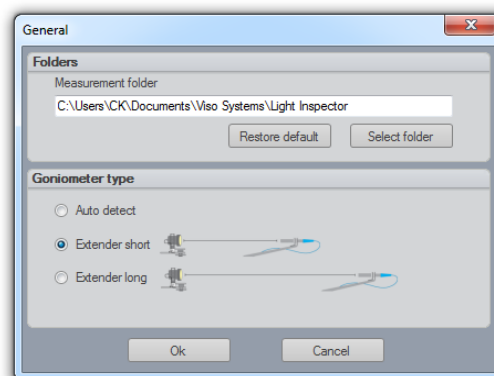


Short configuration:



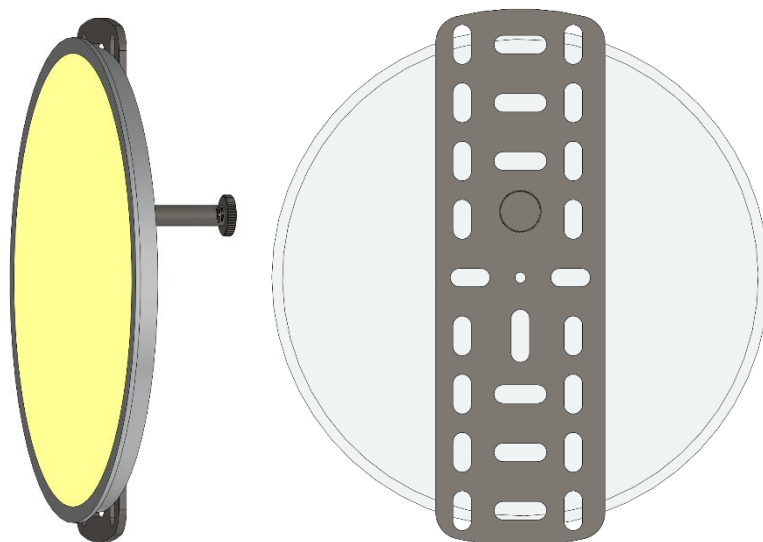
In case the system does not detect the Extender, it is possible to select it manually in:

Setup -> Options.



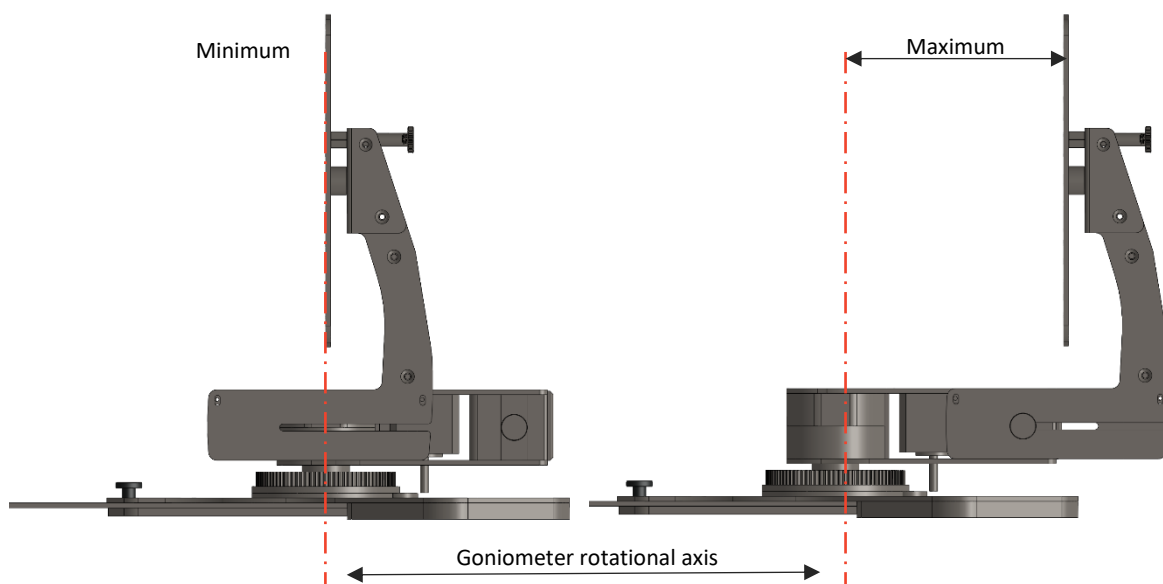
10. Mounting a Light Source

The lamp holder bracket can easily be removed from the goniometer, which allows you to take the bracket to a working table to attach the lamp. The vertical alignment of the light source is done automatically by the centered twin clamp holder.

