



# CRY3203-S01

## 1/2" Free-field Prepolarized High-sensitivity Microphone Set

### Features

- **Key Specifications**

|                     |                              |
|---------------------|------------------------------|
| Nominal Sensitivity | 50 mV/Pa                     |
| Dynamic Range       | 16 dBA to 135 dB             |
| Frequency Range     | 3.15 Hz to 20 kHz $\pm 2$ dB |

- **Applications**

Anechoic chamber test  
Electroacoustic test  
Noise test

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

- **Components**

CRY3203 1/2" Free-field Prepolarized Microphone  
CRY3501 1/2" IEPE Preamplifier

### Introduction

CRY3203-S01 is a free-field prepolarized microphone and preamplifier set widely used in acoustic testing environments, such as anechoic chambers and quiet rooms. Its frequency response range matches the auditory frequency range of the human ear, making it highly suitable for noise detection. Additionally, it is also widely applicable in various fields including electroacoustic measurements, audio measurements, and acoustical research.

### Highlights

- **Use of High-sensitivity Free-field Microphones**

High-sensitivity microphone sets have a broad measurement frequency range and are applicable to a variety of measurement scenarios.

Free-field microphone sets 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 CRY SOUND prepolarized microphone kit requires a constant current source power module (IEPE power supply) that can provide a current of 2mA to 20mA and a no-load voltage of 24V.

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

- **TEDS Microphone Set**

Supports TEDS, and TEDS programmed to the IEEE 1451.4 standard for SMART transducers, V 1.0 format.

- **Calibration**

Each CRY SOUND microphone set 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 and preamplifiers are supported by a 10-year warranty—offering one of the best service guarantees in the world.

# Technical Specifications

## Specifications

|                            |                                                               |
|----------------------------|---------------------------------------------------------------|
| Field Type                 | Free-field                                                    |
| Sensitivity( $\pm 1.5$ dB) | 50 mV/Pa, -26 re 1V/Pa                                        |
| Frequency Response         | 3.15 Hz to 20 kHz $\pm 2$ dB                                  |
| Polarization Voltage       | 0 V                                                           |
| Dynamic Range(re.20uPa)    | 16 dBA to 135 dB                                              |
| Operating Temperature      | -30°C to +70°C (-22°F to +158°F)                              |
| Temperature Stability      | 0.012 dB/°C (-10°C to +50°C)<br>0.007 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                                                          |
| Output Impedance           | < 35 $\Omega$                                                 |
| Maximum Output Voltage     | > 9.0 Vp                                                      |
| DC Bias Voltage            | 12V $\pm$ 2 V                                                 |
| Power Supply               | IEPE (2 mA to 20 mA)                                          |
| Typical Operating Current  | 4 mA                                                          |
| Interface Type             | BNC                                                           |

## Ordering Information

### Consisting of

|                        |                                                    |
|------------------------|----------------------------------------------------|
| Measurement Microphone | CRY3203 1/2" Free-field<br>Prepolarized Microphone |
| Preamplifier           | CRY3501 1/2" IEPE Preamplifier                     |
| Cable                  | BL5001 BNC to BNC Cable /1.6m                      |

### Optional Accessories

|                        |                                                                                                 |
|------------------------|-------------------------------------------------------------------------------------------------|
| Electrostatic Actuator | TA0302 1/2" Electrostatic<br>Actuator                                                           |
| Power Supply           | CRY575 Three-channel<br>Microphone Power Supply                                                 |
| Cable                  | BL5001 BNC to BNC Cable /1.0m<br>BL5001 BNC to BNC Cable /3.2m<br>BL5001 BNC to BNC Cable /5.0m |

## Frequency Response

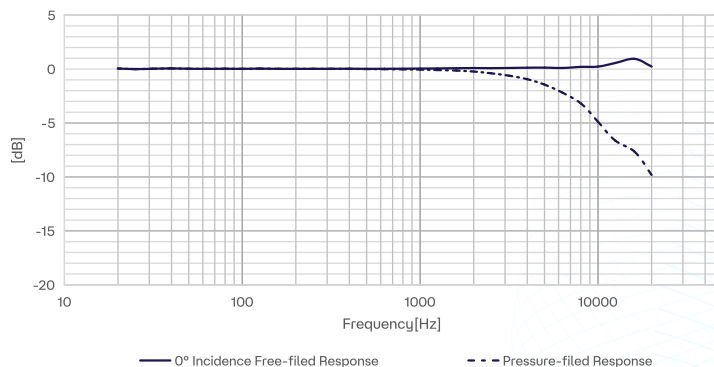


Fig.1 CRY3203-S01 Microphone Set Typical Frequency Response

## Dimensions

|                    |                 |
|--------------------|-----------------|
| Height with Grid   | 91.5 mm (3.6")  |
| Diameter with Grid | 13.2 mm (0.52") |

## Drawings(mm)[inch]

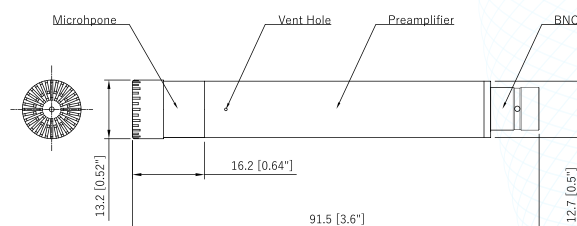


Fig.2 CRY3203-S01 Microphone Set Drawings

## Related Products

|             |                                                                                                      |
|-------------|------------------------------------------------------------------------------------------------------|
| CRY3203-S02 | 1/2" free-field prepolarized high-sensitivity microphone set, 50 mV/Pa, 3.15 Hz-20kHz, 16 dBA-132 dB |
| CRY3101-S01 | 1" free-field prepolarized low-noise microphone set, 50 mV/Pa, 4 Hz-16kHz, 12 dBA-135dB              |
| CRY3201-S01 | 1/2" free-field prepolarized high-frequency microphone set, 12.5 mV/Pa, 3.15 Hz-40 kHz, 23 dBA-147dB |
| CRY3403-S01 | 1/4" free-field prepolarized high-frequency microphone set, 4 mV/Pa, 4 Hz-90kHz, 35dBA-154dB         |
| CRY3261-S01 | 1/2" free-field prepolarized ultra low-noise microphone set, 354 mV/Pa, 3.15 Hz-20kHz, 7.5dBA-115dB  |