SOUND SOLUTIONS FROM LIGHT TECHNOLOGY



OPTIMIC™ 1160

Fiber Optic Microphone for Extended Frequency Applications

Miniature fiber optic microphone for indoor acoustic monitoring with extended frequency range 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
- 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	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	≤31 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
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	6/23 mm
Weight	0.6 g
Optical Cable Length	10 m

APPLICATIONS

- High fidelity signal monitoring
- High voltage electrical utilities
- Oil and gas detection sites
- Highly explosive areas
- High RF areas
- Severe electromagnetic fields
- Aerospace measurements
- Petrochemical facilities
- EMC test labs



OPTIMIC™ 1160 System Kit

Complete, versatile, cost-effective solution

Optoacoustics' OPTIMIC 1160 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.

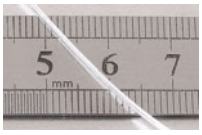
Product | Options | Accessories

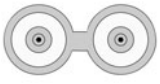
Example: 1160- P A – 1 - 50 ← (Optional) Extension cable length [m]

(Optional) Extension cable type code

Electro-optic unit type code

Fiber optic cable type code

Options	Fiber Optic Cable Type		Electro-Optic Unit Type	
Item	Clear PVC ∅ 1 mm	Kevlar reinforced black PVC ∅ 3 mm	EOU 100 Single Channel	EOU 200 Single Channel
Code	**P**	**F**	**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**
				

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