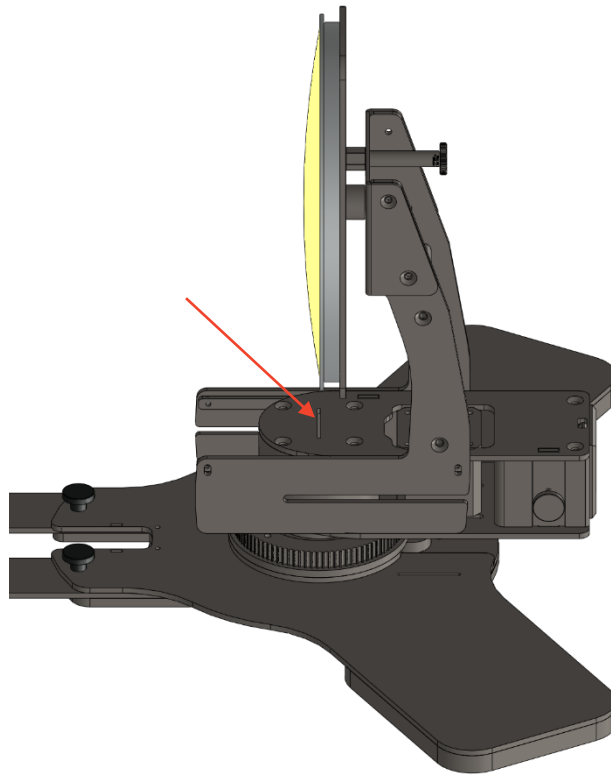


10.1. Light Source Alignment

The photometric center of the light source must be centered vertically on the rotation axis of the goniometer. This is done by sliding the Tower. Loosen the two thumb screws and slide the Tower to the wanted position. The Tower can be slid from 0 to 140 mm



The horizontal position of the light source should be placed in such a way so that the illuminating part is at the center of rotation, as shown below. The center of rotation is marked with a slit in the top plate.



Important: Failing to align the light source to the center of rotation can affect the accuracy of the peak intensity value and the beam angle.

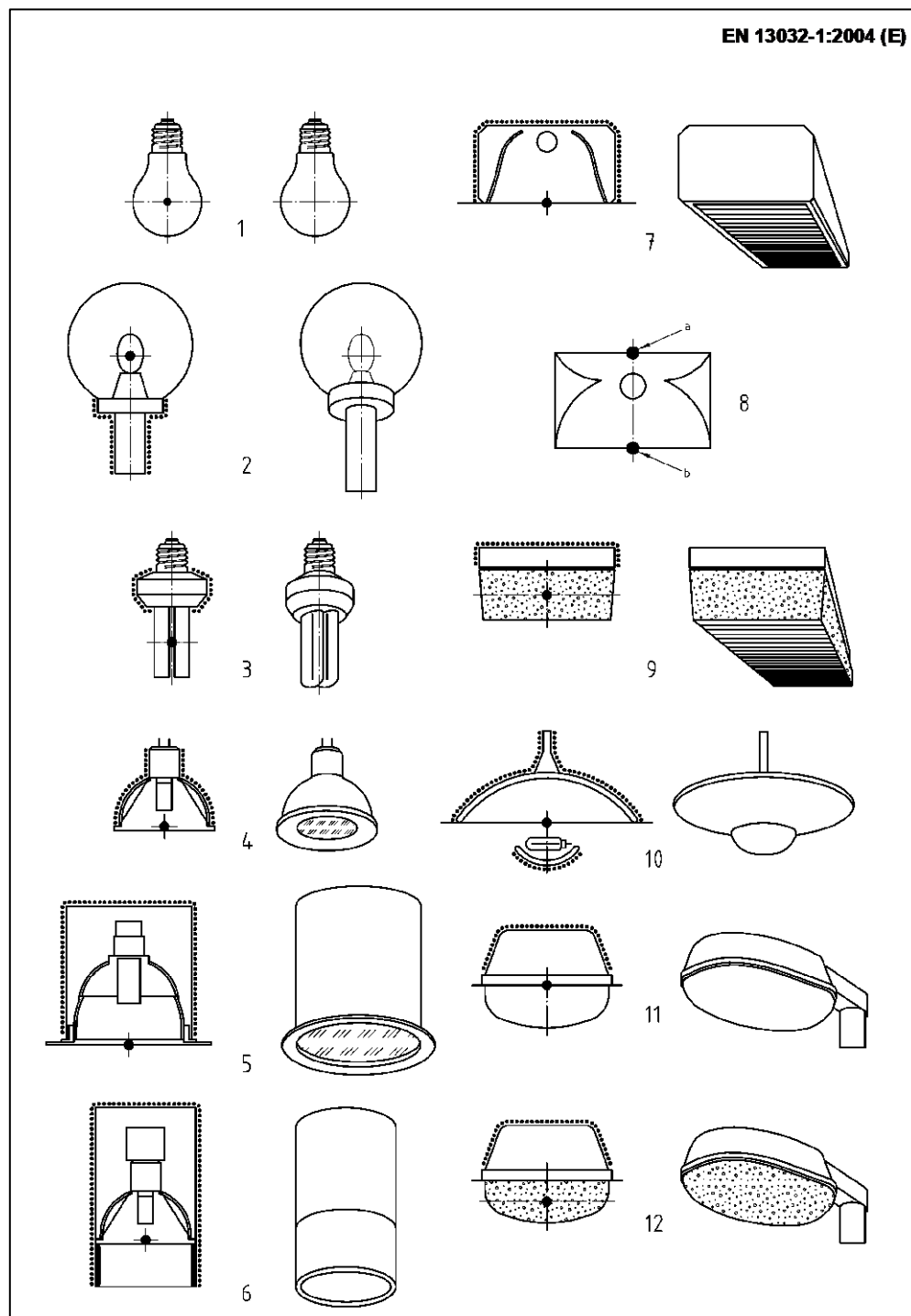
The flux value is minimally affected by the incorrect horizontal placement.

