

## Press release

### Lumitronix Presents Novel LumProtect® Lamination Process at Light + Building 2022

Hechingen-based LED expert Lumitronix will demonstrate its innovative lamination process for flexible electronics and LED technology to interested visitors at this year's Light + Building, the world's leading trade fair for lighting in Frankfurt. The unique technology makes it possible to reliably protect flexible modules from damage without compromising their flexibility.

Not least because of the potential energy savings that can be achieved through the use of LEDs, the high demand for LED lighting solutions continues to grow. At the same time, lighting systems with LEDs are becoming more versatile, complex and bring new challenges in terms of protection methods. LED technologies must be able to operate in a wide range of environmental conditions and withstand the stresses over their entire service life. For LED modules on flexible substrates, conventional protection methods can result in a loss of flexibility and a large shift in colour temperature, which is serious for lighting applications. To counteract these problems and to meet the company's own claim for the safe protection of LED strips and flexible LED area modules, a new lamination production process has been established by Lumitronix in the form of LumProtect®.

Since only very thin plastic layers are used in the lamination process, the flexibility of the LED module is still maintained and at the same time the mechanical resistance increases significantly. The high transparency and low colour shifts of the materials used make the innovative technology a perfect match for lighting or even sensor applications.

Several layers are applied to the flexible LED board by means of heat and high pressure. This encapsulates the assembled LEDs, largely displacing air residues in the composite material. Design wishes with different colours can be realised individually according to customer requirements with optional textile layers. The surface can also be offered with a smooth or textured structure. The lamination technology can be used for both LED strips and LED surface modules. Safely protected against a wide range of environmental influences and, if desired, also as a visual eye-catcher, there are virtually no limits to the possible applications.

Whether solar radiation, wind or water - the modules can withstand any weather and can thus be used for example in outdoor flexible lighting solutions. Furthermore, the lamination reliably protects flexible modules against various chemicals from the air such as exhaust fumes or even in direct contact with the surface with paint, cleaning agents or dust. Mechanical stresses, such as direct interference with the electronics by the user, can also be largely avoided.

To showcase the quality of this pioneering technology, Lumitronix will present two laminated demonstrator modules (IP67) at Light + Building for closer inspection and testing at booth E50/Hall 8.0 in a water bath.

LumProtect® can be applied to the entire standard product portfolio based on flexible materials and can also be used for customised flexible LED solutions as part of individual projects.

### **About Lumitronix**

Lumitronix has been one of the leading specialists for LEDs and LED products for many years. As a competent partner for the industry, Lumitronix possesses broad application knowledge from numerous sectors. The Swabian company, based in Hechingen, Germany, has ISO 9001 certification and is also the official distributor of market-leading manufacturers of LED technology. Lumitronix is not only involved in the distribution of LED products, but also develops and manufactures LED modules and matching control units in-house according to customer-specific requirements. Two ultra-modern production lines with the latest machine technology allow the assembly of both rigid and flexible PCBs. A special feature of the flex production is the reel-to-reel processing, with which almost endless lengths can be realised. The production site in Hechingen furthermore provides the benefit of being able to respond quickly and reliably to individual customer wishes and requirements. Quality Made in Germany.

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