

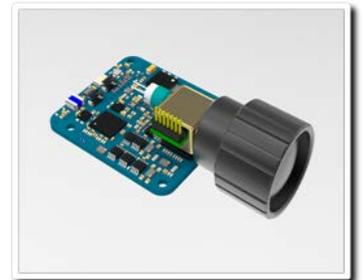


Optical Audio Sensing Assembly for Remote Audio Detection

Omnisensing's new Advanced Optical Audio Sensing Assembly (OASA), model OSP-OASA-G100, is designed for remote sound wave detection with an all-in-one package that integrates laser, detector, PIC (Photonics Integrated Circuit) and lens into one small package. Utilizing our proprietary hardware and firmware, the OASA can detect and capture minute vibrations at distances up to 50 meters. Its basic function as a remote laser microphone offers unparalleled discrimination in harsh or noisy environments allowing the user to quickly discern the desired capture signal. It can be used as a standalone sensor module or as an add-on function to existing modules or instruments. Uses for this highly sensitivity audio signal detection engine will enhance remote measurements across Scientific, Industrial and Manufacturing applications. Custom designs can also be implemented for Aerospace, Audio-Acoustics, Automotive, Medical and structural analysis.

Features:

- ◆ High sensitivity: Due to its optical coherent detection PIC engine, the OASA assembly can detect very small audio signals up to 50meters.
- ◆ Vibration measurement accuracy is maintained across its full frequency range.
- ◆ High resolution: Within the detectable audio frequency range (150Hz-6KHz), the detectable vibration velocity is ~10nm/sec.
- ◆ Small form-factor: 50mmX30mmX30mm
- ◆ Low emitting power: <10mW and low power consumption.
- ◆ Immune to environmental interference.
- ◆ Standalone module can be networked via Ethernet or controlled via USB
- ◆ Low cost scalable components that are ideal for high volume production.
- ◆ Reference designs and application support available.



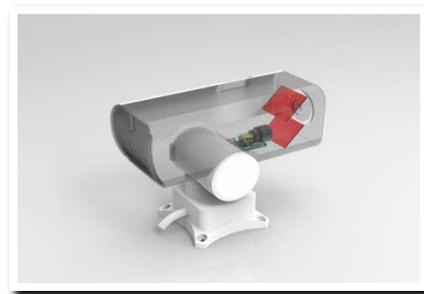
Model OSP-OASA-G100

Applications

- ◆ Audio sensor for advanced remote microphone designs
- ◆ Enhanced security via remote audio detection as an integral part of a surveillance system.



Key component of standalone sensor module



Add-on function of video surveillance system

Specifications	Parameters
Measurement distance (m)	5-50
Laser output (mW)	<10
Laser wavelength(nm)	1310
Eye safety level	Class I
Lens diameter (mm)	28
Focused Beam size at optimized distance(mm)	<1@5m, <5@50m
Anti-glare interference(Lux)	>60000
S sampling rate(MHz)	5
Acoustic wave measurement frequency range (kHz)	500~5000
Acoustic wave measurement range(mm/s)	<5000
Acoustic wave measurement sensitivity (nm)	0.1
Reference design HW power consumption (W)	<6
Dimensions including the lens(mm)	50x30x30
Weight(g)	50
Temperature range(°C)	0-50
Relative humidity	35%-85%

Mechanical:

Mechanical dimensions under current reference design.

