



PRODUCT HIGHLIGHTS

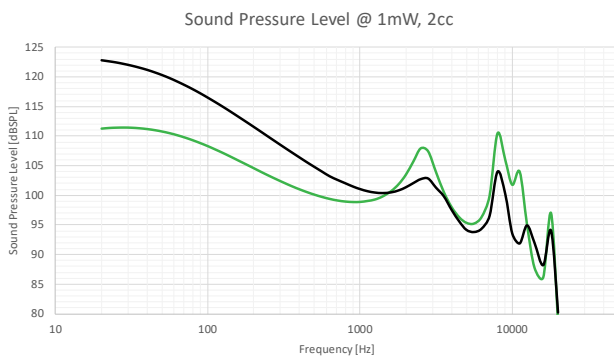
- **Optimized for outstanding ANC performance**
- **Low distortion due to very linear diaphragm motion and optimized motor.**
- **High sensitivity using DDD Technology™ (patent pending)**
- **Class leading performance/size ratio**

SPEAKER DATA

OWR-0570T-16	
Sensitivity (1mW, 2cc, 100Hz) [dB SPL]	117
F0 (in 2cc) [Hz]	2700
DC resistance [ohm]	16
Maximum power (20 Hz to 20 kHz) [mW]	>60
Dimensions (Ø x H) [mm]	5.7 x 4.0

ACOUSTIC PERFORMANCE, 1.0mW / 2cc

Black: OWR-0570T-16
Green: Standard Ole Wolff 5.8mm driver



Graph 1: SPL comparison to standard Ole Wolff 5.8mm driver



OWR-0570T-16

EARPHONE DRIVER FOR DEMANDING ANC APPLICATIONS

The OWR-0570T-16 is an earphone driver designed for outstanding ANC performance. The driver delivers very high SPL with a minimum level of THD.

The high performance here is achieved by using a unique diaphragm design (DDD™, patent pending) in combination with a very powerful motor.

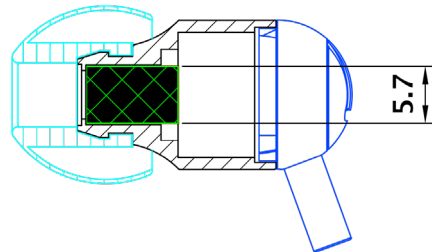
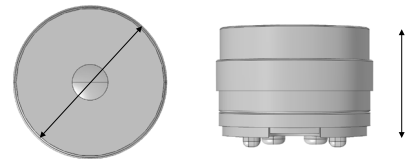
For comparison, please refer to graph 2 where the OWR-0570T-16 is compared to a conventional Ø5.8mm receiver forced to max. possible SPL at a maximum THD level of 3%.

It can be seen that in the frequency range of ANC interest (20Hz – 1500Hz), the OWR-0570T-16 performs with a much higher SPL than the Ø5.8mm before hitting the THD limit of 3%.

It should be noted that maximum power handling of course is a part of the equation, where the limit for receivers of this size is a maximum long term voice coil temperature of 80 deg. C which is respected.

MECHANICAL

Ø 5.7mm H 4.0mm



The outer diameter of only 5.7mm allows for placement in the nozzle of the earphone which improves HF performance as well as frees up space in the earphone housing for electronics, batteries etc.

For feedback-type ANC it is desirable to keep both the driver and the feedback microphone as close to the eardrum as possible.

SUMMARY

The OWR-0570T-16 receiver is the optimal choice for present and future in-ear earphone designs where focus is set on very high audio performance and comfort. Other parameters such as the well balanced frequency response and a very low R&B are also highly appreciated qualities which this performance-to-size optimized miniature driver delivers.

RESOURCES: Upon request Ole Wolff can supply 3D CAD drawings, Comsol™ simulations and lumped models of the speaker to assist you in the design process.

