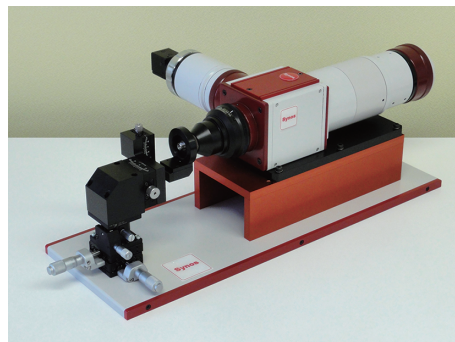


M-Scope type G UNDERFILLED LAUNCH OPTICAL SYSTEM

Possible to control underfilled launch condition such as N.A., diameter of input light. Best for evaluation of multi-mode optical device.

M-Scope type G is underfilled launch optical system, possible to control launch condition such as N.A., diameter of input light by specially designed optical method. As **M-Scope type G** has camera system for observation, it is possible to observe the launch light position and launch condition directly. It is widely applicable for optical characteristic evaluation and measurement of MMF, POF, polymer waveguide in OPCB substrate, and various multimode devices and modules. Additionally, in combination with SYNOS' NFP and FFP measurement system, EF/EAF measurement system, highly advanced optical characteristic evaluation of various multi-mode device will be realized.



[Features]

- Evaluation of various multi-mode device by changing launch condition
 - Adjustable launch light spot diameter and N.A.
- Possible to select various kind of measurement light source such as LED, SLD, LD, etc.
- Equips camera system for coaxial direct observation. Possible to observe the launch light position and launch light condition onto the sample surface.

[Summary of specification]

- N.A. adjustment of launch light: 0.1-0.65 (Sequentially variable)
- Diameter of launch light: ϕ 10,20,40,80,120 (by aperture)
- Measurement wavelength: 850nm (reccomendation)
- Optical fiber: ϕ 1mm Large core fiber
- Camera mount: C-mount

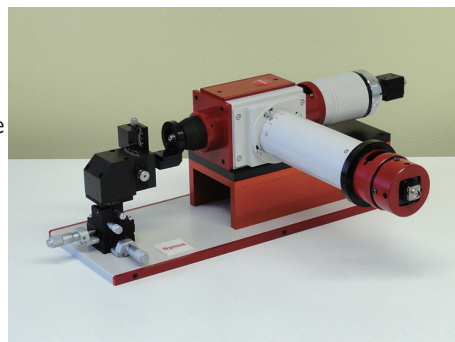
[Standard component]

- Main optics: 1
- Optics base: 1
- Aperture: 5 pieces/set
- CMOS camera: 1

M-Scope type ML MODE-SELECTIVE LAUNCH OPTICAL SYSTEM

Possible to control launch condition by specified mode and N.A. Best for evaluation of multi-mode optical device.

M-Scope type ML is mode-selective launch optical system, possible to select specified angle (N.A.) component of launch light to the sample fibers by specially designed optical method. As **M-Scope type ML** has camera system for observation, it is possible to observe the launch light position and launch condition directly. It is widely applicable for optical characteristic evaluation of MMF, POF, polymer waveguide, and various multimode devices and modules under controlled launch condition. Additionally, in combination with SYNOS' NFP measurement system, FFP measurement system, EF/EAF measurement system etc, highly advanced optical characteristic evaluation and measurement of various multimode device will be realized.



[Features]

- Evaluation of various multi-mode device by changing launch condition
 - Select specified angle (N.A.) component of launch light to the sample fibers.
- Possible to select various kind of measurement light source such as LED, SLD, LD.
- Equips camera system for coaxial direct observation. Possible to observe the launch light position and launch light condition onto the sample surface.

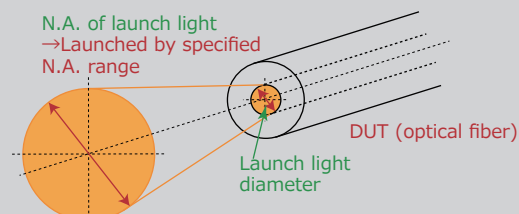
[Summary of specification]

- Mode-selective port
 - N.A. adjustment of launch light: 0.1-0.6 (Sequentially variable)
 - Launch light width: approx. 0.05/0.1 (N.A. conversion value) (variable by aperture)
- Optical magnification for observation: approx. 2.95x
- View of observation: approx. 2.39mm x 1.79mm (with 1/1.8" CMOS camera)
- Fiber connector type for input light: FC connector

[Standard component]

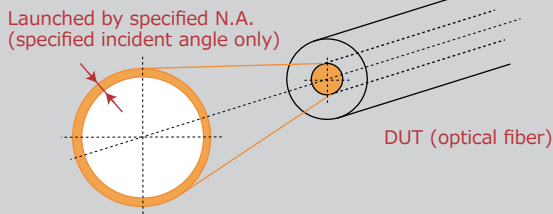
- Main optics: 1
- Optics base: 1
- Aperture: 1set
- CMOS camera: 1

Technical information [Underfilled launch and mode-selective launch]



● Underfilled launch

Underfilled launch optical system is the special launch optics that changes the spot size and irradiation N.A. (Numerical Aperture) of launch light, and analyze the optical diffusion of multimode optical fiber, plastic optical fiber, etc. Image of underfilled launch method is shown above. In case of underfilled launch, sample fiber is launched by all the light flux as specified N.A. In this case, beam profile of launch light on sample fiber core has flat shape.



● Mode selective launch

In case of mode-selective launch, sample fiber is launched by the light flux of only the specified N.A. In other words, mode-selective launch optics generate the launch light that has the specified incident angle only. Image of mode-selective launch method is shown above. Launch light has only specified N.A. light flux (specified incident angle light flux), launch light has ring condition incident angle light flux.