

## Opalum Technical Product Description: FLOW.1010

This document provides technical background information about the Opalum FLOW.1010

### The speakers

The FLOW.1010 speakers are each using 10 pieces of 2" drivers configured in an array. One of the drivers is used as tweeter and 9 drivers are used as woofers in groups of three.

The speakers are active and powered by Opalums Actiline® technology. Each speaker receives a digital signal through the speaker cable. The signal is heavily processed using Opalums own technology building blocks and then amplified and sent to the 10 drivers.

There are four (4) dedicated and extremely efficient High PSRR Closed-loop Class D Amplifiers used in EACH of the speakers and are configured to deliver 20w to the single tweeter and 3x20w for the woofer groups of 3 drivers per group (RMS and 0,05% THD). In total 160 w for a FLOW.1010 system. The crossover frequency is 2 kHz and implemented with a digital 4<sup>th</sup> order Linkwitz-Riley filter.

The dispersion of the FLOW.1010 is similar in vertical and horizontal direction, which means that you can turn the speaker 90 degrees without compromising the performance.

Opalums core technology Actisonic® is what makes the FLOW.1010 a sonic masterpiece: Years of research from Linköping University has resulted in a technology platform that allows Opalum to create clear and pleasant sound from physically constrained, seemingly impossible acoustic designs. Model specific characterization and measurements ensure total control of the audio sub-system including electronics, transducer and enclosure coloring of the sound.

The foundation of the technology is based on advanced inverse-filtering algorithms optimizing both frequency and time domain characteristics, giving a more natural sound, clearer details and a very well defined stereo image even from the worst possible acoustic form-factors.

The unique slim and award winning design of the FLOW.1010 was inspired by a sheet of paper floating down along a wall. The aluminum cabinet and the elegant undulating shape is not only pleasing to the eye, it minimizes vibrations and conducts the sound directly to the listener.

Typical setups would be for TVs, Home Theater Systems, and whole house audio.

