

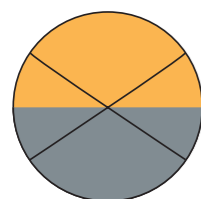
DR-M2

Cat.No.1410

DR-M4

High Refractive Index Model

Cat.No.1414



Refraction view



Display



Customizable wavelength: 1100nm range supported

Refractive Index or Abbe number (vd or ve) can be measured at different wavelengths ranging from 450 to 1,100nm. For measurement at wavelengths ranging from 681 to 1,100nm, the optional near infrared ray viewer (Part No.RE-9119) is required. The DR-M2/DR-M4 digitally displays the measurement results of refractive index or Abbe number on the LCD. Measurement can be achieved by

matching the boundary line at the intersection point of the cross hairs. These refractometers can be connected to the digital printer. The DR-M4 is a high refractive index version of the DR-M2, with a refractive index measurement range of 1.4700 to 1.8700 (at a wavelength of 589nm). The DR-M4 shares common appearance and features with the DR-M2.

Specifications

Measurement Range	Resolution	Refractive Index (nD) 0.0001, Abbe number 0.1
DR-M2	Measurement accuracy	Refractive Index (nD) ±0.0002 (With the attached test piece at 500 to 650nm)
Wavelength 450nm : Refractive Index 1.3278 to 1.7379	Wavelength range	From 450 to 1,100nm
Wavelength 589nm : Refractive Index 1.3000 to 1.7100		*Interference filters for measurement at wavelengths other than 589nm are sold separately (For measurement at wavelengths ranging from 681 to 1,100nm, the near infrared ray viewer (optional) is required.)
Wavelength 680nm : Refractive Index 1.2912 to 1.7011	Measurement temperature range	5 to 50°C (Temperature range regulated by circulating constant temperature water bath.)
Wavelength 1,100nm : Refractive Index 1.2743 to 1.6840	Thermometer accuracy	±0.2°C
DR-M4	Ambient temperature	5 to 40°C
Wavelength 450nm : Refractive Index 1.5219 to 1.9220	Power consumption	160VA
Wavelength 589nm : Refractive Index 1.4700 to 1.8700	Output	For digital printer, DP-63(B) (optional), Conforming to Centronics standard
Wavelength 680nm : Refractive Index 1.4545 to 1.8544	Power supply	AC100 to 240V, 50/60Hz
Wavelength 1,100nm : Refractive Index 1.4260 to 1.8259	Dimensions and weight	13×29×31cm, 6.0kg (Main unit) 15×33×11cm, 3.2kg (Power supply unit)

Optional Accessories

Circulating Constant Temperature Bath

60-C5

Cat.No.1923

A circulating water bath for precise temperature control of refractometers without Peltier. The temperature range can be set from 10 to 60°C and its compact, easy to use design makes it optimal for connecting to a refractometer.



Specifications

Tank capacity	1.0 L
Temperature setting range	10 to 60°C (water)
Minimum temperature indication	0.1°C
Constant-temperature accuracy	±0.2°C
Power consumption	250VA
Power supply	AC 100 to 240V, 50/60Hz
Dimensions and weight	20.4×33.6×28.9cm, 9.0kg (main unit only)

Digital Printer

DP-63(C)

for DR-A1·DR-A1-Plus

Cat.No.3136

DP-63(B)

for DR-M2·DR-M4·DR-M2/1550·DR-M4/1550

Cat.No.3135



Specifications

Printing method	Thermal dot
Power consumption	13VA
Power supply	AC adapter (Input voltage: AC100 to 240V)
Dimensions and weight	17×16×7cm 580g (main unit only)

