

# QD30 Reflectometer

Precise measurement of the daylight visibility (Qd) of road markings and road surfaces according to CEN specifications



## Other features:

- Easy to operate
- Measurements in full daylight
- Measures plane, glossy, textured and profiled markings (up to ~ 4 mm profile height)
- Stray light compensated
- Illumination level compensated
- RS232 serial interface for data output, extended control, calibration and diagnostics
- Rechargeable battery
- Built-in thermal printer
- Carrying case
- Independently traceable calibration standard
- Built-in average function
- Battery capacity ~ 1000 measurements

The QD30 Reflectometer is a portable instrument for precision measurement of the reflection of road surfaces and road markings as seen by drivers of vehicles in daylight or under road lighting.

The QD30 measures the luminance coefficient under diffuse illumination (Qd) according to EN 1436 with direct read out in  $\text{mcd}\cdot\text{m}^{-2}\cdot\text{lx}^{-1}$ .

The automatic straylight and illumination level corrections ensure precise measurement of

all types of surfaces. Built-in printer and memory, provide registration of measurement results and supplementary data for documentation purposes.

The calibration standard supplied with the QD30 is traceable to an accredited national standards laboratory. Calibration to an independently traceable standard is your assurance for reliable measurements.

# QD30 Reflectometer

Specifications in agreement with EN 1436



## Optical specifications

|   |                          |
|---|--------------------------|
| Field of measurement:                           |                          |
| width   | 45 mm / 1.8 inch         |
| length  | 175 mm / 6.9 inch        |
| Illumination:                                   | diffuse according to CEN |
| Observation angle to the road:                  | 2.29°                    |
| Aperture angle:                                 | 0.33°                    |
| Equivalent observation distance:                | 30 m                     |
| Range (mcd·m <sup>-2</sup> ·lx <sup>-1</sup> ): | 0 – 318                  |

## Instrument dimensions

|                        |                    |
|------------------------|--------------------|
| Length:                | 630 mm / 24.8 inch |
| Width:                 | 450 mm / 17.7 inch |
| Height:                | 470 mm / 18.5 inch |
| Weight:                | 11.5 kg / 25 lbs   |
| Gross weight, approx.: | 30 kg / 66 lbs     |

## Electrical characteristics

|                   |   |
|-------------------|---|
| EMC:              | EN50081-1/EN50082-1                               |
| Power supply:     | internal 12 V, 3.5 Ah<br>sealed lead-acid battery |
| External charger: | 100 – 240 V AC / 50 – 60Hz                        |
| Data memory:      | ~ 1000 measurements                               |
| Data retention:   | typ. 5 years                                      |
| Interface:        | RS232   |

## Environmental specification

|              |                                  |
|--------------|----------------------------------|
| Temperature: |                                  |
| operating    | 0°C to + 45°C<br>32°F to 113°F   |
| storage*     | ÷ 15°C to + 55°C<br>5°F to 131°F |
|              | *(Battery must be fully charged) |
| Humidity:    | non condensing                   |

## Standard delivery

|                                  |
|----------------------------------|
| QD30                             |
| Carrying case                    |
| Reflection Standard – calibrated |
| Battery charger                  |
| Quick guide                      |
| User manual                      |

## Options

|                         |
|-------------------------|
| Calibration certificate |
| Calibration service     |

## Technical references

|   |
|---|
| Mean luminance coefficient in diffuse illumination, Qd for road surfaces and road markings. Laboratory tests. Light & Optics No. 21 |
| BAST – Test report of the lighting engineering part characteristics of the QD30 Reflectometer, Test No. 4594                        |
| EN 1436:1997 - Road marking materials – Road marking performance for road users.  |

*The information contained in this document is subject to change without notice.*

To obtain more information please contact:

**DELTA**  
Light & Optics  
Hjortekærsvej 99  
DK 2800 Kgs. Lyngby  
DENMARK

Phone: +45 45 88 83 33  
Fax: +45 45 87 08 10  
E-mail: [opelec@delta.dk](mailto:opelec@delta.dk)  
Internet: [www.delta.dk](http://www.delta.dk)

Distributor: