



LTL-X Mark II Retroreflectometer



ENNIS-FLINT
The Mark of Traffic Safety®



THE LTL-X Mark II Retroreflectometer

The Reference Instrument for Qualification and Asset Management of Pavement Markings

Government agencies recognize the challenges in trying to objectively evaluate pavement markings for nighttime visibility and color. Many agencies have set numerical standards and implemented performance-based safety management programs to help reduce accidents, save money, and provide valuable data for asset utilization and reporting requirements for transportation funding. Likewise, in-service performance and economy can be improved when maintenance decisions are based on a qualitative measurement program and not on fixed replacement intervals. The DELTA LTL-X Mark II retroreflectometer is the recognized industry standard and the first choice for governmental agencies and

testing facilities for the fast, accurate, and reliable measurement of the nighttime visibility of pavement markings.

Following years of extensive research, the FHWA is proposing recommended minimum levels for pavement marking retroreflectivity to meet drivers' nighttime visibility needs.



The LTL-X Mark II is an important component to properly measure and verify data when implementing any of the proposed maintenance methods. DELTA instruments are repeatable, reproducible and traceable to a NIST national standard through an ISO 17025-certified testing and calibration laboratory.

As the exclusive distributor of the DELTA LTL-X Mark II pavement marking retroreflectometers in the United States, Canada and Mexico, Ennis-Flint is helping customers objectively monitor the optical performance of today's traffic control pavement markings.

Annual Maintenance Inspection Program

Through Ennis-Flint's Annual Maintenance Inspection Program, factory trained and authorized personnel provide a thorough annual maintenance inspection to keep each DELTA instrument operating at optimum performance. Ennis-Flint technicians thoroughly check, adjust and/or repair any aspect of the instrument which fails to meet the high quality standards set by DELTA during the original manufacturing process.

Calibration Standards

LTL-X Mark II instruments are calibrated at DELTA's DANAK-accredited laboratory and are traceable in accordance with standards issued by PTB (Physikalisch-Technische Bundesanstalt, Germany) and NIST (National Institute of Standards and Technology, USA). A certificate of conformance and traceability is supplied with each instrument.

LTL-X Mark II FEATURES SUMMARY

- Portable self-contained instrument with retractable handle
- Clearly visible color LED screen with acoustic signals to guide user
- Sturdy, ergonomic design for single hand operation
- Fast measurement time of 1 second
- One-step calibration procedure
- Instrument calibration standards traceable and accredited to NIST
- Measure wet and dry surfaces
- Built-in WAAS GPS and printer; can print instantly if needed
- Multiple languages and error detection
- Auto color correction without recalibrating
- Measurement averaging (fixed or moving)
- Interactive ID labeling: series, user and marking type
- Measure profiled markings (up to 15 mm in height)
- Measure wet markings in accordance with ASTM E 2832, ASTM E 2177 and ASTM E 1710 (RL)
- Wet timer to facilitate measuring wet markings
- LTL-XL RSC Software interface allows data to be downloaded to inventory program
- Data storage: Memory capacity of 200,000 measurements (typically 2500/battery charge), recording of temperature and relative humidity
- Built in 12 volt / 4.5 Ah Hi-Power battery; Charging time: Approx. 3 hour 30 min.
- Removable wheels



Adjustable Handle



Wheels



WAAS GPS



Printer