



# Kansas LTAP Fact Sheet

A Service of The University of Kansas Transportation Center for Road & Bridge Agencies

## Should You Buy a Retroreflector?

By Matthew Barnett



### Where to Buy One

An easy way to buy a retroreflector would be to announce a request for bid. Or you can purchase one directly from an online source.

Tom Mulinazzi suggests:

- Advanced Retro Technology ([www.roadvista.com](http://www.roadvista.com))
- Mechatronic ([http://www.mechatronic-traffic.de/en/traffic\\_indexen.html](http://www.mechatronic-traffic.de/en/traffic_indexen.html))
- Professional Pavement Products (<http://www.pppcatalog.com>)

The FHWA mentions these models:

- Delta Retrosign GR3 ([www.tapcostore.com](http://www.tapcostore.com))
- Road Vista 922 ([www.roadvista.com](http://www.roadvista.com))

Have you thought about purchasing a retroreflector? A retroreflector is an instrument capable of measuring the light reflecting properties of signs accurately and reliably. They come in a variety of types and sizes.

Why buy one? Using a retroreflector is an accurate way of measuring a sign's retroreflectivity level during the daylight hours. It is a good method for the day-to-day finding of signs that don't meet the minimum level of retroreflectivity in federal standards. Some local agencies are using a retroreflector as a back-up to other methods for assuring their signs meet those standards.

### Pros and cons

The advantages of using a retroreflector are: 1) it removes subjectivity and 2) it is the most direct means of monitoring retroreflectivity.

Unfortunately, the drawbacks are the cost of the instrument (over \$10,000) and the time involved in taking the readings. Also, relying strictly

on a retroreflector may result in neglecting other aspects of whether a sign should be replaced, such as overall legibility and visual clutter or glare.

### Durability and maintenance

Retroreflectors are expensive and sensitive, so it's important to take care of them. The manual for a 920 SEL by Mechatronics recommends that parts be replaced by the manufacturer or authorized dealer, the carrying case be used at all times for optimum protection, and the retroreflector be stored indoors in a dry place between 32–95 degrees Fahrenheit. When cleaning the lens, it suggests a cloth suitable for optic lenses be used, as scratching the glass could change measurement accuracy.

### Sources:

- "New MUTCD Sign Retroreflectivity Requirements" U.S. DOT and FHWA Brochure. [www.fhwa.dot.gov/retro](http://www.fhwa.dot.gov/retro)
- "Guidelines for Conducting Retroreflective Measurements of Traffic Signs." FHWA. [http://safety.fhwa.dot.gov/roadway\\_dept/night\\_visib/retrotoolkit/pdfs/measurement.pdf](http://safety.fhwa.dot.gov/roadway_dept/night_visib/retrotoolkit/pdfs/measurement.pdf)
- Interview with Tom Mulinazzi, May 4, 2010.
- "Sign Retroreflectivity Toolkit." FHWA 2009. DVD.

Tom Mulinazzi of Kansas LTAP recommends that one person be in charge of the retroreflector at a time. "When you let a bunch of people use it, it's more liable to be broken. It's a highly sensitive instrument," he said.

Do you need one? The short answer: no. There are other ways to meet the federal standards. But if your local government has a lot of signs (and potential for sign-related lawsuits), it may be a good idea to use a retroreflector as a back-up.

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