ILLUMIPANEL comprises the illumination of edge emitting LED light source onto transparent acrylic boards using original high-efficiency reflection dots (patent application in progress). Currently, various sizes are available, from a 2 m × 1 m size panel for automatic doors to a 30 mm × 60 mm panel for mobile phones. ILLUMIPANEL is superior to conventional products in terms of high brightness intensity due to its ability to efficiently reflect light. We are in the process of developing application of dots that turn transparent when not lit (inconspicuous dots).

For the applications of inconspicuous dots, we have jointly developed with Nabco, the top producer of automatic doors, the doors that utilize this concept. As can be seen in Fig. 1, ILLUMIPANEL is sandwiched between two layers of glass of an automatic door; green arrows can be seen when the automatic door opens and red arrows can be seen when the door closes. In Fig. 2, a similar panel was featured in Fuji TV drama “Glory of Team Batista”. Our product is so popular with TV producers that it was also adopted for use in TBS drama “RESUCE”. These examples show that the inconspicuous dots are highly advantageous and can support various designs.

As seen in Fig. 3, the prototype mobile phone depicts the high level of design, high brightness intensity and reflectivity of ILLUMIPANEL. When the LEDs are turned off, the face of the mobile phone can function as a mirror; furthermore, when the LEDs are on, the high level of design of ILLUMIPANEL is represented by the three-dimensional effect. This prototype consists of three layers, with ILLUMIPANEL sandwiched between a layer mirror film at the bottom and a two-way mirror on the top (total thickness is less than 1 mm). Owing to this extraordinary design, three-dimensional images can be seen, even though it is just 1 mm thick! This technology can be applied not only to mobile phones but also to various household electrical appliances and signboards.

**Fig. 1.** Automatic doors with ILLUMIPANELs.

**Fig. 2.** Panel featured in Fuji TV drama “Glory of Team Batista”.

**Fig. 3.** ILLUMIPANEL used in mobile phone prototype.

[Information]
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