Calibrated Sensitometer and Scanning Densitometer

darkscan duo ref

Art. No. 11605

The darkscan duo ref is a high-precision combination of sensitometer and densitometer in one unit. It is designed for daily routine testing of x-ray film-screen equipment according IEC 61223-2-1 and DIN 6868-2 standards.

The device combination provides functional and technical advantages such as one power supply (batteries or rechargeable batteries), less maintenance cost and less room for operation or storage.

The sensitometer section is suitable for blue and green x-ray films. The exposition for blue and green films is manually adjustable in 5 steps. The step wedge with 21 steps has an optical step wedge constant of 0.15. The exposition homogeneity of each step is almost constant. The maximum tolerance is ± 0.01 log (H).

The scanning densitometer allows measurement of single grey steps in „manual‘ mode and up to 21 grey steps in „automatic“ mode. In „automatic“, all optical densities of a 21 step grey scale are measured automatically when pulling the film at constant speed beneath the measuring orifice. A bedstop provides control over the film‘s movement. Optical densities are measured with an accuracy of D ± 0.0l.

The memory can store grey values of 25 film strips, with 21 grey steps each.

Standard parameters like Minimum Density (D_{min}), Light Speed (LS), Light Contrast (LC), Contrast Index (CI), and Speed Index (SI) are automatically calculated and displayed on the integrated display.

The meter can be connected to a PC via serial connection. The software DARKSCAN-FOR WINDOWS provides all features for a clear, standard compliant documentation.

The darkscan duo ref is available for acceptance test according to the German DIN V 6868-55. Its reference sensitometer is provided with a highly precise 21-step wedge. All reference sensitometers are calibrated to minimum tolerance at a DKD laboratory*.

TECHNICAL SPECIFICATIONS

Sensitometer Section	
Exposure color:	Selectable blue or green
Peak Wavelength:	Blue (460 ± 10) nm, Green (510 ± 10) nm
Exposure H[lx.s]:	5 steps selectable for each exposure color
Exposure Homogeneity:	± 0.01 log (H) for each step
Step Wedge:	21 steps
Step Wedge Constant:	0.15 ± 5 %
Reference Sensitometer:	according to DlNV6868-55
Calibration:	after 2 years
Densitometer Section	
Spectral Characteristics:	ANSIPH 2.19-1979 (DIN 4512-3) for light source
Sensor Optics Size:	3 mm diameter
Measuring Range:	D= 0 - 4.5
Measuring Accuracy:	± 2.0 % for D~ 3; ± (1.5 - 2) % for D>3
Accuracy:	D = ±0.0l

DELIVERY SCOPE

1 darkscan duo / 4 Pins for film-screen positioning / 1 Calibration strip featuring D= 2.8 / 4 Mignon Alkaline batteries (1.5 V) / 1 Manual (English) / DARKSCAN QA Software