



CRY3101

1" Free-field Prepolarized Low-noise Microphone

Features

- **Key Specifications**

Sensitivity	50 mV/Pa
Dynamic Range	12 dBA to 140 dB
Frequency Range	4 Hz to 16 kHz ± 2 dB

- **Applications**

Anechoic chamber test
Speaker test
Low-noise testing

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

Introduction

CRY3101 is a 1-inch free-field prepolarized measurement microphone, specifically designed for sensitive acoustic testing in low-noise environments such as anechoic chambers and quiet rooms.

It is also widely applicable in various fields that require precise acoustic testing, research in acoustical design, and calibration testing of audio equipment including speakers.

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 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(± 1.5 dB)	50 mV/Pa, -26 dB re 1 V/Pa
Frequency Response	4 Hz to 16 kHz ± 2 dB
Polarization Voltage	0 V
Capacitance	66 pF (@250 Hz)
Dynamic Range(re.20uPa)	12 dBA to 140 dB
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")

Drawings(mm)[inch]

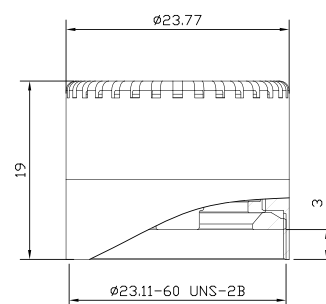


Fig.1 CRY3101 Microphone Drawings

Frequency Response

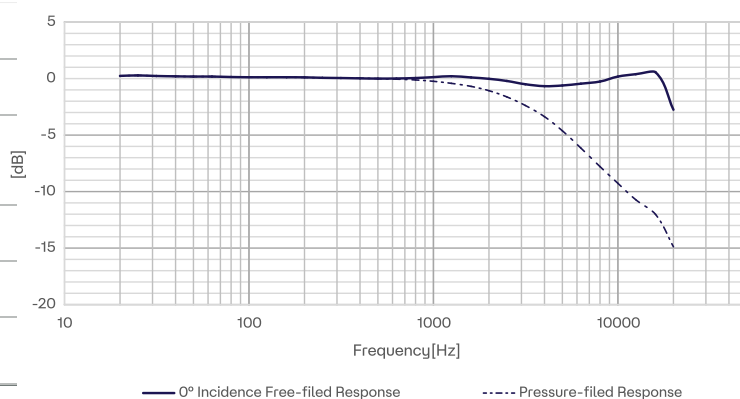


Fig.2 CRY3101 Microphone Typical Frequency Response

Ordering Information

Optional Accessories

Preamplifier	CRY3501 1/2" BNC Interface CRY3503 1/2" Microdot Interface CRY3502 1/2" SMB Interface
Electrostatic Actuator	TA0301 1" IEPE Electrostatic Actuator
Adapter	TA0501 1/2" to 1" Adapter Ring
Power Supply	CRY575 Three-channel Microphone Power Supply
Electroacoustic Analyzer	CRY6151B Electroacoustic Analyzer
Cable	BL5001 BNC to BNC Cable /1.6m SMB to BNC Cable /1.5m Microdot to BNC Cable /1.5m

Related Products

CRY3102	1" pressure-field prepolarized low-noise microphone, 50 mV/Pa, 4 Hz-8 kHz, 12 dBA-146 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
CRY3403	1/4" free-field prepolarized high-frequency microphone, 4 mV/Pa, 4 Hz-90kHz, 35dBA-165dB