

PHOTOMETRIC MODULE / IVL MEASUREMENT

IVL MEASUREMENT MODULE PMD002/IVL

Easily measure the IVL characteristics of semiconductor laser devices, using a large size Si photodiode.

IVL measurement module **PMD002/IVL** is the photometric sensor module that can easily measure the IVL characteristics of light emitting devices such as semiconductor lasers and VCSELs. The compact and lightweight IVL measuring sensor head can be used as a single unit or mounted on objective lens revolver that is equipped with sophisticated NFP measurement optics **M-Scope type S**, etc. The sensor uses a 18 mm square large-diameter photodiode and can cover a wide radiation angle.



[Features]

- 18mm square large Si photodiode is used to cover a wide N.A.
- A wide measurement power range is secured by using a neutral density filter together.
- It can be attached to the manual revolver of NFP measurement optics **M-Scope type S**, etc.
- Can be mounted on a prober system. Supports VCSEL IVL measurement at the wafer level.

[Summary of specifications]

- Measurement method: Large size Si PD device + SMU
- Spectral range:
 - for 340~1000nm: **PMD002/IVL VIS**
 - *IR model for 900~1700nm is under development
- Maximum sensitivity wavelength (λ_p): 960nm
- Photosensitivity ($\lambda=\lambda_p$): 0.66W
- W.D.: Approx. 10mm
- N.A.: $\pm 30^\circ$ (at measurement light flux diameter:
approx. $10\mu\text{m}^2$)
- Measurement range (at 940nm):
 - ~15mW (ND: none)
 - ~95mW (ND: 10%)
 - ~770mW (ND: 0.5%)
- Attenuate: By ND filter (mount on sensor head)

[Software function]

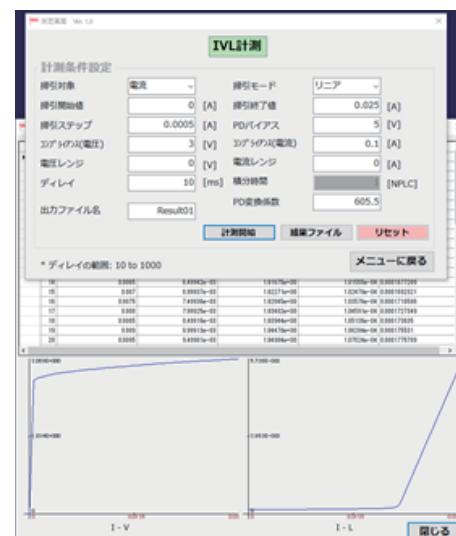
- IVL measurement software **Optometrics IVL basic**
- (Functions)
 - Measurement parameter: Threshold current (I_{th}) • voltage (V_{th})
Drive current (I_f) • voltage (V_f)
Light output (P_f : optput at I_f)
Slope efficiency (SEf: slope at I_f), etc.
 - Function:
 - Data storage and output: Graph data, Output of graph data (csv format)

[Standard component]

- Sensor head: 1
- ND filter: 1 each (10%, 0.5%)
- IVL measurement software: **Optometrics IVL basic**

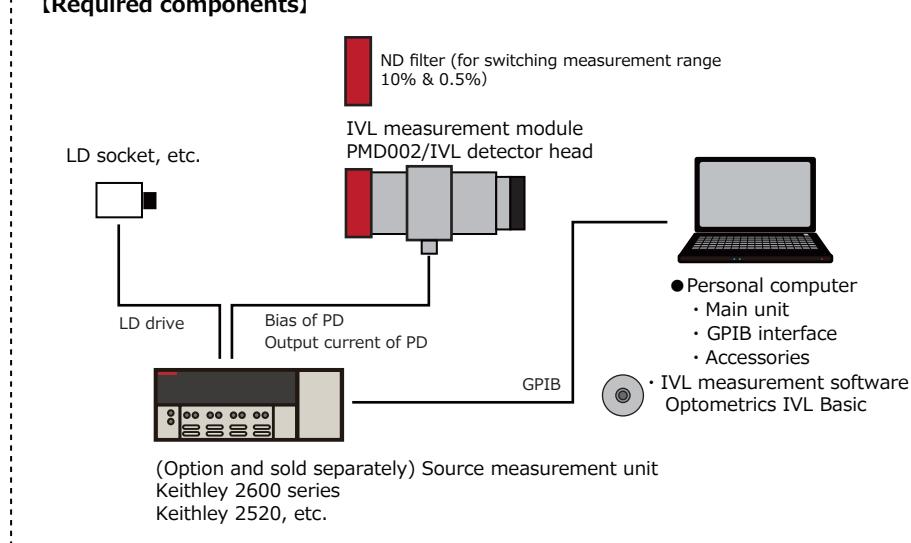
[Option]

- SMU (source measurement unit)
 - Keithley 2600 series (for CW measurement)
 - Keithley 2520 (for pulse measurement)
- *Please contact us for SMUs of other manufacturers and models.



○ Graph display of IVL measurement data

[Required components]



[NFP&IVL measurement system]
Detector head of IVL measurement module **PMD002/IVL** can be mounted on the manual revolver of sophisticated NFP measurement optics **M-Scope type S**.