MODULAR TOUCH FOIL COMBINED WITH LEDS AND MICRO SWITCHES

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Recommended Citation
Unger, Axel, "MODULAR TOUCH FOIL COMBINED WITH LEDS AND MICRO SWITCHES", Technical Disclosure Commons, (November 30, 2020)
https://www.tdcommons.org/dpubs_series/3838

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Technical task:
Nowadays, control elements are often realized as touch elements. However, this requires a high degree of coordination of the individual components (individual light guides, touch surface, haptic element).
In addition, the haptics also requires a lot of tuning in relation to the resulting acoustics, which is decisive for the "safe click".

Initial situation:
The coordination effort of the individual components is high and individual for each control element. In addition, new designs are constantly emerging.

Solution
A cell with touch surface, LED with light guide and haptic element intended for a modular design has defined properties. The single cell can be duplicated or extended several times and assembled to a module. If the module is configured appropriately, it can be used for many applications or operating elements.

Advantages:
- Easier tuning, as the module is perfected once and then moves into several control panels.
- Acoustic optimization possible, since the basis is the same.
- Cost optimization possible, because in the assembly of the control panel no several components have to be installed. -> one module.
- Another positive effect is the possible flat construction.

Possible application:
Shown below is one of the possible implementations of the module.

Fig. 1 Touch foil with integrated LL, LEDs and haptic element

Fig. 2