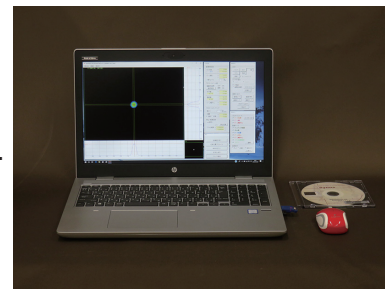


OPTICAL BEAM ANALYSIS MODULE AP013

Image processing hardware and software package for optical beam profile measurement. EF/EAF analysis function is supported as standard function.

Optical beam analysis module AP013 is the image processing and data analysis system focusing on optical beam profile measurement and analysis, widely applicable to optical beam profile measurement application such as NFP, FFP, collimated beam and various application in combination with Synos' optical system **M-Scope series** and imaging detectors **ISA series**. **AP013** is composed of personal computer for image processing and data analysis, optical beam analysis software **Optometrics BA Standard**, calibration data set, and detector driver interface. Additionally, **Optometrics BA Standard** is equipped with power distribution analysis function such as flux analysis function (EF/EAF) that is the standard analysis parameters for MMF, D86 analysis function, D4σ analysis function, etc.



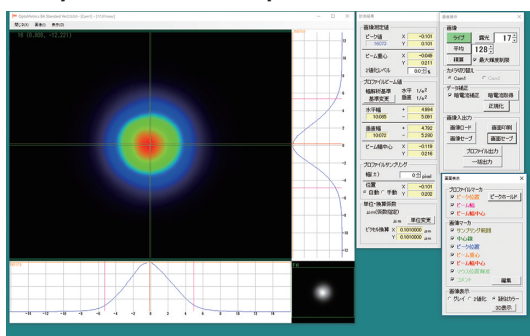
OPTICAL BEAM ANALYSIS SOFTWARE Optometrics BA Standard (Ver.3.0.0)

Optical beam analysis software **Optometrics BA Standard** is image processing/analysis software equipped with our unique and abundant optical beam measurement and analysis functions, including general-purpose beam profile measurement, beam width measurement, optical power distribution analysis such as EF/EAF analysis, D86 analysis, D4σ analysis.

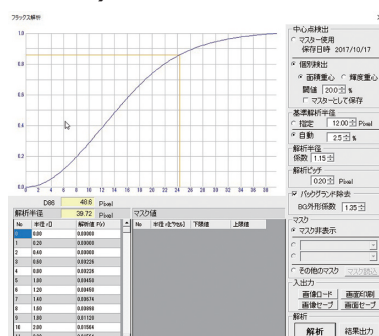
[features of optical beam analysis software Optometrics BA Standard]

| |
|--|
| ○Image acquisition and processing |
| Live image display, Image averaging and accumulation, Dark current correction, Storage and read out of image data |
| ○Center setting function |
| Peak intensity position of the image, Center of gravity position of the beam, Profile peak position, Center of beam profile width, any specified position |
| ○Conversion value (unit conversion) setting function |
| Conversion value setting, Analysis by converted value (unit: pixel/μm/degree) |
| ○Indicator display |
| Peak intensity position & value (maximum intensity value in the image and its position), Beam center of gravity position |
| ○Measurement and Analysis function |
| <ul style="list-style-type: none"> ● Optical beam profile analysis Realtime beam profile display(vertical/horizontal, by automatic search or manual set of center position), Beam profile display of arbitrary direction, 3D display of intensity profile, Peak hold display, Gaussian fitting beam profile ● Width measurement and analysis Beam width analysis (FWHM, 1/e², arbitrary% down width), Unit setting & conversion ● Optical power distribution analysis (*These functions are included only in "Optometrics BA standard") EF(Encircled Flux)/EAF(Encircled Angular Flux) analysis, D86 analysis(based on EF/EAF analysis), D4σ analysis ● Other analysis function Total intensity analysis in any area, etc. |
| ○Image display |
| Gray scale, binarized image, pseudo color, 3D intensity display, equal intensity line display |
| ○Image and data storage |
| Image storage (TIFF/BMP/CSV), intensity profile data (CSV), EF/EAF data (CSV), hard copy of measurement screen (JPEG/BMP) |

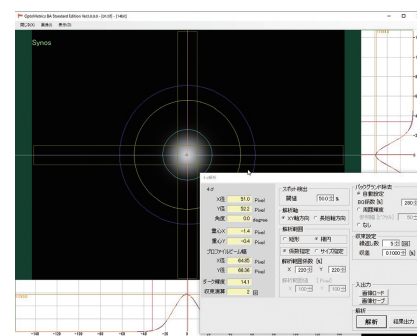
[Analysis function of "Optometrics BA Standard (ver.3.0.0.)]



○Main operation window of "Optometrics BA Standard"



○EF/EAF analysis & D86 analysis



○D4σ analysis

[Main component]

- Personal computer system for image processing and data analysis ... 1set
 - OS: Microsoft Windows 10 professional 64bit
 - Processor: Intel core i5 (or corresponding specification)
 - Main memory: 16GB (or corresponding specification)
- Optical beam analysis software Optometrics BA Standard (ver. 3.0.0) ... 1 license
 - Software install media: 1 (including Optometrics BA Standard, Driver and interface software for detector, Calibration data),
 - Software license key (USB key): 1

[AP013 System selection]

| MODEL | SOFTWARE | OUTLINE |
|--------|--|--|
| AP013 | Optometrics BA Standard | Supports all the above features |
| AP013B | Optometrics BA Basic | Among the functions of Optometrics BA Standard, it supports functions excluding the optical power distribution analysis function |
| Option | Socket communication external control software AP013-Exc | Software for external control of Optometrics BA Standard · Optometrics BA Basic. |