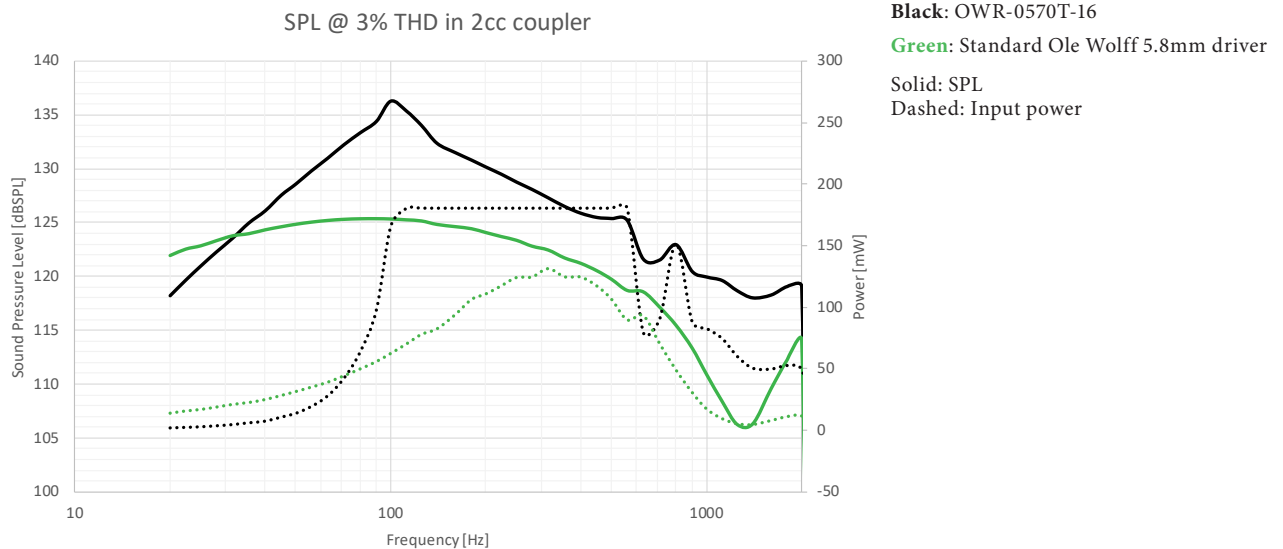


OWR-0570T-16

- SPL comparison with standard 5.8mm driver at 3% THD
- Comparison to the 7mm driver used in the Sony WF-1000MX3

SPL WHEN LIMITED TO 3% OR VOICE COIL TEMPERATURE=80°C

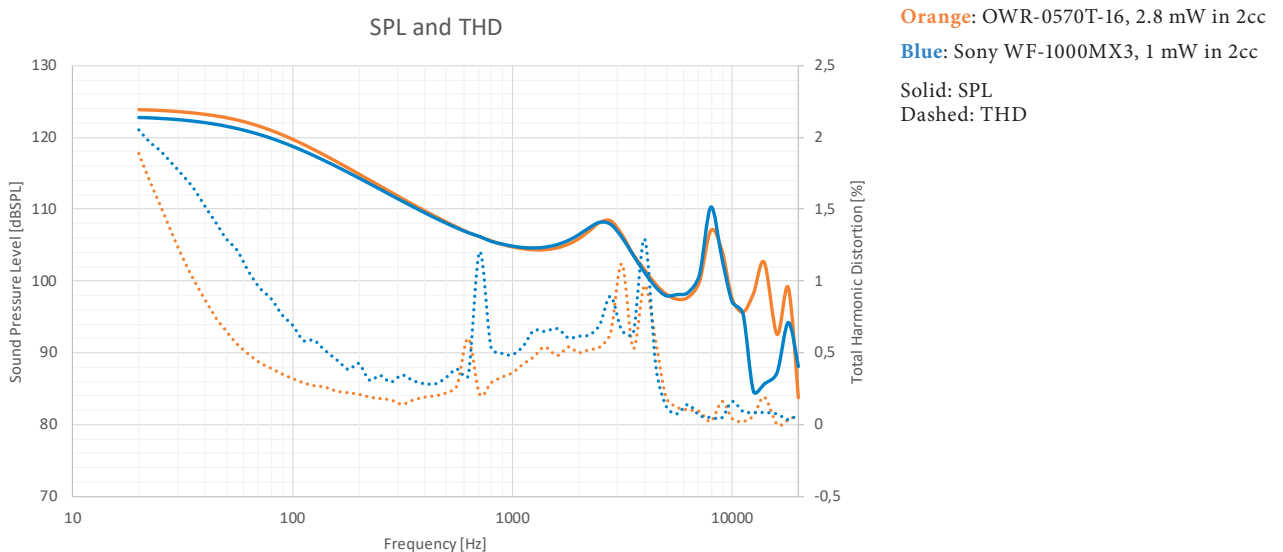
The drivers were tested in a test sequence that increases the input voltage to the point where *either* the THD hits 3% or the voice coil temperature reaches 80°C.



Graph 2: Clearly the OWR-0570T-16 can play much louder in the ANC-critical 0.03-1.5 kHz region than the standard 5.8mm driver before generating 3% THD or heating up to 80°C.

COMPARISON TO SONY WF-1000MX3 DRIVER

The driver in the acclaimed Sony WF-1000MX3 ANC earphone is Ø7mm. When input power to the OWR-0570T-16 is increased to 2.8 mW it has very similar SPL but lower THD and increased HF response due to the build in front resonator in the grill.



Graph 3: The OWR-0570T-16 has lower THD at 2.8mW than the Ø 7mm Sony WF-1000MX3 driver at 1 mW but very similar frequency response with slightly higher bass and HF response.

