Business Communication **3 November 2020**

Umicore realizes breakthrough in the development of Germanium wafers for VCSELs

Umicore Electro-Optic Materials (EOM), the leading global supplier of Germanium products and materials solutions, announces the successful development of 6" Germanium wafers for Vertical Cavity Surface Emitting Lasers in collaboration with leading commercial and academic partners.

Vertical Cavity Surface Emitting Lasers (VCSELs) are a key component in telecom and 3D sensor systems. Applications range from datacenters to Face Recognition systems and LiDAR Time of flight sensors on mobile handsets and in cabin sensing of autonomous vehicles. To increase the working distance of these sensors, VCSEL array sizes and costs are growing which is one of the drivers to transition from GaAs to Germanium wafers.

Bendix De Meulemeester, Director Marketing & Business Development: *"For very demanding applications such as VCSELs, defect free 6" Germanium wafers show clear performance and process cost benefits in comparison with GaAs wafers. Umicore has invested years of research in the development of defect free low-resistivity 6" Germanium wafers which are currently in the process of qualification. Production volumes are expected to ramp over the next few years as adoption across the VCSEL supply chain accelerates."*

Contacts

Umicore Electro-Optic Materials

Tim Aerts	+ 32 14 245 563	tim.aerts@eu.umicore.com
Pieter Arickx	+ 32 14 245 306	pieter.arickx@eu.umicore.com

About Umicore

Umicore is a global materials technology and recycling group. It focuses on application areas where its expertise in materials science, chemistry and metallurgy makes a real difference. Its activities are organised in three business groups: Catalysis, Energy & Surface Technologies and Recycling. Each business group is divided into market-focused business units offering materials and solutions that are at the cutting edge of new technological developments and essential to everyday life.

Umicore generates the majority of its revenues and dedicates most of its R&D efforts to clean mobility materials and recycling. Umicore's overriding goal of sustainable value creation is based on an ambition to develop, produce and recycle materials in a way that fulfils its mission: materials for a better life.

Umicore's industrial and commercial operations as well as R&D activities are located across the world to best serve its global customer base. The Group generated revenues (excluding metal) of € 1.6 billion (turnover of € 10.0 billion) in the first half of 2020 and currently employs just below 11,000 people.

For more information, visit https://www.umicore.com/

About Umicore Electro-Optic Materials

Umicore Electro-Optic Materials (EOM) is creating material solutions for optical and electronic applications to customers around the world. The hyper-connectivity megatrend is at the center of our new product and services developments. This megatrend is a combination of ubiquitous communication networks, sensors and artificial intelligence and it will create exciting new possibilities and opportunities in our businesses and personal lives.
For more information, visit https://eom.umicore.com/