



## OPTIMIC™ 1195

### Fiber Optic Microphone for High SNR, Wide Frequency Applications

Miniature optical microphone for acoustic monitoring that requires high signal-to-noise ratios (SNR) and wide frequency response. 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
- ▶ Completely passive sensor with no metal or electrical parts
- ▶ High SNR, Wide Frequency
- ▶ Noise levels lower than ECM electret microphones
- ▶ High reliability and environmental stability
- ▶ Optical fiber connection over extended lengths without signal loss
- ▶ Exceptionally low sensitivity to vibration
- ▶ Headphone output and volume control
- ▶ 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	250 mV/Pa ±10% at 1 kHz
Equivalent Self-Noise Levels	≤22 dBA
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	-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	Polycarbonate
Dimensions D/L	6/30 mm
Weight	0.5 g
Optical Cable Length	10 m

#### APPLICATIONS

- ▶ Extremely low level noise monitoring
- ▶ Long range peer-to-peer monitoring
- ▶ 'No interference' signal monitoring
- ▶ Oil and gas detection sites
- ▶ High voltage electrical utilities
- ▶ Highly explosive areas
- ▶ High RFI and EMI areas
- ▶ Aerospace measurements
- ▶ Petrochemical facilities



## OPTIMIC™ 1195 System Kit

Complete, versatile,  
cost-effective solution

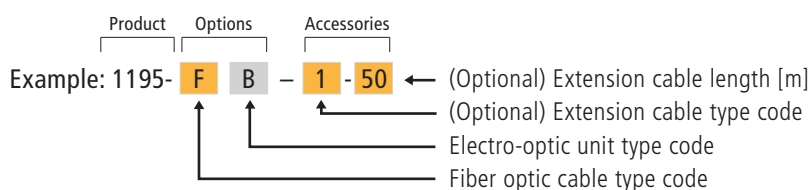
Optoacoustics' OPTIMIC 1195 system is comprised of our advanced OPTIMIC fiber optic microphone, electro-optic unit, audio cable with BNC connector, DC power supply and a ruggedized carrying case.

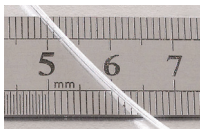
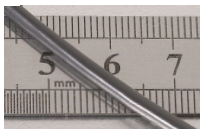





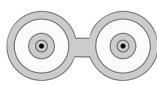
Optoacoustics EOU 200 electro-optic unit showing fiber optic, audio, and power supply connections

### 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	Clear PVC Ø 1 mm	Kevlar reinforced black PVC Ø 3 mm	EOU 200 Single Channel
Code	<b>P</b>	<b>F</b>	<b>B</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	<b>1</b>	<b>3</b>	<b>4</b>
			



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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