

## Y (HI)-Series High Intensity Hydrophones



The high intensity (HI) hydrophones are highly sensitive with broad bandwidth, intended for measuring high-intensity focused ultrasound (HIFU) transducers.

The HI hydrophones can provide acoustic maps anywhere within the radiating field during high (or low) power experiments without hydrophone damage. With this capability, they can be used to map pressures at the focal zone, a transducer's radiating surface, in the near field and far field.

Upon request, the HI hydrophones can be calibrated within their representative MHz frequency ranges.

### Features

- Withstand high intensity focused ultrasound (HIFU) focal pressures
- Large bandwidth
- High sensitivity
- Also useful as source transducer
- Optional MRI Compatible version
- Optional calibration
- Temperature monitoring

### Characteristics

#### HOUSING

Coax cable, 1 meter at 50 Ohms, BNC Male Plug

Waterproof, 0-50 degrees C, up to BNC connector

Stainless steel (standard) or brass housing (MRI compatible option)

Housing at tip dimensions:

Length = 25 mm; Outside diameter = 2.8 mm (Y-104) / 1.5 mm (Y-120)

Carbon composite shaft right angle

L-shaped or straight

#### TRANSDUCER

Operating frequency range: 0.050-1.900 MHz to 6 dB points

Sensing area is encapsulated in a rigid, waterproof material, tip is smooth and rounded, and may come into direct contact with smooth surfaces, such as transducer faces without damage

RF shielding throughout Carbon composite shaft right angle

#### ELECTRICAL TRANSMIT LIMITS

NOTE: This section pertains to using HI hydrophones as a source transducer

Transmit voltage limits up to 10 Vpp continuous (CW); with unit in water; up to 100 Vpp at low duty cycle (0.1% or less); with unit in water (higher Vpp can be used dependant upon transducer.

### Configuration Specifications

#### Y-104

50 kHz to 1.9 MHz

1.5 mm diameter element

#### Y-120

2.0 to 4.0 MHz.

0.8 mm diameter element