



# CRY3403

## 1/4" Free-field Prepolarized High Frequency Microphone

### Features

- **Key Specifications**

|                 |                           |
|-----------------|---------------------------|
| Sensitivity     | 4 mV/Pa                   |
| Dynamic Range   | 35 dB 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 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 High frequency Free-field Microphones**

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 dB to 165 dB  |
| Inherent noise             | 35 dBA   |
| Operating Temperature      | -30°C to +80°C (-22°F to +176°F)                             |
| Temperature Stability      | 0.01 dB/°C (-10°C to +50°C)<br>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

### TEDS Combinations

|                |  |
|----------------|--|
| Microphone Set | CRY3403-S01 Microphone Set (CRY3541 IEPE Preamplifier)<br>CRY3403-S02 Microphone Set (CRY3543 IEPE Preamplifier) |
|----------------|--|

### Optional Accessories

|                   |   |
|-------------------|---|
| Preamplifier      | CRY3542 1/4" SMB Interface<br>CRY3501 1/2" BNCInterface |
| Microphone Holder | 1/2" Microphone Holder                                  |
| Adapter           | TA0503 1/2" to 1/4" Adapter Ring                        |
| Power Supply      | CRY575 Three-channel Microphone Power Supply            |

### Drawings(mm)[inch]

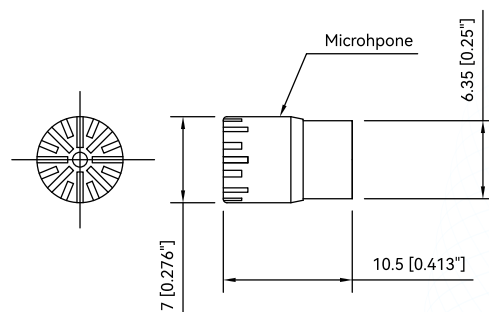


Fig.1 CRY3403 Microphone Drawings

### Frequency Response

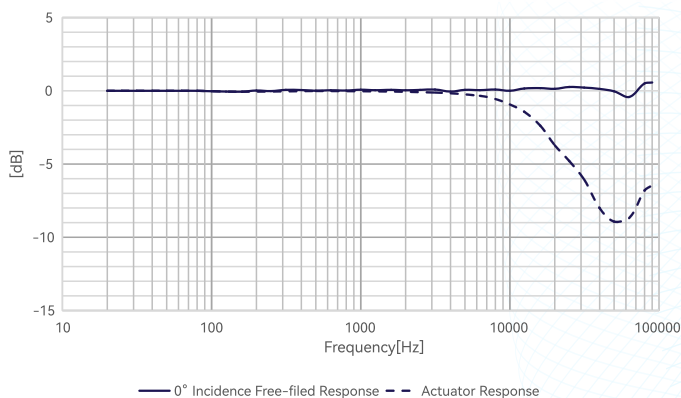


Fig.2 CRY3403 Microphone Typical Frequency Response

### Related Products

|         |  |
|---------|--|
| CRY3101 | 1" free-field prepolarized low-noise microphone, 50 mV/Pa, 4 Hz-16kHz, 12 dB-146 dB              |
| CRY3201 | 1/2" free-field prepolarized high-frequency microphone, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dB-160 dB |
| CRY3203 | 1/2" free-field prepolarized high-sensitivity microphone, 50 mV/Pa, 3.15 Hz-20kHz, 16 dB-146 dB  |
| CRY3401 | 1/4" free-field prepolarized low-noise microphone, 15.8 mV/Pa, 4 Hz-40 kHz, 26dB-144 dB          |