Volume supplier of Photonic Assemblies (PHIX) and Tyndall Institute strengthen their collaboration

Wednesday, 6 December 2017: PHIX Photonics assembly (PHIX) and PIXAPP Pilot Line Coordinator Tyndall Institute have strengthened their collaboration in the development of the photonic packaging ecosystem by arranging dedicated training of PHIX engineers on Tyndall's advanced packaging equipment. This sharing of knowledge will strengthen the photonic ecosystem in Europe and assure open access to high volume Photonic Integrated Circuit (PIC) packaging through the PIXAPP Pilot Line.

PIC based photonics involves the generation, control and detection of light. It impacts our lives in many areas, including high-speed fiber optic communications, medical diagnostic sensors, the control of self-driving cars and emerging mass markets in the internet of things. Our need for photonics is driven by the fact that the speed and usage of our day to day communication technology is almost at capacity. PICs will address mass market requirements in communications, healthcare and security.

PHIX offers their customers photonic assembly services targeting high volume PIC applications. The initiator and shareholder of PHIX (LioniX International) is also a partner in the PIXAPP Pilot Line and will provide PIXAPP with access to a new high volume assembly line as the next stage for customers after accessing the Pilot Line. Both PHIX and Tyndall will actively supply engineering resources to support the further development of the packaging and assembly processes.

Hybrid integration platform, assembly competence in PHIX

PHIX will provide a state-of-the-art infrastructure in the Netherlands, supporting the European and worldwide industrial development of Photonic Integrated Circuits (PICs). PHIX focuses on a hybrid platform, consisting of two or more different chips that are assembled in a planar configuration and coupled to optical fibers. The PICs are fabricated on Indium Phosphide or Silicon substrates. The hybrid platform supports a wide range of applications, and PHIX will standardize key processes and assembly steps with the support of Tyndall.

"Offering packaging services requires both processing and state of the art equipment knowledge", says Albert Hasper, CEO of PHIX. "With Tyndall we have found a partner that has a broad range of processing knowledge for PIC assemblies complementary to our expertise".

"We are delighted to support PHIX develop volume packaging processes and to provide comprehensive training to its staff", says Peter O'Brien, Head of Group and Director of the PIXAPP Pilot Line at Tyndall. "A key objective of PIXAPP is to build the integrated photonics ecosystem, establishing a volume manufacturing capability in Europe. Our focus on packaging design rules helps achieve this objective, ensuring efficient and scalable assembly processes. We plan to train PHIX engineers on the principles of these design rules, and how to implement them to build complex integrated photonic assemblies".

PHIX photonics assembly

PHIX supplies the photonics industry with assembly and packaging services for Photonics Integrated Circuits. The photonics industry is one of the fastest growing industries at the moment and can be compared with the electronics industry of the 70's during the introduction of the ICs. In photonic integration there are three main technology platforms and each has its preferred application areas: Silicon, InP, and TriPleX. Combining these different platforms by hybrid integration even enhances the possible application of photonic integration into the fast growing markets like tele- and data communication, life science, automotive and consumer electronics. The main challenge for combining the PIC platforms is in the hybrid integration of the various PICs in one package. Not only have the PICs to be connected to optical fibers and electrical connections but they also have to be interconnected. This is the main focus of PHIX: to supply PIC manufacturers for assembly of their PICs and package them into qualified modules for their OEM customers.

http://phix-photonics-assembly.com

TYNDALL:

Tyndall National Institute is a leading European research c entre in integrated ICT (Information and Communications Technology) hardware and systems. Central to Tyndall's mission is delivering economic impact through research excellence. We work with industry and academia to transform research into products in our core market areas of agri-food, communications, energy, environment and health.

As the national institute for photonics and micro/nanoelectronics, Tyndall, at University College Cork, employs over 500 researchers, engineers and support staff, with a cohort of 120 full-time graduate students. Together we generated over 270 peer-reviewed publications in 2016.

https://www.tyndall.ie/