



Light guide film as a groundbreaking alternative to the illumination of membrane keyboards

- Longer lasting and less expensive than EL film

At workplaces in darker rooms or at night time, you need illuminated keyboards to guarantee a safe and error free operation. Especially at work environments like the shipping industry, road construction, medical and traffic engineering, explicit attendance is a must. Undeniably the EL film offers the advantages of a slim construction, a low consumption of electricity and a homogeneous illumination (but only with low brightness). On the other hand, this technology has a relatively short life expectancy. Constructions with short-travel keys compensate this disadvantage but the effort and the expenses are much higher.

From now on The Wunder KG in Hamburg offers a solution, which combines the advantages of both constructions.

The light guide film (LGF) is a polyester film, which, according to the illumination layout, is structured by a laser. The variable structure offers an individual defined lighting of selective or complete segments of a membrane keyboard. The illumination results from SMD-LEDs which are assembled on a separate layer. This layer can be made of polyester or it can be constructed as a polyimide layer (flexible PCB), if the illumination is more complex. The light intensity is adjustable. A light-stop can be assembled between the buttons and the graphic elements to define the individual parts of the keyboard. If a flexible PCB is used as the LED-layer, it is possible to assemble driver-ICs, resistors and active/passive components.

LEDs in different colors can be assembled. That allows the customer a great range of configuration. Naturally the buttons can be embossed in any way. The execution of protection category like IP 65 or higher is no problem. Because of the fact that the classic structure of a membrane keyboard is retained, a construction height from 1,3mm is possible. The membrane keyboard with Light-Guide-Film is also available in combination with a capacitive or resistive touch screen.

THE LGF TECHNOLOGY IS NOW AVAILABLE FOR CUSTOMERS OF THE WUNDER KG

Your advantages at a glance:

- Homogeneous and adjustable illumination
- Nearly limitless life expectancy
- Many individual input solutions
- Flexible and extreme slim construction technique
- economically reasonable
- Low tooling- und start-up costs
- Low consumption of electricity
- Low heat emission
- Fewer LEDs needed as for EL-film technique
- IP-protection category

Hamburg, June 2014

WUNDER GmbH & Co. KG
Schnackenburgallee 41a
22525 Hamburg
Fon: +49 40 85 17 220
Fax: +49 40 85 80 87
Mail: info@wunder.ag
Web: www.wunder.ag