

# CRY3101

## 1" Free-field Prepolarized Low-noise Microphone

### Features

- **Key Specifications**

Sensitivity	50 mV/Pa
Dynamic Range	12 dB to 146 dB
Frequency Range	4 Hz to 16 kHz $\pm 2$ dB

- **Applications**

Anechoic chamber test  
Speaker test  
Low-noise testing

- **Standards**

IEC 61094 4:1995 Measurement microphones – Part 4

### Introduction

The CRY3101 is a free-field prepolarized measurement microphone, specially designed for sensitive acoustic tests in low-noise environments, such as anechoic chambers and quiet rooms.

The CRY3101 is widely applicable to scenarios that require precise acoustic tests, such as in the fields of acoustic design research, audio equipment calibration and so on.

### Highlights

- **Use of Low-noise Free-field Microphones**

Low-noise microphones have very low internal noise. When performing acoustic measurements, they have lower background noise to obtain lower acoustic signals. 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 CRY3101 measuring microphone is compatible with the 1/2" 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)	50 mV/Pa, -26 dB re 1 V/Pa
Frequency Response	4 Hz to 16 kHz $\pm 2$ dB
Polarization Voltage	0 V
Capacitance	66 pF (@250 Hz)
Dynamic Range(re.20uPa)	12 dB to 146 dB
Inherent noise	12 dBA
Operating Temperature	-20°C to +60°C (-4°F to +140°F)
Temperature Stability	0.015 dB/°C (-10°C to +50°C) 0.008 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	WS1F

### Dimensions

Height with Grid	19 mm (0.748")
Diameter with Grid	23.77 mm (0.936")

## Ordering Information

### TEDS Combinations

Microphone Set	CRY3101-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" Microphone Holder
Adapter	TA0501 1/2" to 1" Adapter Ring
Sound Level Meter	CRY2851 Sound Level Meter
Power Supply	CRY575 Three-channel Microphone Power Supply
Electroacoustic Analyzer	CRY6151B Electroacoustic Analyzer

### Drawings(mm)[inch]

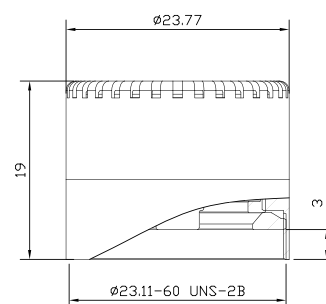


Fig.1 CRY3101 Microphone Drawings

### Frequency Response

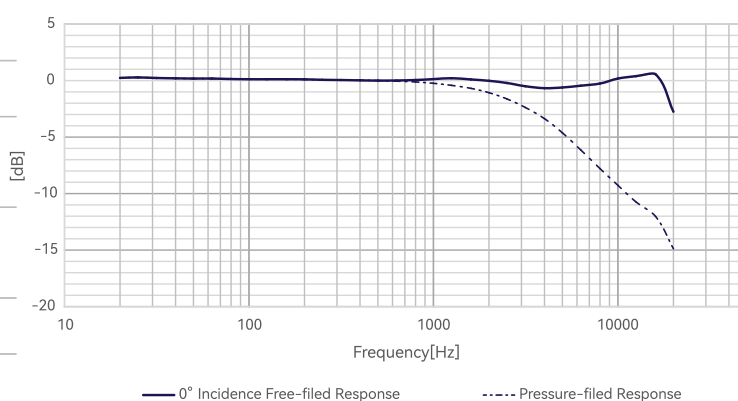


Fig.2 CRY3101 Microphone Typical Frequency Response

### Related Products

CRY3102	1" pressure-field prepolarized low-noise microphone, 50 mV/Pa, 4 Hz-8 kHz, 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
CRY3403	1/4" free-field prepolarized high-frequency microphone, 4 mV/Pa, 4 Hz-90kHz, 35dB-165dB