



# FD-D8R SCI/SCE Color Inspection System



## Color Measurements in Challenging Environments

The FD-D8R is a robust, non-contact, real-time spectrophotometer designed for use in industrial applications. Its novel, compact design allows measurement of color with both the specular component included and excluded using diffuse illumination and an 8° measurement angle, without the need to be tethered to optical fibers.

The system rapidly measures color adhering to international standards with results that correlate highly to quality control laboratory systems. Its fast cycle time enables throughputs of hundreds of thousands of parts per day.



## At a Glance

**Measurement geometry:** Diffuse/8°, SCI (specular component included) and SCE (specular component excluded), conforms to CIE No. 15

**Integrating sphere size:** Ø 50 mm

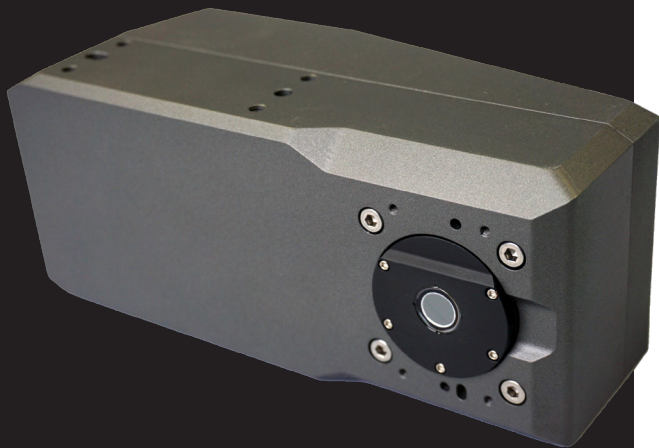
**Wavelength range:** 400-700 nm

**Measurement distance:** 1.0 mm – 2.0 mm

**Measurement/Illumination area:** 2 x 2 mm measurement/ Ø 50 mm illumination (customization available)

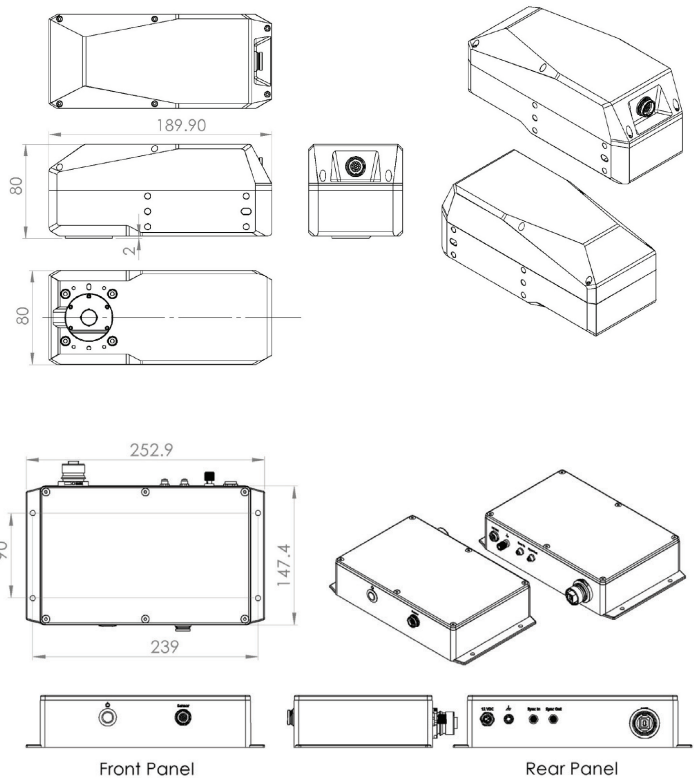
**Measurement cycle time:** <200 milliseconds

**Client/Server TCP/IP:** Via USB 2.0



## FD-D8R System Overview

At the core of the FD-D8R is the integration of illumination optics and measurement sensors into a compact assembly. Its ability to make non-contact measurements is made possible with a fully sealed and chemical resistant case with a cleanable/replaceable sapphire window, which protects the integrating sphere and internal optics from contaminants. Reflectance is measured in the visible range of 400-700 nm and provides CIE color coordinates for your choice of illuminant.



## Factory Integration

The FD-D8R design allows the unit to be integrated in a variety of ways into industrial positioning systems, robots, laser distance sensors and more. This allows the sensor to measure small or hard-to-reach parts with geometrically complex shapes in challenging environments, connecting to a control module with a single, high flex electrical cable.