



Light pollution and straylight monitoring

Light pollution is a delicate issue in highly populated areas. Such as in large cities and industrial areas. Light pollution can have a significant impact on life, the life of animals can be strongly affected in correlation with a change of the diurnal cycle. If light washes out the darkness, feeding and reproduction of certain species can be troubled. A lot of research has been conducted to understand the interaction between light pollution and its impact on life.

To be able to quantify the amount of light pollution, the illuminance measurements with the ML-020S can be performed to define the variability of the diurnal cycle. The MS-020S-O and ML-020S-I illuminance sensors are both all-weather sensors which feature customized detector sensitivities for either indoor low light level or outdoors high light level applications. The built-in interference filter in conjunction with the detectors spectral response reproduces the CIE photopic curve and gives a calibrated output in lux (lx).

HOW-TO Application Guide

1

Each sensor is designed and calibrated to measure the vertical component of an incident light to the sensing plane. When the sensor is used to measure the light from the sky hemisphere, set the sensor horizontally. For other applications, the sensor can be set the inclined position.

2

When the sensor is configured horizontally, the levelling plate enables easy setting of the sensor. You can adjust the flat level of the sensor by rotating the level adjusting screws to guide the bubble of the spirit level centered.

3

To obtain each physical value from the output of the sensor, calculate the following equation.

$$Q = E / K$$

Q: Physical value

E: Output voltage from the sensor

K: Sensitivity