

# The speckle reducer



Reduce speckle, Get clear images  
SK-11 reduces coherent noise from laser light source

**SK-11**<sup>TM</sup>  
Speckle reducer

# SK-11™ “Speckle Reduction”

## Introduction

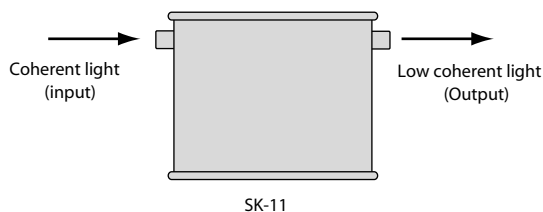
When coherent light illuminates an object, speckle noise occurs, causing degradation of your important images. This phenomena occurs due to the coherence of the light and seems to be inevitable.

SK-11 reduces speckle noise to improve image quality. SK-11 consists of a fiber bundle of different length fibers. The high coherence input laser beam emerges from SK-11 with lower coherence because the length of the each fiber differs more than the coherent length.

SK-11 is excellent for microscope illumination. Monochromatic illumination eliminates objective lens chromatic aberration. SK-11 has no moving parts so it produces no vibration. A scanning system is not required, making it suitable for the temporal resolved imaging.

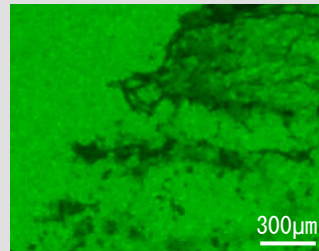
SK-11 also works as a beam homogenizer. The input Gaussian intensity profile is transformed into a homogeneous profile.

## How to use

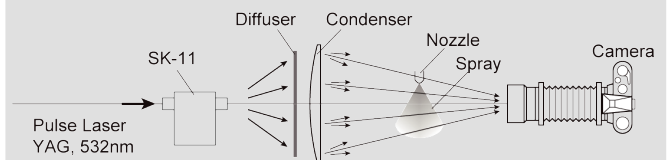
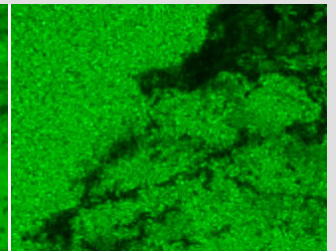


## Observation of Spray Atomization Process

a) with SK-11



b) without SK-11



The water spray is generated by a hollow-cone type nozzle and the photos record the moment of the water spray atomization by using a YAG pulsed laser. The speckle noise is reduced by using SK-11.

Provided by courtesy of associate prof. Takashi Suzuki of Toyohashi University of Technology and Central Research Institute of Electric Power Industry.

## Specification

Wavelength:	450 nm - 950 nm (Option: 1000 nm - 1400 nm, 250 nm - )
Entrance pupil:	5 mm (ask for different diameter)
Exit pupil:	5 mm (the same with entrance pupil)
Transmission:	>50 % at 550 nm
Size:	110 (H) x 140 (W) x 55 (L)

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