



# CRY3213

## 1/2" NVH Measurement Microphone

### Features

- **Key Specifications**

Nominal Sensitivity	50 mV/Pa
Dynamic Range	17 -136 dB
Frequency Range	3.15 Hz-20 kHz $\pm 2$ dB

- **Applications**

Optimization of Vehicle Interior Quietness  
Powertrain Noise Reduction  
Detection and Elimination of Abnormal Noises  
High-Temperature Environmental Testing

- **Standards**

IEC 61094 4:1995 Measurement microphones - Part 4

### Introduction

The CRY3213 is a high-precision microphone specifically engineered for demanding NVH (Noise, Vibration, and Harshness) testing scenarios.

Featuring IP67-rated protection and an extended operating temperature range of  $-50^{\circ}\text{C}$  to  $125^{\circ}\text{C}$ , it excels in harsh environments with humidity, dust, particulate contamination, and extreme temperatures, ensuring stable and reliable data acquisition.

### Highlights

- **Rugged Design**

CRY3213 NVH Measurement Microphone is engineered for durability with stable sensitivity performance even in harsh testing environments.

- **Waterproof & Dustproof**

Safe for use in humid or splashing environments, compliant with IP67 standards.

- **Power-on Indicator**

Provides visual confirmation upon power-up for convenient operation.

- **Extreme Temperature Performance**

Designed for extreme conditions, operating temperature range:  $-50^{\circ}\text{C}$  to  $125^{\circ}\text{C}$ , ensuring accurate measurements in demanding environments.

- **Shock Resistance**

The product effectively mitigates risks from accidental drops and mechanical vibrations, ensuring long-term reliability of automotive test data.

Key performance metrics include: Shock resistance up to  $1000\text{ m/s}^2$ , vibration resistance up to  $80\text{ m/s}^2$ .

- **EMC Immunity**

The CRY3213 NVH measurement microphone meets both conducted and radiated disturbance immunity standards, complying with IEC 61000-4 requirements, making it suitable for harsh electromagnetic environments.

- **Compatibility**

CRY3213 NVH measurement microphone requires an IEPE constant current power supply module with 2mA-20mA constant current output and 24V open-circuit voltage.

- **Calibration**

Factory-calibrated using traceable calibration equipment, with a calibration certificate included. Annual recalibration is recommended.

## Technical Specifications

### Specifications

Field Type	Free-field
Sensitivity(±2 dB)	50 mV/Pa, -26 dB re 1V/Pa
Frequency Response	3.15 Hz – 20 kHz ±2 dB
Dynamic Range(re.20uPa)	17 – 136 dB
Inherent Noise	17 dBA
Dynamic range upper limit	136 dB (THD < 3%)
Polarization Voltage	0 V
Capacitance@250Hz	15pF
Pressure Equalization Vent	Rear vented
Output Impedance	< 50 Ω
Maximum Output Voltage	> 8.0 Vp
Power Supply	IEPE (2 – 20) mA, Typical: 4 mA
DC Bias Voltage	12 V ± 2 V
Interface Type	BNC
Operating Temperature	-50 °C – +125 °C
Storage Temperature	-25 °C – +70 °C
Operating Humidity	0-90% RH no condensation
Temperature Coefficient	-0.008 dB/°C, 0.004 dB/°F
Humidity Stability	< 0.1 dB (0 to 90%RH no condensation)
Static Pressure Stability	-0.01 dB/kPa
Protection Rating	IP67
TEDS	IEEE 1451.4
Shock Resistant	1000 m/s <sup>2</sup>
Vibration Resistant	80 m/s <sup>2</sup>
EMC Immunity Standard	IEC 61000-4-6: 2013 IEC 61000-4-3: 2020

### Frequency Response

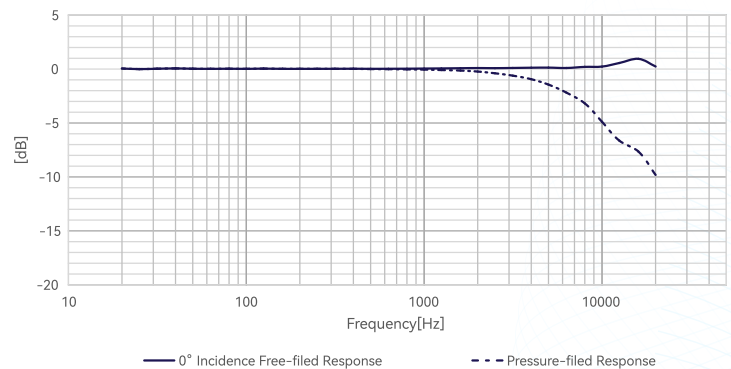


Fig.1 CRY3213 NVH Measurement Microphone

### Dimensions

Height with Grid	92 mm (3.6")
Diameter with Grid	14.5 mm (0.6")

### Drawings(Mm)[Inch]

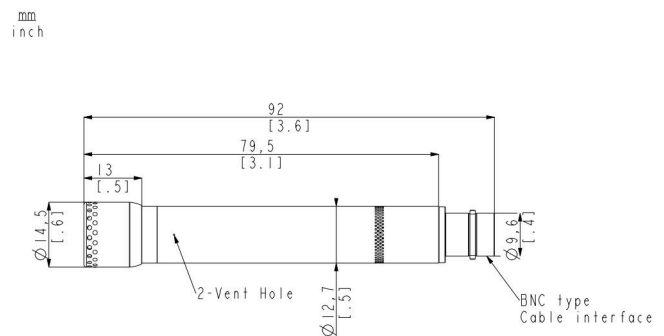


Fig.2 CRY3213 NVH Measurement Microphone Drawings

## Product Configuration

Microphone	CRY3213 NVH Measurement Microphone
Calibrator Adapter	Compared to the standard microphone top grid, the CRY3213 has a slightly larger protective grid, requiring a dedicated calibration adapter.
Replaceable Protective Grid	Equipped with a standard protective grid for convenient measurement.