

Optical sensors Sweden AB



ROAD EYE SENSOR

Model: Road SD Mk2

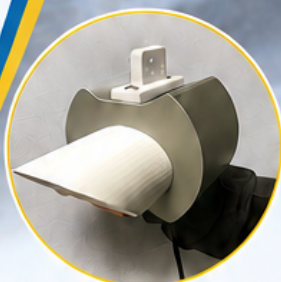
Road Eye Sensor is designed by **Dr. Sten Löfving**. This sensor is a patented (Pat number **SE 531949C2**) contactless sensor concept for monitoring the road surface. The information from the sensor can for instance be used for warning a driver for low friction when there is ice on the road. The measuring principle is spectral analysis of backscattered laser radiation from the road surface using two lasers at IR wavelengths where the radiation is absorbed by ice and water.



**DUAL IR LASER
TECHNOLOGY**



**CONTACTLESS
MEASUREMENT**

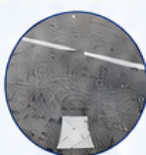


TWO VERSIONS FOR EVERY NEED

- **Road Eye Short Distance (SD)**
– to be mounted on vehicles
- **Road Eye Long Distance (LD)**
– to be mounted at roadside

Both SD and LD sensors are able to identify important road conditions like:

DETECTS IMPORTANT ROAD CONDITIONS



DRY ROAD

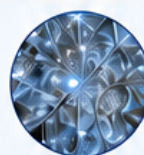
(Most important to identify – associated with the best friction)



MOISTURE ON ROAD



WET ROAD



CLEAR ICE

(Ice without air bubbles – very dangerous)



ICE / PACKED SNOW

SD

ABOUT THE SHORT DISTANCE MODEL SD

The range of the SD sensor is up to about 2 meters and the update time is about 60 ms which can be converted to a distance much shorter than the length of a car for all possible speeds on public roads.

The Road eye SD sensor has been used in a lot of projects at LTU. The SD type has been investigated in big road research projects like the IVSS projects www.ivss.se. The SD model has been tested by car manufacturers and suppliers.

SPECIFICATIONS OF MODEL SD



Dimensions of the casing except for the protecting tube: about 50 × 50 mm



Length of the protecting tube: 250 mm



Supply voltage: 8 – 15 Volt DC



Current consumption: about 50 mA



Temperature range: -20 to +40 °C



Housing: Anodized aluminum, openings sealed with O-rings



APPLICATIONS



Road & rail tunnels
Small airports & helipads
Remote weather monitoring stations
Environmental field sites
Mobile weather monitoring vehicles



PATENT PROTECTION

The invention is today protected by two active Swedish patents, SE521094C2 and SE531949C2.

In the present design there are probably "new" patentable characteristic.



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Represented by:



* Drawing & specifications are subjected to change at any time without prior notice as per manufacturing.

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