

darkscan / darklight Series

# Densitometry / Sensitometry



# darkscan Series

2-in-1 Devices for Densitometry and Sensitometry



## darkscan duo ref

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

The 2-in-1 solution 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  $\pm 0.01 \log (H)$ .

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  $D \pm 0.01$ .

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

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.

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 ( $460 \pm 10$ ) nm, Green ( $510 \pm 10$ ) nm
Exposure H[lx.s]:	5 steps selectable for each exposure color
Exposure Homogeneity:	$\pm 0.01 \log (H)$ for each step
Step Wedge:	21 steps
Step Wedge Constant:	$0.15 \pm 5 \%$
Reference Sensitometer:	according to DIN V 6868-55
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:	$\pm 2.0 \%$ for $D \sim 3$ ; $\pm (1.5 - 2) \%$ for $D > 3$
Accuracy:	$D = \pm 0.01$

## DELIVERY SCOPE

1 darkscan duo (ref) / 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 S/W

## ALSO AVAILABLE

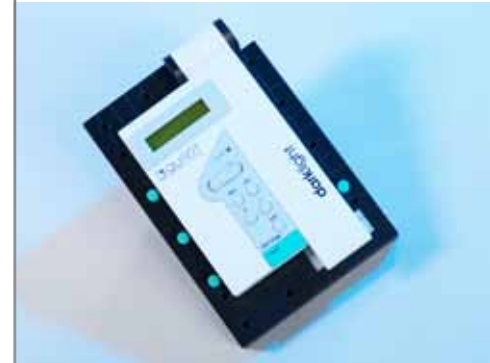
darkscan duo	2-in-1 device combination without reference functionality
darklight duo ec	2-in-1 densitometer/sensitometer without scanning



\* DKD - Deutscher Kalibrierdienst (German Calibration Service)

# darklight Series

Easy-to-use sensitometer and densitometer



The darklight single purpose devices comply with IEC 61223-2-1 and DIN 6868-2. They are suitable for all film sizes and are very easy to use.

A great deal of practical study had been put into the development of the sensitometer/densitometer range of devices. The wide screen supporting and positioning surface allows processing of x-ray films of various formats.

The densitometers allow measurements of single grey steps up to a density value of 4.5. The grey step to be measured is placed beneath a measuring orifice. Pressing the „Lamp“ key initiates the measurement. The optical densities are measured with a reproducibility of  $D \pm 0.01$ .

The sensitometers are suitable for blue and green 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  $\pm 0.01 \log (H)$ .

## FEATURES

Dimensions:	240 x 165 x 60 mm
Weight:	800 gr. (without batteries)
Operating Temperature:	15°C – 35 °C
Manual:	Integrated Display Leads
System Languages:	German, French, English

## darklight densi ec Densitometer

### TECHNICAL SPECIFICATIONS

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:	$\pm 2.0\%$ for $D \sim 3$ ; $\pm (1.5 - 2)\%$ or $D > 3$
Accuracy:	$D = \pm 0.01$

## darklight sensi Sensitometer

### TECHNICAL SPECIFICATIONS

Exposure color:	Selectable blue or green
Peak Wavelength:	Blue ( $460 \pm 10$ ) nm, Green ( $510 \pm 10$ ) nm
Exposure H[lx.s]:	5 steps selectable for each exposure color
Exposure Homogeneity:	$\pm 0.01 \log (H)$ for each step
Step Wedge:	21 steps
Step Wedge Constant:	$0.15 \pm 5\%$
Reference Sensitometer:	darklight sensi ref according to DIN V 6868-55
Calibration:	after 2 years

## ALSO AVAILABLE

darklight sensi ref	Reference Sensitometer for acceptance & constancy tests
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