

# Eta450 Ultra

## Acoustic

Transducer type	Membrane-free, optical
Frequency range	50 kHz – 2 MHz
Dynamic range	100 dB
Self-noise	5 $\mu$ Pa (BW: 1 Hz, measured @ 500 kHz)
Self-noise, full bandwidth	10 mPa
Max. sound pressure for THD < 3%	40 Pa
Max. sound pressure level for THD < 3%	126 dB rel. 20 $\mu$ Pa
Damage threshold	> 194 dB rel. 20 $\mu$ Pa
Sensitivity	100 mV/Pa @ 1 kHz (0 dB gain, 50 $\Omega$ )
Polar pattern	Omnidirectional
Sound field optimization	Free field and pressure field
Calibration	Yes, standard calibrators (with adapter)

## General

Maximum output voltage	$\pm$ 15 V (high impedance), $\pm$ 7.5 V (50 $\Omega$ )
Output impedance	50 $\Omega$
Output connector	BNC
Size of sensor head	diameter: 5 mm; length: 35 mm
Weight of sensor head	ca. 10 g
Length of fiber-optic cable	5 m (other upon request)
Size of signal conditioning unit	220 mm x 334 mm; height: 93 mm
Weight of signal conditioning unit	8 kg
Power supply	120/230 V $\pm$ 5%; 50/60 Hz
Power consumption	< 50 W

## Environmental

Storage temperature	-20 °C to 80 °C (0 °F to 175 °F)
Operating temperature of sensor head	-20 °C to 100 °C (0 °F to 210 °F)
Operating temperature of signal conditioning unit	0 °C to 50 °C (30 °F to 120 °F)
Environmental humidity	non-condensing