

ECODYN 3 : DAYTIME AND NIGHT VISIBILITY OF ROAD MARKINGS

Continuous and dynamic measurement of road marking performance (Retroreflection - RL)



EN 1436

Device qualified mlpc®

Description

The first mobile retro-reflectometer capable of measuring two lines simultaneously at traffic speed.

Road markings guide and secure road users, especially at night. Subjected to traffic and climate, markings become less visible. In order to maintain an accessible and legible road for drivers and vehicle assistance systems, road managers must ensure that road markings are regularly maintained.

Ecodyn 3 allows to evaluate objectively and accurately the quality of longitudinal road markings (center lines, edge lines), according to the EN 1436 standard. It is capable of measuring (by day or night) the night visibility of road markings (retro-reflection RL). It thus provides the necessary information to program preventive renewal campaigns, to control the quality of the implementation of marking products and to follow their evolution over time.

Ecodyn, the first device capable of measuring dynamically the retro-reflection of markings, has been widely distributed throughout the world. Ecodyn was the successor of the ECOLUX, the first portable reflectometer capable of measuring the retro-reflection of markings in static.

In keeping with this heritage of technical excellence and innovation, the third generation Ecodyn 3 is the first in the world to offer LED lighting technologies and to allow the simultaneous measurement of two marking lines (axis + edges).



Highlights

Security

- The device is more compact than previous generations.
- Installation as close as possible to the vehicle.
- Wide measurement field for easy operation in single-or dual-band mode.
- The measurement is continuous and can be carried out from 0 to 130Km/h without data loss.

Productivity

- Data acquisition carried out at traffic speed using one or two simultaneous heads: halves the costs of personnel, fuel and vehicle use compared to other lateral systems.
- Simplified human-machine interface with event keyboard to lighten the workload of the device operator.

Metrological quality

- mlpc® qualification: developed in partnership with the UGE (formerly LCPC) and CEREMA, Ecodyn 3 has been metrologically qualified, which attests to its compliance with the requirements of standard EN 1436.
- Integrated architecture of the measuring head (LED, optical fibres, filtering, detection, digital electronics, computer network...) facilitating the metrological integrity of the data.
- For each device, the national verification centre ensures an accurate and connected calibration.

Durability

- LED technology significantly reducing power constraints and increasing measurement stability.
- Vehicle integration (anchoring, connectivity) maximising operational reliability.



Features

Standards/details	
Standard	EN 1436 (geometry: 30 metres)
Number of measuring heads	1 to 2 detachable heads
Number of markings measured at the same time	up to two markings, four lines (two left, two right)
Acquire	continuous at more than 130 Km/h
Metrological features	
Lighting angle	1.24°
Viewing angle	2.29°
Average distance of illumination	6 m
Surveyed area	1 m x 40 cm per head
Mechanical/electrical features	
Carrier vehicle	Van, estate, utility or SUV (consult us)
Measuring cabinet	L = 0,55 m ; l = 0,16 m ; h = 0,28 m
Power supply	12V vehicle battery
Light source	Diodes LED's Light-emitting diodes, life span: approx. 50,000 h
Software for acquisition and processing	
Survey campaign management	<ul style="list-style-type: none"> • By road/section/markings • By progress status • By distance travelled
Procurement management	Selection of country roads, selection of markings
Treatment management	Measurement report management, parameterisation, issuance of test results and test reports, various possibilities of setup, export to Excel, PDF or KML
Advanced Treatment	Complete access to raw data

Standard equipment

The basic system includes :

- A stand-alone measuring head, measuring the quality of the marking and also integrating temperature and humidity measurement and GPS positioning.
- A connection rack
- An odometer for synchronisation and distance measurement
- A cell for measuring the ambient brightness
- A bar graph unit for driving assistance
- An environmental camera HD
- An accessory case containing tools, spare sightglasses and reference plates for checking the instrument,
- Equipment transport case
- Mechanical elements for integration on the vehicle.

Accessories and options

Optional :

- Second measuring head for two sides measurement (axis+edge)
- A set of two protective windows
- Additional spare measuring head
- Auxiliary GPS with or without inertial system
- Spare cables