Guidance on how to establish the photometric center of a light source can be found in the next section.

11. Center of Light Sources

Photometric center

The black spot marks the photometric center of the different light sources. This photometric center is what should be aligned with center of rotation of the Base.



EN 13032-1:2004 (E)

Explanation of presentation

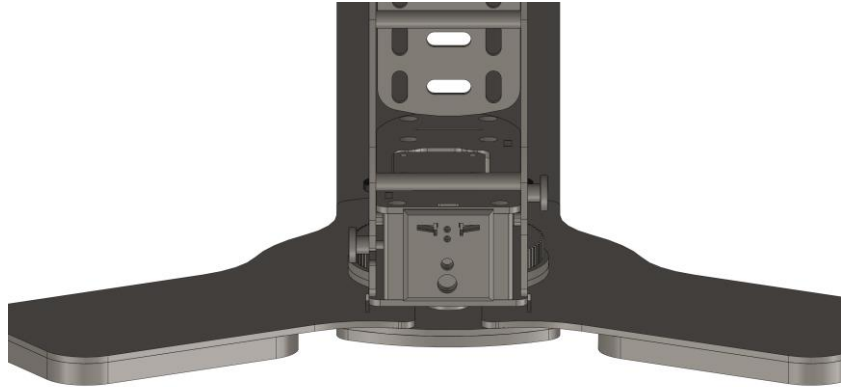
Presentation	Explanation
●	Photometric centre
—	opaque, substantially black
/// /// ///	opaque, dif use or specular ref ectant
••••••••	translucent, clear
••••••••••	compartment

Photometric centre of light sources

- 1) Incandescent lamp
- 2) With a clear cover
- 3) Compact fuorescent lamp
- 4) Ref ector lamp
- 5) Luminaire with ref ecting mirror
- 6) Luminaire with shield, substantially black
- 7) Luminaire with opaque sides
- 8) Direct-indirect luminaire
 - a) Luminant area 1 with photometric centre 1
 - b) Luminant area 2 with photometric centre 2
- 9) Luminaire with dif using/prismatic sides
- 10) Indirect luminaire with secondary ref ector
- 11) Outdoor luminaire with clear cover
- 12) Outdoor luminaire with dif using/prismatic cover

12. Light source connection

The measured light source is connected using an all-purpose power connector placed on the back of the goniometer base, as shown below.



13. Making measurements

The LightSpion Extender measurements are done in the exact same way as in the case of LightSpion.

Please refer to the LightSpion user manual for further details.

When measuring linear tubes, their width should not exceed half of the maximum diameter of light sources for the Extender, namely 220 cm. That means the maximum width of the tubes is 110 cm.

14. Stray Light Corrections

Sometimes when measuring specific light sources, you can observe reflections in the black surface of the extender plate, adding to the amount of light detected by the sensor. Such an example is shown in the picture to the right:

To avoid the unnecessary the false light /stray light, remember to use the Straylight Plate in the long configuration.

Also follow instructions in the Viso guidelines called: "Guidelines - Building a Lighting Laboratory"



15. Specifications

Physical dimensions

Shipping dimensions (L x W x H)	106 x 35 x 22 cm
Shipping Weight.....	9 kg
Dimensions (L x W x H)	166 (99) x 43 x 31 cm
Weight	7 kg
Sensor distance	114 and 181 cm
Light source diameter range	0 - 220 mm
Linear light source depth range	0 - 140 mm
Light source maximum weight	4 kg

Warranty

Warranty period	2 years
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Ordering information

LightSpion Extender	P/N EXLIGSP002
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At Viso Systems we design, develop and manufacture OEM- and customer-specific goniophotometer solutions. Our mission is to support customers with powerful and yet easy to use control measurements solutions. Products are developed and manufactured in Copenhagen, Denmark.



Light measurement made easy
