

SK-11™ Speckle Reducer



Features

- Range from 450nm - 950nm
- No moving parts
- Uniform beam output
- Much higher power than any LED
- Works with most lasers
- Excellent for temporal resolved imaging

Produced by Nanophoton Corp.

One of the most annoying aspects of using lasers as an illuminating source is the speckle noise they produce which degrades your image. This is due to the coherence of the laser source.

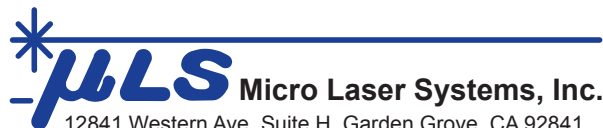
The SK11™ Speckle Reducer improves image quality by reducing the coherence of the laser source. This is accomplished by using a bundle of fibers of different lengths. Each fiber length differs by more than the coherence length of the laser.

The SK11 is an excellent source for microscopic illumination. Using monochromatic light eliminates any chromatic aberration of the objectives lens. Since the SK11 has no

moving parts, it produces no vibrational noise. A scanning system is not required. This makes the SK11™ Speckle Reducer suitable for temporal resolved imaging.

The SK11 also homogenizes any input beam. A Gaussian input profile is transformed into a homogeneous profile.

We have many laser wavelengths available from 375nm to 1600nm which can be used with the SK11. You can also use most types of lasers in your lab as well.



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Speckle Reducer

Specifications

Wavelength ranges: 450nm to 950nm
 Optional 1000nm to 1400nm
 Options for 250nm to 400nm

Entrance/Exit aperture: 5mm standard
 Options for 2mm, 3mm and 10mm

Fiber pigtail length: 1 meter

Power handling: Low power <math><300\text{W}/\text{cm}^2</math>
 High power <math><1200\text{W}/\text{cm}^2</math>

Transmission: >50% at 532nm

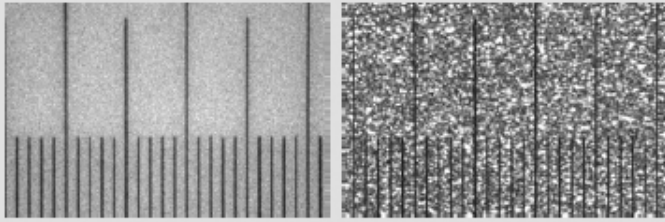
Ordering Information

Model #	Low Power (<math><300\text{W}/\text{cm}^2</math>)
SK-11-Mg-2	2mm aperture
SK-11-Mg-3	3mm aperture
SK-11-Mg-5	5mm aperture
Model #	High Power (<math><1200\text{W}/\text{cm}^2</math>)
SK-11-Mg-5-350C	5mm aperture
Model #	UV Light (no pigtail)
SK-11-Qz-3	3mm aperture

The microscopic images of an objective micrometer

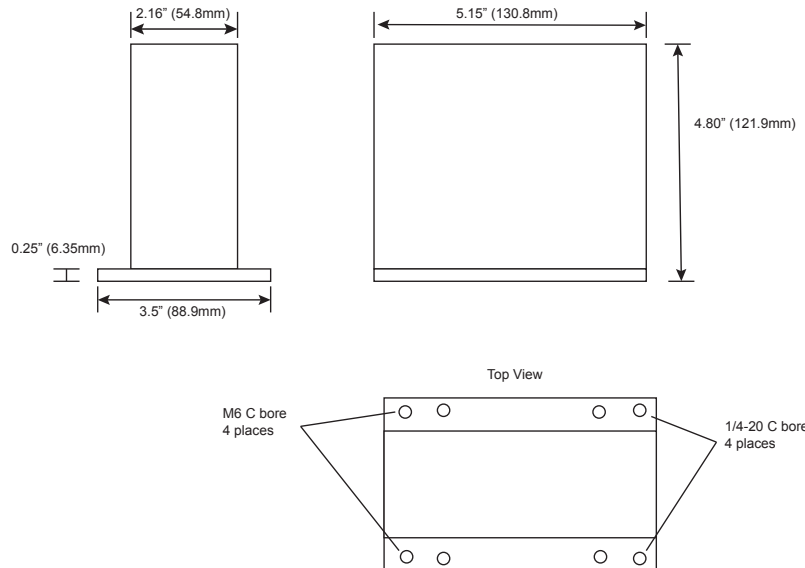
a) with SK-11

b) without SK-11



References: • Dingel, Kawata, et al., Optik, 94 (1993) 132.
 • Dingel, Kawata, Opt. Commun., 93 (1992) 27.

Dimensions



Specifications subject to change without notice.



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