

HEINE SIGMA® 250

DATA	
Description	SIGMA 250 / SIGMA 250 M2
Catalogue number	See catalogue or pricelist
Stand / Datum	V02 / 29.09.2014

GENERAL	
Regulation	CE FDA IEC 60601-1, IEC 60601-1-2, ISO 15004-1 / ISO 10943 / classified as group II instrument according ISO 15004-2
Product variants	SIGMA 250 with S-FRAME SIGMA 250 M2 with S-FRAME
Weight	SIGMA 250 for S-FRAME without cable: 90 g SIGMA 250 for S-FRAME with cable: 110 g
Dimensions Instrument	150mm x 75mm x 50mm (without bend protection and cable)
Dimensions Packaging	215mm x 159mm x 83 mm (for SIGMA 250 and S-FRAME)
Material	Synthetic material, glass, carbon fiber
REACH /RoHS	REACH & RoHS compliant
Phatalate	n/a
Biocompatibility	The medical device does not have patient contact per intended use. Therefore the ISO 10993 is not applicable.
Latex	n/a
Surface	Synthetic material dark grey and black
Environmental conditions operation	Temperature +10°C to +35°C, relative humidity 30% to 75%, air pressure 700 hPa to 1060 hPa
Environmental conditions storage	Temperature +5°C to +45°C, relative humidity 45% to 80%, air pressure 500 hPa to 1060 hPa
Environmental conditions transport	Temperature -20°C to +50°C, relative humidity 45% to 80%, air pressure 500 hPa to 160 hPa
Durability	5 years warranty
Operating elements	Aperture lever, filter lever, stereopsis control, parallax control, Beam control, PD adjustment, Release to S-FRAME, swiveling
Convergence and Parallax Adjustment	Separately possible, plus separate fine-tuning of the illumination beam $\pm 3^\circ$
Apertures	Big aperture, small aperture, Microspot (only M2)
Filters	Red-free filter (integrated), Blue, Yellow and Diffusor option
Mirror	Teaching mirror optional available
Dioptric	+2D lenses integrated, plano lenses enclosed
Power supply	mPack LL, EN 50, EN 50-m
Accessories	Teaching mirror, case for filters, blue filter, yellow filter, diffusor
Patents	US Pat. 5.815.241

MECHANICAL DATA	
Connections	Connecting link for teaching mirror Round flange for filter adaption Snap joint connection for S-FRAME
Imprints	Front: HEINE logo english red, "SIGMA 250" Right side: 2 points for apertures, where applicable "M2" Left side: 2 points for filter (white and green) Bottom: "US Pat 5.8.15.241", "HEINE made in Germany", "Stereopsis" with two symbols, CE symbol, symbol for user manual Back: arrow for PD scale, PD scale with numbers "50-60-70", "Parallax" with 2 symbols, serial number, "www.heine.com"

CLEANING, STERILIZATION

	Please also see detailed instruction in the user manual! Only wipe cleaning and wipe disinfection Recommended agents: - Cleaning agent Neodisher® MediClean - Disinfectant agent: alcoholic (e.g. Incides® Tissues)
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LIGHT

Type	LED
Lamp exchangeable	no
Wartung	SIGMA 250 does not require maintenance or service
Voltage	3 V
Performance	0,63 Watt
Power absorption	210 mA
Light controlling	Stepless light control by control element of power source
Luminous intensity	450 lux at 500 mm distance
Luminous flux	2,34 lumen (average)
Colour temperature	4500 K
Illuminated field 1	80 mm ±2 mm (at 500 mm distance) = Big aperture
Illuminated field 2	35 mm ±2 mm (at 500 mm distance) = Small aperture
Illuminated field 3	22,5 mm ±2 mm (at 500 mm distance) = Microspot with M2
Quality of the illuminated field	Round, homogeneous illuminated, sharp edge in 500 mm, without colour fringes
Focusing	n/a
Medium life expectance	ca 50.000 h
Operating times	with mPack LL: > 23 hours
Working distance	≈ 420 mm between the eye of the examiner and the eye of the patient
Colour rendering	approx. Ra > 90, R9 > 75
UV radiation	SIGMA 250 emits no UV radiance
Lightening direction	Vertical adjustable from ±3° (ocular level)