# NFP/FFP SIMULTANEOUS MEASUREMENT SYSTEM FOR ~10W CLASS BLUE HIGH POWER LASER

NFP/FFP simultaneous measurement system especially targeting for ~10W output class blue high power laser

HIGH POWER LASER BEAM PROFILER SYSTEM SOLUTION / NFP/FFP SIMULTANEOUS MEASUREMENT

### NFP/FFP Simultaneous measurement system for high power laser realizes simultaneous

observation and analysis of NFP and FFP of output ~10W class blue high power laser by a single optical unit. FFP/NFP simultaneous measurement optics for high power laser M-Scope type HD is used. The light flux emitted from the sample is attenuated by a two-stage beam sampler after the objective lens, and is further attenuated by ND filter at subsequent staget. NFP & FFP images that has been attenuated to appropriate beam power are captured and image processing analysis is performed each.

## [Features]

OM-Scope type HD, NFP/FFP simultaneous measurement optics for high power laser

- Simultaneous NFP and FFP measurement of high power blue laser by single optical unit
- Attenuation of incident beam with two-stage beam sampler and ND filters
- Optical beam analysis module AP013, specially designed high-functional image processing software for optical beam profile analysis • All-in-one package of PC, optical beam analysis software, detector driver, calibration data.
  - High-performance image processing software for optical beam profile measurement Optimetrics BA Standard is pre-installed.

#### [Standard component]

Optics

●400~460nm : NFP/FFP simultaneous measurement optics for high power laser

# M-Scope type HD/BL

\*Please contact us for measurements in

other wavelength ranges.

○Objective lens : M-Plan Apo NUV 50×

- OAvailable detector (recommended)
  - 400~1100nm : Hi-resolution CMOS detector ISA071/ISA071GL (for NFP and FFP)
- Optical beam analysis module AP013
  - PC for image processing, optical beam analysis software Optometrics BA Standard, detector driver, calibration data, USB key

OAccessories

https://www.synos.jp

• Cables, instruction manuals, etc.

### [Available detector, field of view, measurement angle, pixel resolution]

Detector	High resolution CMOS detector ISA071/ISA071GL			
Spectral range	400~1100nm			
Total pixels	2048×1536 pixels			
Pixels pitch	3.45µm sq.			
Objective lens	M-Plan Apo NUV 50×			
Meas. flux diameter	Approx. 0.1mm			
Measurement item	FFP (unit:degree)		NFP (unit:µm)	
Meas. angle/field of	Meas. angle	Resolution	Field of view	Resolution
view/resolution	Approx.±24°	Approx.0.037°	Approx. 140×100	Approx. 0.069

\*Pixel resolution: Measured angle and length equivalent to the detector pixel calculated from

measured angle range, field of view and sensor pitch of the detector.







# [Option]

- Option for optics (for **M-Scope type HD**)
  - 2× intermediate lens port MS-OP011-RL2 Intermediate lens unit that doubles the overall magnification. The maximum optical magnification is 100x when using a 50x objective lens.
  - 1/2× intermediate lens port MS-OP011-RLH
- Intermediate lens unit that halves the overall magnification OAccessories
- Objective lens, ND filter (dedicated φ30), aperture, coaxial epi-illumination system, optics bench, etc.