



OPTIMIC™ 1200

Fiber Optic Microphone for Extremely Demanding Applications

Miniature optical microphone for acoustic monitoring with extended frequency response, high SNR over long distances and at extreme temperatures. Ideal where the footprint for microphone placement is severely limited or where the microphone is a sub-component in another device or system.

FEATURES

- ▶ Small, lightweight MEMS design
- ▶ Absolute EMI/RFI immunity
- ▶ Extended frequency response
- ▶ High SNR over long distances
- ▶ Noise levels lower than ECM electret microphones
- ▶ Suitable for use at extreme temperatures
- ▶ 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	10-15,000 Hz		
Conformity 10 - 1,000 Hz	±0.5 dB		
Conformity 1,000 - 15,000 Hz	±3.0 dB		
Sensitivity	100 mV/Pa ±10% at 1 kHz		
Equivalent Self-Noise Levels	≤19 dBA	≤21 dBA	≤34 dBA
	At Distances	10 m	100 m
Maximum Acoustic Pressure	114 dB SPL		
Total Harmonic Distortion	<1% at 84 dB SPL		
Equivalent Vibration Sensitivity	Max. 45 db SPL/g at 1 kHz		
Supply Voltage	8-15 V DC		
Current Drain (max.)	110 mA		
Operating Temperature	-50 to +120 °C (-58 to +248 °F)		
Storage Temperature	-50 to +120 °C (-58 to +248 °F)		
Humidity - 1000 hours	Up to 95% RH at 40 °C		
MTBF	>100,000 hours		
Microphone Head Material	Polycarbonate		
Dimensions D/L	6/23 mm		
Weight	0.6 g		
Optical Cable Length	10 m		

APPLICATIONS

- ▶ Extreme environments requiring high fidelity monitoring
- ▶ Close-proximity machine monitoring
- ▶ Extremely low noise level monitoring
- ▶ Long range peer-to-peer monitoring
- ▶ Oil and gas detection sites
- ▶ High voltage electrical utilities
- ▶ High RFI and EMI areas
- ▶ Petrochemical facilities



OPTIMIC™ 1200 System Kit

Complete, versatile, cost-effective solution

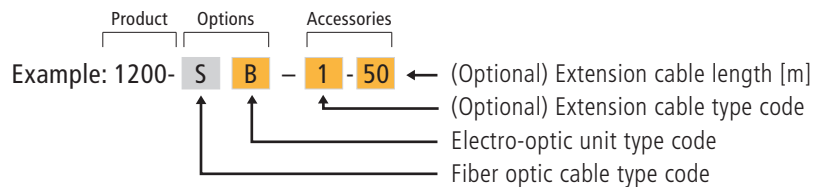
Optoacoustics' OPTIMIC 1200 system is comprised of our advanced OPTIMIC fiber optic microphone, electro-optic unit, audio cable with BNC connector, DC power supply and a ruggedized carrying case.








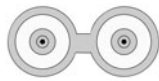
Optoacoustics EOU 100 electro-optic unit showing fiber optic, audio, and power supply connections

PRODUCT ORDERING GUIDE

Use the matrix below to select accessories for your order.



Options	Fiber Optic Cable Type	Electro-Optic Unit Type	
Item	Clear Teflon Ø 1 mm	EOU 100 Single Channel	EOU 200 Single Channel
Code	S	A	B
			

Accessories	Extension Cable Type (Specify length from 10-1000 m)		
Item	Outdoor, Milspec Ø 5 mm	Indoor, Rugged Ø 3.0 mm	Indoor, Zip Cord Ø 3.0 x 2 mm
Code	1	3	4
			

* Extension cables listed here are not suitable for operation at extreme temperatures.



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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