

FFP MEASUREMENT SYSTEM

FFP measurement and analysis system in combination with dedicated FFP measurement optics & image processing method.

FFP (far field pattern) measurement system is for measuring FFP (far field pattern) of semiconductor lasers, optical fibers, optical waveguides, various optical modules and so on. With dedicated f-θ lens optics and image processing method, it can be applied to FFP measurement, radiation angle distribution measurement, emission N.A. measurement and analysis of various optical devices.

【Features】

- **M-Scope type F**, FFP measurement optics
 - Quick and easy measurement by dedicated f-θ lens optics and image processing method.
 - Long working distance design with the working distance of approx. 6±0.8mm.
- Possible to measure in 400nm to 1700nm wavelength range by selecting detector.
- 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, correction data.
 - High-performance image processing software for optical beam profile measurement **Optometrics BA Standard** is pre-installed.

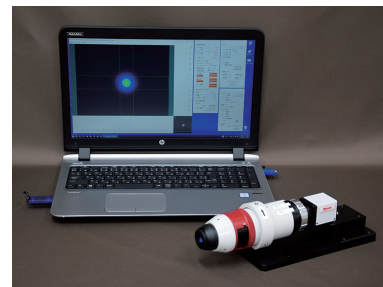
【Standard component】

- FFP measurement optics selection
 - 650~1700nm: **M-Scope type F**
 - 400-650nm: **M-Scope type F/BL**
- Available detector selection
 - 400-1100nm : Hi-resolution CMOS detector **ISA071/ISA071GL**
 - 950-1700nm : InGaAs high sensitivity NIR detector **ISA041H2**
 - 400~1700nm : InGaAs high resolution NIR detector **ISA041HRA**

☞ Regarding the measurement angle coverage and pixel resolution during FFP measurement by the detector used, please refer to P50 [Detector selection and FFP measurement specifications]
- Optical beam analysis module **AP013**
 - PC for image processing, optical beam analysis software **Optometrics BA Standard**, detector driver, calibration data, USB key
- Accessories
 - Cables, instruction manuals, etc.

【Option】

- ND filter
 - Visible (400~700nm): **NDF-5** (5 types per set)
 - NIR (700~1100nm): **NDF NIR-5** (5 types per set)
 - IR (1310~1550nm): **NDF IR-5** (5 types per set)
- Optics bench
 - Optics bench for fiber measurement with manual stages
 - Vertical setting optics bench



● HIGH RESOLUTION FFP MEASUREMENT OPTICS FOR IR RANGE

High-resolution IR FFP measurement system exclusively for the 1310~1550 nm spectral range

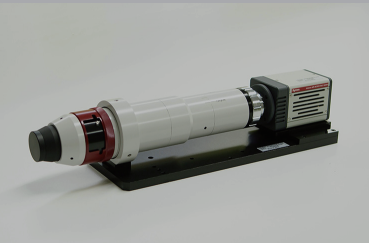
【Standard component】

- High resolution FFP measurement optics for IR **M-Scope type FHR**
- VGA-type InGaAs NIR detector **ISA041VH**
- Optical beam analysis module **AP013**
- IR ND filter, optics bench, etc.

【Available detector, angle coverage, pixel resolution (approx.)】

Detector	VGA-type InGaAs NIR detector ISA041VH	
Spectral range	950~1700nm	
Total pixels	640×512 pixels	
Pixels pitch	20μm sq.	
Meas. angle / pixel resolution	Meas. angle	Pixel resolution
	±32°(V)×±25.6°(H)	0.1°

*Pixel resolution: Measured angle equivalent to the detector pixel calculated from measured angle range and sensor pitch of the detector.



【Component selection of FFP measurement system】

<p>○ Stages · optics bench</p> <p>Sample stages Optics stages</p> <p>Optics bench for fiber measurement</p> <p>Vertical setting optics bench</p> <p>* Can be combined with various motorized/manual stages</p>	<p>○ FFP measurement optics selection</p> <p>● M-Scope type F (for 650-1700nm) ● M-Scope type F/BL (for 400-650nm)</p> <p>○ High resolution IR FFP measurement optics</p> <p>● M-Scope type FHR (for 1300-1600nm)</p>	<p>○ Detector selection</p> <ul style="list-style-type: none"> ● for 400~1100nm Hi-resolution CMOS detector ISA071/ISA071GL ● for 950~1700nm InGaAs NIR detector ISA041H2 · ISA041HRA <p>○ High resolution IR FFP measurement optics</p> <ul style="list-style-type: none"> ● for 950~1700nm VGA-type InGaAs NIR detector ISA041VH 	<p>○ Optical beam analysis module AP013</p> <ul style="list-style-type: none"> ● Personal computer <ul style="list-style-type: none"> · Main unit · Accessories ● Optical beam analysis software Optometrics BA Standard <ul style="list-style-type: none"> ● Detector driver ● Calibration data ● USB licence key <p>○ Accessories</p> <ul style="list-style-type: none"> ● ND filter
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