

## Data sheet

# NLF-Backlight

### Characteristics

- Even light distribution
- Thanks to the use of side LEDs, no expensive and EMC-ESD problematic converters / inverters are necessary for triggering
  - The LEDs can be operated with low DC voltage without any additional complex switching circuitry (incl. with battery operation)
- LEDs have a long operating life
  - Suitable for use in applications with permanent keypad illumination
- Almost all backlighting requirements can be implemented in a compact and cost-effective way
- Both single keys and large areas can be backlit (including individually, i.e. separately from each other)

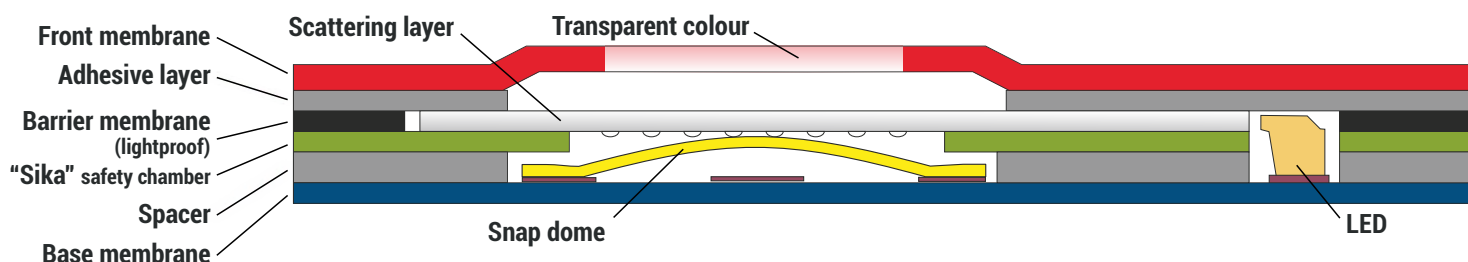
### Field of application

- Wherever the keypad is also to be operated under dark ambient conditions
- As an alternative to the well-known *EL membrane*
- Not as an alternative to *Profiline backlit*, because thanks to the high embossing, this technology has an improved tactile action point



### Application example

- Enclosure BoPad (BOP 500 BE4MC-9016)
- Illumination by means of NLF-Backlight
- Partially recessed textured lacquer



**Your contact person for the HMI sector:**  
 Nikolai Wilke  
 E-Mail: [nwilke@bopla.de](mailto:nwilke@bopla.de)  
 Telephone: +49 (0) 52 23 / 9 69 - 169

Bopla Gehäuse Systeme GmbH  
 Borsigstraße 17-25 · D-32257 Bünde  
[www.bopla.de](http://www.bopla.de)  
[info@bopla.de](mailto:info@bopla.de)

## Data sheet

# Profiline (back-lit)

### Characteristics

- Best haptic and ergonomic features due to the so called „short stroke“ feeling
  - It improves the input interface, including for keys with extremely small or extremely large surfaces
  - Guaranteed by the high-tactile, robust key-element (inlay) which is fitted between the snap dome and front membrane
- Even light distribution
- An LED is fitted on the base membrane in the middle of the key
  - The light passes through a hole in the special snap dome into the integrated acrylic inlay, where it is scattered accordingly
- Key height: approx. 12 mm, tolerance +/- 0.2 mm
- Almost all backlighting requirements can be implemented in a compact and cost-effective way
- Both single keys and large areas can be backlit (including individually, i.e. separately from each other)



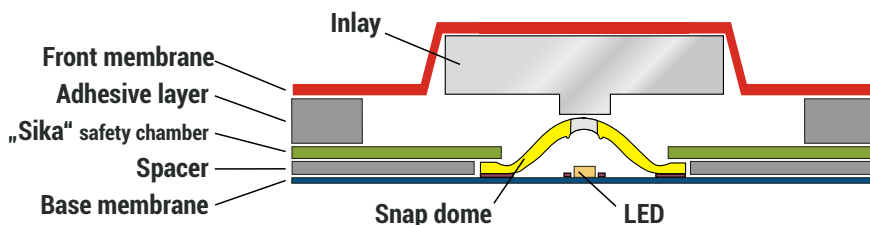
### Advanced version: RGB-LED

- A special RGB-LED makes it possible for a key to light up in different colours
- In addition to classic red, green or blue, a very wide range of mixed colours can be created with the appropriate triggering
- This means that it is possible for a single key to display various situations (E.g.: locked status = red; switched on = green; Bluetooth connection = blue; charging = white, etc.)



### Field of application

- Wherever the keypad is also to be operated under dark ambient conditions
- Special ambient conditions where, for example, operation using gloves means that very good tactile feedback must be achieved



**Your contact person for the HMI sector:**  
 Nikolai Wilke  
 E-Mail: [nwilke@bopla.de](mailto:nwilke@bopla.de)  
 Telephone: +49 (0) 52 23 / 9 69 - 169

Bopla Gehäuse Systeme GmbH  
 Borsigstraße 17-25 · D-32257 Bünde  
[www.bopla.de](http://www.bopla.de)  
[info@bopla.de](mailto:info@bopla.de)