Philips showcases production-ready Lumalive textile garments

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On jackets containing the Philips Lumalive fabrics dynamic advertisements, graphics and constantly changing color surfaces can be displayed. Photo: Philips

Philips Research intends to impress the visitors at this year's IFA (Internationale Funkausstellung) with a world-first demonstration of promotional jackets and furniture featuring its innovative Lumalive technology. Lumalive textiles make it possible to create fabrics that

carry dynamic advertisements, graphics and constantly changing color surfaces.

Although the technology has been developed only recently —early prototypes were exhibited at IFA 2005— Philips Research has made immense progress in fully integrating Lumalive fabrics into garments demonstrated by the jackets worn by Philips' hostesses at the show. These first-generation jackets are ready for commercialization by companies partnering with Philips Research, particularly those in the promotional industry looking for a new, high-impact medium.

Lumalive fabrics feature flexible arrays of colored light-emitting diodes (LEDs) fully integrated into the fabric - without compromising the softness or flexibility of the cloth. These light emitting textiles make it possible to create materials that can carry dynamic messages, graphics or multicolored surfaces. Fabrics like drapes, cushions or sofa coverings become active when they illuminate in order to enhance the observer's mood and positively influence his/her behavior.

The jackets are comfortable to wear, and the Lumalive fabrics only become obvious when they light up to display vivid colored patterns, logos, short text messages or even full color animations. The electronics, batteries and LED arrays are fully integrated and invisible to the observer and wearer. The jackets feature panels of up to 200 by 200 mm^2, although the active sections can be scaled up to cover much larger areas such as a sofa.

"Taking the Lumalive fabrics from prototypes to integrated products has been a major challenge," said Bas Zeper, Managing Director of Photonic Textiles, Philips Research. "The light emitting textiles have to be flexible, durable and operated by reasonably compact batteries. Fitting all that into a comfortable, lightweight garment is a considerable engineering success."

“What Philips Research showed last year were research prototypes; this year the jackets and furniture represent versions that are ready to go into commercial production, and include integrated power sources and control electronics,” said Zeper.

The products include features that make them practical for daily use. For example, when integrating the Lumalive fabrics into the garment Philips Research has made the parts that can’t be easily washed — such as the batteries and control electronics—simple to disconnect and reconnect after the garment has been cleaned. Even the light-emitting layer can be easily removed and refitted to the jacket.

Source: Philips