



OPTIMIC™ 2180

Ruggedized Infrasound Fiber Optic Microphone, Extended Frequency

Fiber optic microphone for indoor/outdoor acoustic monitoring with infrasound and extended frequency range response. Ideal for industrial use, placement in heavy machinery, or where the microphone requires very robust housing and fiber cables.

FEATURES

- ▶ Robust design suited to industrial applications
- ▶ Absolute EMI/RFI immunity
- ▶ Completely passive sensor with no electrical parts
- ▶ Infrasound capability
- ▶ Extended frequency response
- ▶ Standard analog output
- ▶ High reliability and environmental stability
- ▶ Optical fiber connection over extended lengths without signal loss
- ▶ Exceptionally low sensitivity to vibration
- ▶ Plug-and-play system
- ▶ Cost-effective, long-term solution

TECHNICAL SPECIFICATIONS

Polar Pattern	Omnidirectional
Frequency Response	0.5-15,000 Hz
Conformity 0.5 - 1,000 Hz	±1.0 dB
Conformity 1,000 - 15,000 Hz	±3.0 dB
Sensitivity	100 mV/Pa ±10% at 1 kHz
Equivalent Self-Noise	≤31 dBA
Noise Density	0 dB SPL / √ Hz at 10 Hz
Maximum Acoustic Pressure	114 dB SPL
Total Harmonic Distortion	<1% at 84 dB SPL
Supply Voltage	8-15 V DC
Current Drain (max.)	80 mA
Operating Temperature	-20 to +60 °C (-4 to +140 °F)
Storage Temperature	-20 to +60 °C (-4 to +140 °F)
Humidity - 1000 hours	Up to 95% RH at 40 °C
MTBF	>100,000 hours
Microphone Head	
Material	Delrin
Dimensions D/L	30/90 mm
Weight	28 g
Optical Cable Length	10 m

APPLICATIONS

- ▶ High fidelity equipment monitoring
- ▶ Infrasound measurements
- ▶ High voltage electrical utilities
- ▶ Oil and gas detection sites
- ▶ Highly explosive areas
- ▶ High RFI and EMI areas
- ▶ Aerospace measurements
- ▶ Petrochemical facilities
- ▶ EMC test labs



OPTIMIC™ 2180 System Kit

Complete, versatile, cost-effective solution

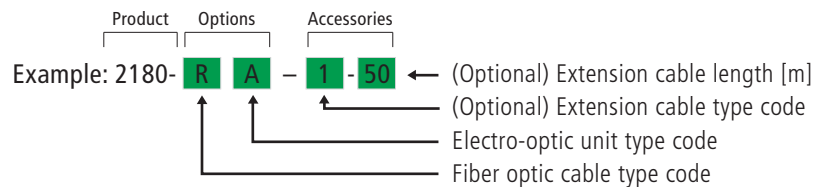
Optoacoustics' OPTIMIC 2180 system is comprised of our advanced OPTIMIC fiber optic microphone, electro-optic unit, audio cable with BNC connector, DC power supply and a ruggedized carrying case.

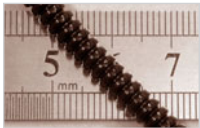








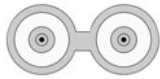
Optoacoustics EOU 100 electro-optic unit showing fiber optic, audio, and power supply connections

PRODUCT ORDERING GUIDE

Use the matrix below to select options and accessories for your order.



Options	Fiber Optic Cable Type		Electro-Optic Unit Type	
Item	Black Polyamide ∅ 5.1 mm	Milspec ∅ 5 mm	EOU 100 Single Channel	EOU 200 Single Channel
Code	R	M	A	B
				

Accessories	Extension Cable Type (Specify length from 10-100 m)			
Item	Outdoor, Milspec ∅ 5 mm	Outdoor, Polyamide ∅ 5.1 mm	Indoor, Rugged ∅ 3.0 mm	Indoor, Zip Cord ∅ 3.0 x 2 mm
Code	1	2	3	4
				



SOUND SOLUTIONS FROM LIGHT TECHNOLOGY

Optoacoustics is a leading manufacturer of high performance, optical fiber-based sound and vibration sensors. Each of our products combines the natural intelligence of optics and acoustics to meet technical performance demands which cannot be addressed by conventional sensing solutions. Optoacoustics' pioneering technology is protected by over 20 international patents.

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DS-2180-1 1009