



# CRY3403

## 1/4" Free-field Prepolarized Ultra-high frequency Microphone

### Features

- **Key Specifications**

Sensitivity	4 mV/Pa
Dynamic Range	35 dBA to 165 dB
Frequency Range	4 Hz to 90 kHz $\pm 2$ dB

- **Applications**

High-frequency (ultrasonic) measurements  
High-definition speakers and NVH measurements  
High Sound Pressure Level (SPL) measurements

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

### Introduction

CRY3403 is a 1/4 inch free field prepolarization measurement microphone designed for ultra-high frequency and high dynamic range acoustic measurements.

Its unique design provides an unusually wide and flat frequency response with a frequency range up to 90kHz. It is an excellent universal measurement microphone that is ideal for high-definition audio measurement and other ultrasonic acoustic applications.

### Highlights

- **Use of Ultra-high frequency Free-field Microphones**

Ultra-high frequency microphones can accurately capture high-frequency sounds and are highly suitable for ultrasonic detection, high-frequency acoustic research, and other similar applications.

Free-field microphone are specifically designed for measurements in environments that are free from reflections or echoes and are widely used in fields such as acoustic research, noise monitoring, and sound system testing.

- **Compatibility**

The CRY3403 measuring microphone is compatible with the IEPE preamplifier of CRY SOUND.

IEPE is a universal constant current source power supply technology used on sensors. Each manufacturer has different names, such as ICP, CCP, etc.

- **Calibration**

Each CRY SOUND microphone is calibrated at the factory using traceable calibration equipment. Calibration certificates are provided with each unit. CRY SOUND recommends recalibration at least once a year.

- **Quality & Warranty**

All CRY SOUND microphone capsules use 3rd generation titanium diaphragms and protection grids and synthetic sapphire insulators - resulting in the most rugged and reliable measurement microphones on the market. Titanium provides superior corrosion resistance, high temperature stability, impact resistance and strength-to-mass than traditional nickel and stainless steel. All capsules are assembled in strict clean-room environments for maximum quality. CRY SOUND microphones are supported by a 10-year warranty—offering one of the best service guarantee in the world.

## Technical Specifications

### Specifications

Field Type	Free-field
Sensitivity( $\pm 3$ dB)	4 mV/Pa, -48 dB re 1V/Pa
Frequency Response	4 Hz to 90 kHz $\pm 2$ dB
Polarization Voltage	0 V
Capacitance	7 pF (@250 Hz)
Dynamic Range(re.20uPa)	35 dBA to 165 dB
Operating Temperature	-30°C to +80°C (-4°F to +140°F)
Temperature Stability	0.01 dB/°C (-10°C to +50°C) 0.006 dB/°F (+14°F to +122°F)
Static Pressure Stability	-0.01 dB/kPa
Operating Humidity Range	0 to 90%RH no condensation
Humidity Stability	< 0.1 dB (0 to 90%RH no condensation)
Pressure Equalization Vent	Side vented
IEC 61094-4 Type	WS3F

### Dimensions

Height with Grid	10.5 mm (0.413")
Diameter with Grid	7 mm (0.276")

## Ordering Information

### Optional Accessories

Preamplifier	CRY3541 1/4" SMB Interface CRY3543 1/4" Microdot Interface CRY3501 1/2" BNC Interface
Electrostatic Actuator	TA0303 1/4" IEPE Electrostatic Actuator
Adapter	TA0503 1/2" to 1/4" Adapter Ring
Electroacoustic Analyzer	CRY6151B Electroacoustic Analyzer
Power Supply	CRY575 Three-channel Microphone Power Supply
Cable	BL5001 BNC to BNC Cable /1.6m SMB to BNC Cable /1.5m Microdot to BNC Cable /1.5m

### Drawings(mm)[inch]

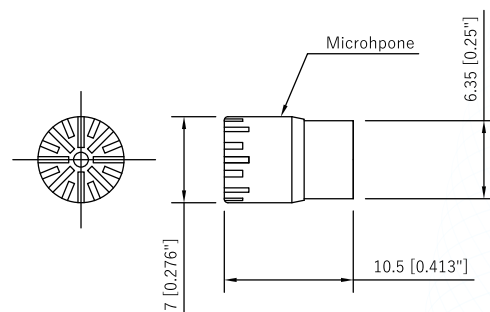


Fig.1 CRY3403 Microphone Drawings

### Frequency Response

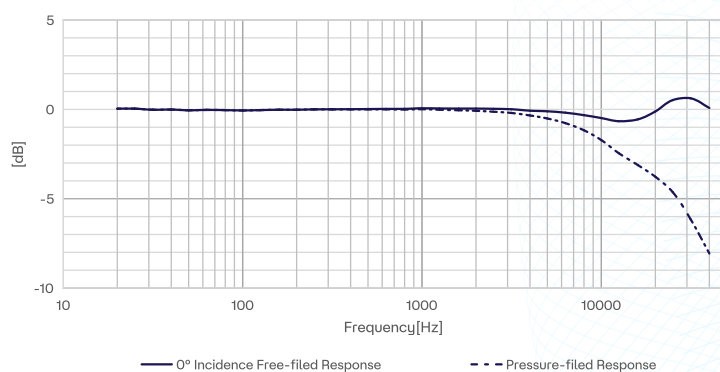


Fig.2 CRY3403 Microphone Typical Frequency Response

### Related Products

CRY3101	1" free-field prepolarized low-noise microphone, 50 mV/Pa, 4 Hz-16kHz, 12 dBA-140 dB
CRY3201	1/2" free-field prepolarized high-frequency microphone, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dBA-160 dB
CRY3203	1/2" free-field prepolarized high-sensitivity microphone, 50 mV/Pa, 3.15 Hz-20kHz, 16 dBA-146 dB
CRY3401	1/4" free-field prepolarized low-noise microphone, 15.8 mV/Pa, 4 Hz-40 kHz, 26dB-144 dB
CRY3402	1/4" pressure-field prepolarized ultra-high frequency microphone, 1.6 mV/Pa, 4 Hz-70kHz, 45dB-170 dB