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MOBIDIAG

Speeding time-to-market and enabling a higher degree of multiplexing for molecular infectious disease diagnostics

CASE STUDY

Client:
Mobidiag

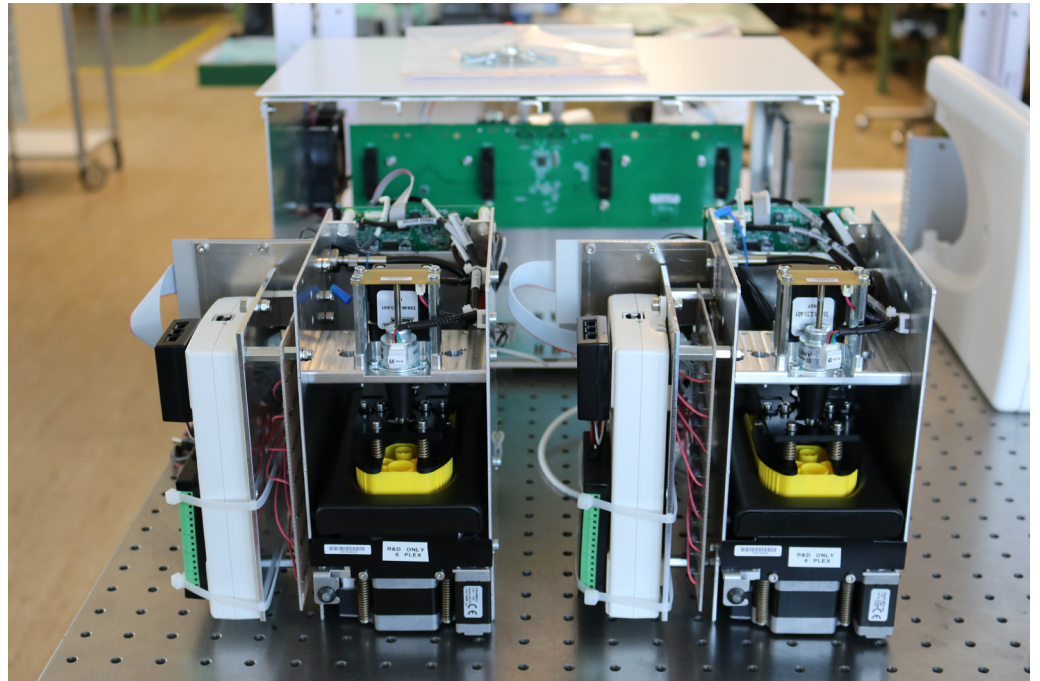
Website:
www.mobidiag.com

Industry:
IVD

Solution/Application:
6-color qPCR

Client Objective

Through teaming up with Volpi, Mobidiag's requirements for a development and industrialization partner for higher multiplexing optoelectronic qPCR modules than in the current 2-optical channel Novodiag instruments, can be met. Volpi's individualized approach for enabling solutions and its proven performance resulted in a collaboration which helped fast time to market of higher multiplexing for the sake of people's health.



Lab models of cartridge operating units, including Volpi-developed Smart Optoelectronic Module

Overview

Volpi has designed, developed and will be manufacturing optical modules with 6 optical channels each for excitation and detection to be integrated in Mobidiag's next generation Novodiag 2 instrument platform.



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Approach

Volpi has been building on its expertise and platform technologies in multi-channel illumination and detection solutions for qPCR to fulfill the optical performance requirements derived from Mobidiag's assay performance requirements. Based on its established supply chain for components in optics, mechanics and electronics and its software capabilities, Volpi provided provide functional prototypes within just a few months from the start of the collaboration.

Results

The timely development at Volpi has helped Mobidiag accelerate the assay and instrument development schedule. This has enabled Mobidiag to focus on assays development by utilizing the new 6-color functional module prototypes for assay testing.

With an achieved sensitivity of 1nM, minimized channel crosstalk and straylight, and state-of-the art thermal insulation, these modules are designed and built to perform.

Conclusion

Increasing multiplexing through the expansion of the number of optical wavelengths requires a sound understanding and multi-years of experience in optoelectronics design and fluorophores selection. Volpi has helped Mobidiag to expand the number of optical channels from two to six, and thereby increased the versatility and suitability of its assays for syndromic testing for infectious diseases.



For Mobidiag, Volpi is a key development and manufacturing supply partner. The collaboration on optoelectronic modules for our Novodiag MDX platform enables us to optimize the detection capabilities. That is key for even more comprehensive syndromic and targeted molecular diagnostics panels from Mobidiag in infectious disease testing, such as sepsis, antibiotic resistance, gastrointestinal and respiratory tract infections. It is my pleasure to confirm that my team and I appreciate the great teamwork with Volpi.

Tuomas Tenkanen, CEO Mobidiag

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