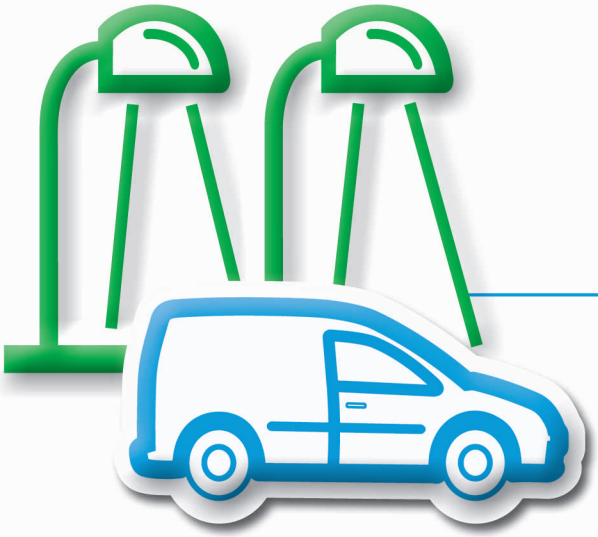

LX-GPS

ILLUMINANCE MEASUREMENT SYSTEM

Lux meter sensor with integrated GPS and a USB connection

Full case with up to 3 sensors and a USB port hub

Software for recording and analysing the measurements, with files that can be exported to GIS and 3D systems

The LX-GPS consists of 1 to 3 sensors for measuring illuminance, integrated GPS, a USB connection and Windows environment software that allows you to analyse the average illuminance and the uniformity of the street lighting.

When you place the LX-GPS sensors on any vehicle, in a single night you can quickly and efficiently take readings of the illuminance in large areas of lighting, including tunnels.

The management software allows you to analyse and compare the average illuminance from different areas of lighting or from the same area on different dates or during different hours. The data can also be exported to other programs so that it can be graphically displayed on Geographic Information Systems (GIS) or in 3D using Google Earth.

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The LX-GPS lux meter is designed to measure the illuminance of street lighting, with a curve similar to that of the human eye, thanks to its exclusive filters and diffuser.

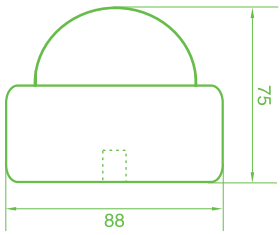
The integration of GPS on the LX-GPS lux meter enables synchronism between the position and the measurement, and also makes it possible for it to subsequently be displayed on georeferenced programs. It is also possible to take static measurements with readings at specific intervals.

The possibility of connecting and registering 3 LX-GPS sensors at the same time means that you can use a method similar to that contained in the national regulations and international guidelines and standards for measuring illuminance.

The LX-GPS software simplifies the task of recording the measurements from a vehicle, using a laptop with the Windows operating system. It also includes features for managing, analysing and comparing the measurements taken.

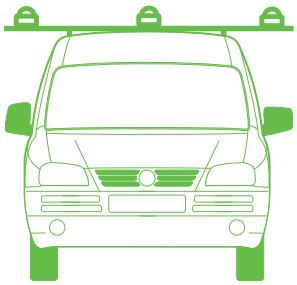
TECHNICAL SPECIFICATIONS

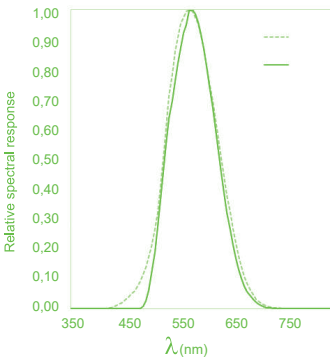
- Filter which responds similarly to the light sensitivity of the human eye.
- Diffuser to adapt the angular response of the sensor to the cosine curve α between -80º y 80º.
- Flat PN silicon photodiode in a hermetically sealed case especially designed for high precision linear applications.
- Measurement range of 0 - 50000 Lux.
- Automatic scale setting with a resolution of between 0.1 and 13.5 Lux.
- GPS position accuracy of 2.5m CEP and speed accuracy of 0.1m/second.
- Transparent and UV-stabilised PC-V0 polycarbonate dome
- Degree of protection: IP65.
- Dimensions 88 x 75mm and weight 170gr.
- The sensor is attached using a magnet and/or M6 screw (maximum depth 9mm).
- USB cable connection.
- USB power supply at 5 Vdc / 20 mA.
- Includes the initial calibration certificate.



FUNCTIONAL SPECIFICATIONS

- Automatically and simultaneously records and stores the illuminance measurements and positions of up to three probes.
- Displays the values measured as they are being recorded (position, speed, distance travelled, illuminance, GPS signal, etc.) with a graph of the illuminance.
- Alarm system and discontinuation of the measurements due to excessive speed, low speed or the loss of the GPS signal.
- Range of measurements up to 50,000 lux, for daytime readings of glare in tunnels.
- Interpolation of position measurements in areas without a GPS signal, for example in tunnels.
- Recording of measurements without a GPS position, at programmable intervals of between 1s and 900s.
- Recording of comments with the computer's microphone.
- Management of the measurements through tasks and projects that define the characteristics of the zone being studied, including the option to import and export files, to work on them on different computers.
- Viewing and editing of the measurements with the following features:
  - Average, maximum and minimum illuminance values.
  - Average and extreme uniformity values.
  - Illuminance-distance bar graph, for each probe's values, for all of the probes or for the average value of the sensors.
  - Measurement uniformity control tools, tools for dumping and cropping areas.
  - A feature that allows you to create different measurement files from the original file.
  - Editor for the comments recorded with the microphone, on the tables and graphs.
  - Direct comparison of two measurement files with inset graphs.
  - Average distance between measurements of 2 metres.
- Create customisable and exportable files, in PDF or RTF format.
- Create a file in the KMZ format, with each point being displayed with a height that is proportional to its illuminance value and with a colour that identifies the value's range.
- Export measurements to DXF or SHP files, in UTM coordinates or decimal degrees.





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Cód. CBI52500113120 3-0

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