

Laser Color Transfer – a new dimension in laser marking

Fuerth and Duesseldorf, 24 October 2007: Kurz will be demonstrating at K 2007 the new Laser Color Transfer (LCT^{®1}) marking process. LCT is a marking technology for thermo-plastic polymers similar to conventional laser marking with one important difference: actual color transference.

In the case of laser marking, the plastic changes its color solely as a result of the heat applied by the laser, but with LCT, actual color is transferred.

Here's how LCT works: A transfer-color ribbon is passed across the plastic part to be marked by means of a supply and take-up unit. Since air gaps would render a laser unusable (air acts as an insulator), the foil is sucked onto the substrate by means of a vacuum. The laser heats the foil and plastic, releasing the color from the carrier foil forming a permanent bond with the molten plastic.

Marking with a strong contrast - regardless of the substrate

With conventional laser marking, the color design possibilities are limited. The coloration is determined by the material being marked and its reaction, so color variations cannot be achieved. In some cases the contrast between product color and marking can be small, in other cases the plastic is fundamentally difficult to mark because the application of temperature does not invoke the desired reaction. The LCT process eliminates these limitations.

Kurz' LCT color ribbons are available in six colors: white, yellow, green, blue, black and red. With this selection, contrasting colors suiting a variety of substrate colors can be achieved. LCT would enable, for example, an easily readable white barcode to be applied to black plastic. Thanks to this new process, true colors are now also available for decorative purposes such as colored logos, patterns and symbols of sophisticated design.

Kurz LCT foils can be matched to any given substrate, enabling trouble-free marking of a wide variety of plastics.

Thanks to the foil transfer technology used, LCT is suitable for smooth, slightly coarse, and lightly-frosted plastic, but not on highly structured surfaces. Compared to simple laser marking there is one further limitation: mildly three-dimensional shapes can be decorated, but not complex 3D geometries.



Photo: Kurz

Kurz color ribbons for laser color transfer



Photo: Kurz

The laser color transfer process

A print-ready version of the photos is made available in the file "photos".

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¹ LCT[®] is a registered trademark of Merck KGaG, Darmstadt, Germany

LCT provides for flexibility in production

Decoration and marking are often only possible at a later stage in the production chain. When essentially identical devices are attributed to different manufacturers or when the same housing is used for different product series or models, it makes sense to apply the logos and product designations at the end of the production process. Thanks to LCT, plastic parts can be pre-fabricated in large production runs and then decorated at a later time. No longer is it necessary to go without an attractive color design.

Inline marking is just as easy to perform as Laser Color Transfer after production of the part. Regardless of the process, LCT can be directly coupled with production, or integrated into an existing laser unit, without difficulty. Both the laser-marking machine and the associated labeling software are easy to incorporate into automated production processes.

Visitors to K can observe Laser Color Transfer live at the Kurz Stand A 19 in Hall 5 and see for themselves the efficiency of this process and the quality of the print image.

About Kurz

The Kurz Group, the recognized global leader in hot stamping technology, represents over 100 years of experience in hot stamping. The range of applications for Kurz foils is virtually without limit - on greeting cards and packaging, electronic and household products, cosmetic articles, textiles, furniture, automotive parts and more. With 3,000 employees located at nine plants in Europe, the USA and the Pacific region, together with 19 subsidiaries and 70 agencies strategically placed around the globe, the Kurz Group manufactures and distributes a comprehensive product range for the surface finishing, decorating and counterfeit prevention sectors. A complete range of stamping machines and tools rounds off its product offering. Kurz, with research and development departments in both Europe and the USA, coupled with customer service and on-site technical assistance, supports its customers internationally with complete, custom-tailored solutions comprising foils, application machines and stamping tools.



Photo: Kurz

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