

FD-5

PRODUCT SPECS:

What are the specs for the product?

Model	FD-7	FD-5
Illumination/viewing system	45°a: 0°(annular illumination) **1 Conforms to CIE No. 15, ISO 7724/1, DIN 5033 Teil 7, ASTM E 1164, and JIS Z 8722 Condition a for reflectance measurements	
Spectral separation device	Concave grating	
Wavelength range	Spectral reflectance: 360 nm to 740 nm Spectral irradiance: 360 to 730 nm	Spectral reflectance: 360 nm to 740 nm
Wavelength pitch	10 nm	
Half bandwidth	Approx. 10 nm	
Measurement area	Ø3.5 mm	
Light source	LED	
Measurement range	Density: 0.0D to 2.5D; Reflectance: 0 to 150%	
Short-term repeatability	Density: σ 0.01D Colorimetric: Within $\sigma\Delta E_{00}$ 0.05 (When white plate is measured 30 times at 10-second intervals after white calibration has been performed)	
Inter-instrument agreement	Within ΔE_{00} 0.3 (Average of 12 BCRA Series II color tiles compared to values measured with a master body under Konica Minolta standard conditions)	
Measurement time	Approx. 1.4 s (single-point reflectance measurement)	
Displayed values	Colorimetric values, color-difference values, density values, density-difference values, dot area ratio, dot gain, PASS/FAIL judgment, illuminance, correlated color temperature	Colorimetric values, color-difference values, density values, density-difference values, dot area ratio, dot gain, PASS/FAIL judgment
Measurement conditions	Corresponding to ISO 13655 Measurement Conditions M0 (CIE Illuminant A), M1 (CIE Illuminant D50), and M2 (illumination with UV-cut filter); User-defined illuminant	
Illuminants	A, C, D50, ID50, D65, ID65, F2, F6, F7, F8, F9, F10, F11, F12, User-defined illuminant	
Observers	2° Standard Observer, 10° Standard Observer	
Color spaces	L*a*b*, L*C*h, Hunter Lab, Yxy, XYZ, and color differences in these color spaces	
Color-difference equations	ΔE^*_{ab} (CIE 1976), ΔE^*_{94} (CIE 1994), ΔE_{00} (CIE 2000), ΔE (Hunter), CMC (l: c)	
Indexes	WI (ASTM E 313-96); Tint (ASTM E 313-96); ISO Brightness (ISO 2470-1); D65 Brightness (ISO 2470-2); Fluorescence index	
Density	ISO Status T, ISO Status E, ISO Status A; DIN 16536	
Storable data	Colorimetric target data: 30 data; Density target data: 30 data	
Display language	English, French, German, Spanish, Japanese, Chinese (Simplified)	
Scanning measurements**2	Scanning measurement of a color chart can be performed.	N/A
Interface	USB 2.0	
Output data**2	Displayed values; Spectral reflectance data; Spectral irradiance data	Displayed values
Power	Rechargeable internal lithium-ion battery (Number of measurements per charge: Approx. 2,000 when new); AC adapter; USB power bus	
Dimensions (W x D x H)	70 x 165 x 83 mm (Body only); 90 x 172 x 84 mm (With target mask attached)	

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(W × D × H)	90 × 172 × 84 mm (With target mask attached)
Weight	Approx. 350 g (Body only); Approx. 430 g (With target mask attached)
Operating temperature/humidity range	10 to 35°C, 30 to 85% relative humidity with no condensation
Storage temperature/humidity range	0 to 45°C, 0 to 85% relative humidity with no condensation
Specifications are subject to change without notice.	
*1 Illumination for wavelengths under 400nm is unidirectional.	
*2 Available when using PC software.	