

# CRY3201

## 1/2" Free-field Prepolarized High-frequency Microphone

### Features

- **Key Specifications**

Sensitivity	12.5 mV/Pa
Dynamic Range	23 dB to 160 dB
Frequency Range	3.15 Hz to 40 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

CRY3201 is a 1/2 inch free field prepolarization measurement microphone designed for high frequency and high dynamic range acoustic measurements.

Its unique design ensures a flat frequency response, measuring frequency ranges up to 40 kHz, and can also withstand sound pressure levels up to 160 dB. It is an excellent general purpose measurement microphone for high definition audio measurement and other ultrasonic acoustic applications.

### Highlights

- **Use of High-sensitivity 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 CRY3201 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( $\pm 1.5$ dB)	12.5 mV/Pa, -38 dB re 1V/Pa
Frequency Response	3.15 Hz to 40 kHz $\pm 2$ dB
Polarization Voltage	0 V
Capacitance	13 pF (@250 Hz)
Dynamic Range(re.20uPa)	23 dB to 160 dB
Inherent noise	23 dBA
Operating Temperature	-30°C to +80°C (-22°F to +176°F)
Temperature Stability	0.005 dB/°C (-10°C to +50°C) 0.003 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	Rear vented
IEC 61094-4 Type	WS2F

### Dimensions

Height with Grid	12.7 mm (0.500")
Diameter with Grid	13.2 mm (0.520")

## Ordering Information

### TEDS Combinations

Microphone Set	CRY3201-S01 Microphone Set (CRY3501 IEPE Preamplifier)
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### Optional Accessories

Preamplifier	CRY3503 1/2" 10-32UNF CRY3502 1/2" SMB Interface
Microphone Holder	1/2" Microphone Holder
Sound Level Meter	CRY2851 Sound Level Meter
Power Supply	CRY575 Three-channel Microphone Power Supply
Electroacoustic Analyzer	CRY6151B Electroacoustic Analyzer

### Drawings(mm)[inch]

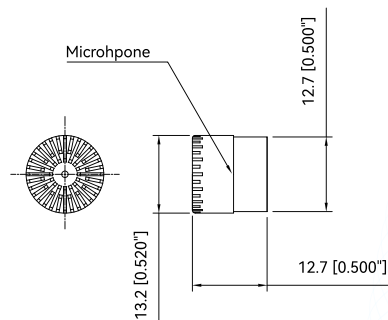


Fig.1 CRY3201 Microphone Drawings

### Frequency Response

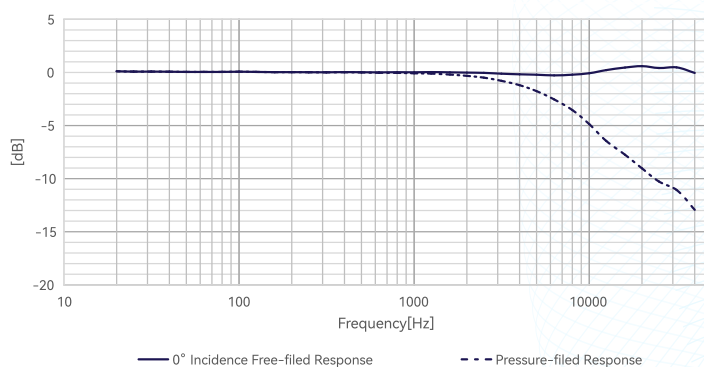


Fig.2 CRY3201 Microphone Typical Frequency Response

### Related Products

CRY3101	1" free-field prepolarized low-noise microphone, 50 mV/Pa, 4 Hz-16kHz, 12 dB-146 dB
CRY3202	1/2" pressure-field prepolarized wide-frequency microphone, 12.5 mV/Pa, 3.15 Hz-20kHz, 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