

LS3 — Light State Sensor System

**For various materials used in the infrastructure industry
If you insert an optical fiber,**

resin material

glass material

surface water

bubbles

objects of different colors

concrete

wood

steel material

ground material

injection agent

Groundwater

Other general construction materials

Where these events are occurring,

move

break

cloudy

precipitate

flowing

seep into

change color

disappear

rust

Rot

get clogged

others

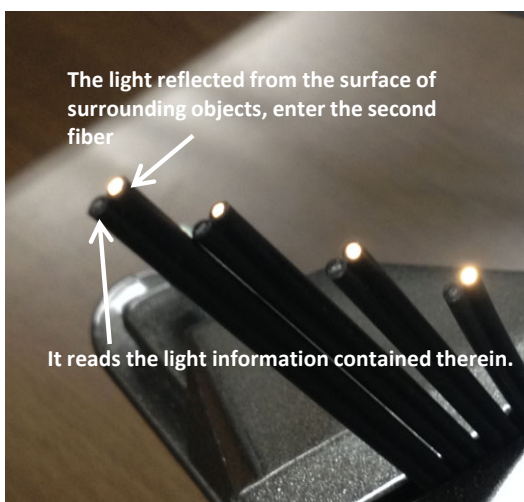
**From the fiber tip, you can obtain
"beneficial light information".**

The characteristics of reflected and transmitted light intensities of the three primary colors (Red, Green, and Blue) change.

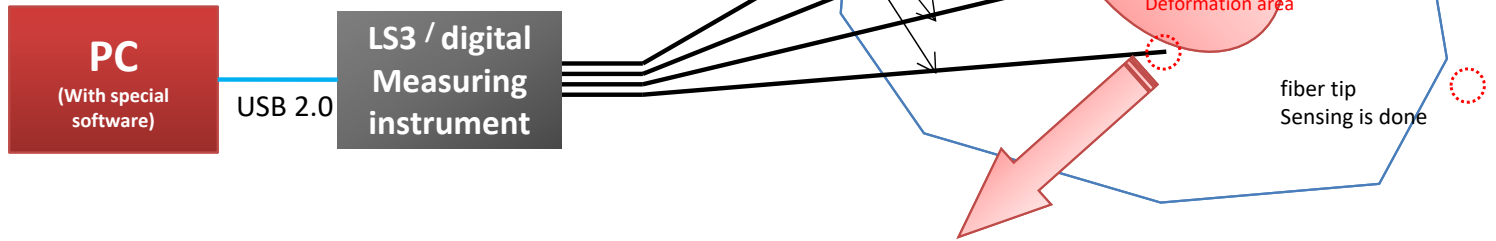
The change in brightness
what it means

color change
what it means

Rather than collecting "light information" from multiple locations and "accurately determining the absolute value" of a specific physical quantity, we can recognize that "something is happening there" and monitor its changes over time. This can be used to improve safety and security.

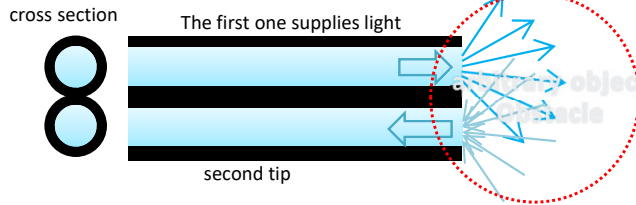


LS3 / digital measurement system



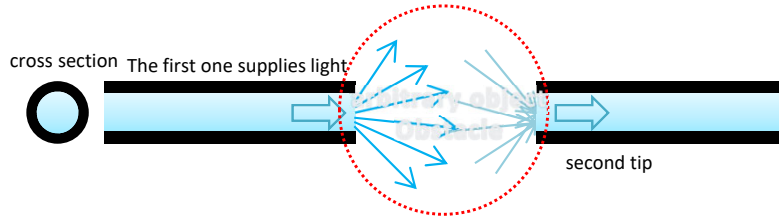
The fiber tip can be designed to have the optimal shape depending on the purpose.

The light emitted from the tip of the first fiber is reflected by the surrounding object surface and enters the second fiber. This light is collected as valuable "optical information" that reflects the changes occurring in a very small area at the fiber tip.



Twin fiber method

The light emitted from the tip of the first fiber is reflected by the surface of the surrounding object, passes through the gap, and enters the second fiber



Gap method

LS³/digital measuring instrument specifications



Includes measurement software (provided on Integrated with built-in

Number of measurement points	4ch, 8ch
Measurement method	Light irradiation type RGB intensity detection method
LED light source	white LED
light output	1W / ch or less
light detection	Detect
Compatible fiber	2 core plastic fiber (Optical fiber diameter 1mm)
optical connector	Dedicated connector
Measurement cycle	Maximum 1 second (can be set in 1 second increments)
Data output IF for	USB (TYPE MiniB)
Data storage format	CSV format (using dedicated software)
output data	RGB intensity, hue/saturation/lightness