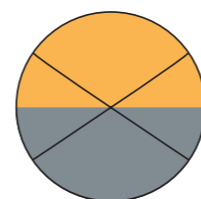
DR-M2/1550

Cat.No.1412

DR-M4/1550

High Refractive Index Model

Cat.No.1415



Refraction view



Display



Customizable wavelength: 1550nm range supported

Refractive Index or Abbe number (vd or ve) can be measured at different wavelengths ranging from 450 to 1,550nm. Measurement at wavelengths of 1550nm has become more in demand with the recent development of materials for the IT communications field. The DR-M2/1550 and the DR-M4/1550 are suitable for measuring samples that require a refractive index in the near infrared range, such as fiber optics materials, optical glass, and plastics. These models are equipped with a power supply unit and a monochromatic light

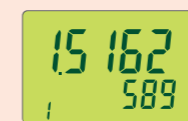
source. They can be used with a near infrared ray viewer or interference filters. These refractometers digitally display the measurement result on the LCD. Measurement can be achieved by matching the boundary line at the intersection point of the cross hairs. These units can be connected to the digital printer. The DR-M4/1550 is a high refractive index version of the DR-M2/1550, with a refractive index measurement range of 1.4700 to 1.8700 (at a wavelength of 589nm). The DR-M4/1550 shares common appearance and features with the DR-M2/1550.

Specifications

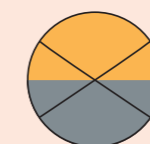
Measurement Range	Resolution	Refractive Index (nD) 0.0001, Abbe number 0.1
DR-M2/1550	Measurement accuracy	Refractive Index (nD) ±0.0002 (with the attached test piece at 500 to 650nm)
Wavelength 450nm : Refractive Index 1.3278 to 1.7379	Wavelength range	From 450 to 1,550nm
Wavelength 589nm : Refractive Index 1.3000 to 1.7100		*Interference filters for measurement at wavelengths other than 589nm are sold separately
Wavelength 680nm : Refractive Index 1.2912 to 1.7011	Measurement temperature range	5 to 50°C (Temperature range regulated by circulating constant temperature water bath.)
Wavelength 1,100nm : Refractive Index 1.2743 to 1.6840	Thermometer accuracy	±0.2°C
Wavelength 1,550nm : Refractive Index 1.2662 to 1.6759	Ambient temperature	5 to 40°C
DR-M4/1550	Power consumption	160VA (Refractometer), 240VA (Monochromatic Light source)
Wavelength 450nm : Refractive Index 1.5219 to 1.9155	Output	For digital printer, DP-63(B) (optional), Conforming to Centronics standard
Wavelength 589nm : Refractive Index 1.4700 to 1.8700	Power supply	AC100 to 240V, 50/60Hz
Wavelength 680nm : Refractive Index 1.4561 to 1.8544	Dimensions and weight	13×29×31cm, 6.0kg (Main unit) 15×33×11cm, 3.2kg (Power supply unit) 22×30×20 to 30cm, 5.2kg (Light source)
Wavelength 1,100nm : Refractive Index 1.4310 to 1.8259		
Wavelength 1,550nm : Refractive Index 1.4215 to 1.8136		

Abbe number can be measured simply!
(In the case of measurement of Abbe number "vd")

- Set the sample on the prism surface.
- Insert the 589nm interference filter (attached to the DR-M2 as a standard accessory). While looking through the eyepiece, match the boundary line with the intersection point of the cross hairs. Then, press the SET key.

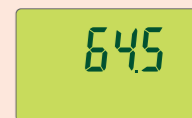
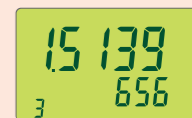
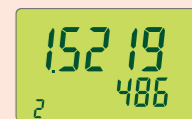


Display



Refraction view

- Replace the interference filter with the 486nm interference filter (an optional part). While looking through the eyepiece, match the boundary line with the intersection point of the cross hairs. Then, press the SET key.
- Replace the interference filter with the 656nm interference filter (of an optional part). While looking through the eyepiece, match the boundary line with the intersection point of the cross hairs.
- Press the SET key. The indication on the display at that time represents the Abbe number "vd".



* For optimum convenience, use an optional digital printer to print out the refractive index at each wavelength and Abbe number.