Leoni presents optical fiber with new capabilities for ambient lighting and individual product design

360-degree light distribution – use in factory automation, industry, cars, buildings and wearables – to be shown at the SPS IPC DRIVES trade fair

Nuremberg, 24 November 2017 – Leoni, the leading European provider of cables and cable systems to the automotive sector and other industries, will show a 360-degree beam optical fiber – its AmbientFiber – at the SPS IPC Drives trade fair. The radial light distribution across the entire fiber length represents not only a crucial advantage over point LED lighting, but also provides unlimited options in the area of ambient lighting for motor vehicles and new approaches to product design.

The areas of application of the new optical fiber is extremely varied: for example, for the interior and emergency exit lighting in aircraft, on ships and on trains; in the field of automation & drives as a virtual feedback system or to illuminate buildings in the architecture and infrastructure segments. Leoni’s AmbientFiber is furthermore suited, for example, to illuminating electrical devices or charging cables. Promising product developments are furthermore conceivable in the field of wearables; i.e. such intelligent clothing or accessories as luminous safety vests or footwear. Combined with the smallest of sensors, AmbientFiber is also capable of indicating changes in temperature, pressure or humidity.

The 3D sample that will be displayed at the SPS IPC DRIVES, Europe’s leading fair for the electric automation trade, showcases the possibilities that AmbientFiber offers and provides inspiration for customised solutions in widely varying areas of application: The light cube indicates the different conditions of the fibers – for instance, a red tone could serve as a warning signal to leave the building; green would show that condition is optimum, while other colours might be assigned to corresponding signals.

AmbientFiber for intelligent driving safety

In the automotive sector, Leoni’s solution is suitable for the interior and exterior lighting of vehicles as well as for the insides of the doors; in the vehicle’s cabin and on the centre console. Dark areas in the vehicle’s interior can be illuminated thanks to the homogeneous light distribution and the different colouring as well as colour gradients. Light effects can highlight the vehicle’s brand in an appealing design.

By functionally integrating position sensors near the cable harness, the status of the seat belt can furthermore be picked up – this is recognised by a lock switch; i.e. a contactless sensor. In hazardous situations the driver is given a red warning light to put his or her belt on, whereas the normal, ambient light indicates optimum safety.

Variable fiber gauges for optimum lighting

The optical fiber’s core consists of quartz glass, thereby preventing any discolouration effects or unwanted reactions to sunlight – darkening effects can thus be ruled out. Various fiber gauges facilitate optimal flex and illumination quality. The intensity of the illumination effect can furthermore be individually adjusted by way of the fiber core gauge: small fiber core gauges provide especially fine lines, while large gauges achieve a stronger result. Depending on the light source, a large number of colours can be displayed. The radial-beam illumination fiber is furthermore easy to fit and provides wide scope for design with customised cable shapes.

*(3,477 characters incl. blanks)*

☞ *Related illustration material can be downloaded next to this release at* [*https://www.leoni.com/en/press/releases/details/leoni-presents-optical-fiber-with-new-capabilities-for-ambient-lighting-and-individual-product-desig/*](https://www.leoni.com/en/press/releases/details/leoni-presents-optical-fiber-with-new-capabilities-for-ambient-lighting-and-individual-product-desig/)

About the Leoni Group

Leoni is a global supplier of wires, optical fibers, cables and cable systems as well as related services for the automotive sector and further industries. Leoni develops and produces technically sophisticated products from single-core automotive cables through to complete wiring systems. Leoni’s product range also comprises wires and strands, standardised cables, special cables and cable system assemblies for various industrial markets. The group of companies, which is listed on the German MDAX, employs about 84,000 people in 31 countries and generated consolidated sales of EUR 4.4 billion in 2016. In 2017, Leoni celebrates its 100 years anniversary.

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