

## The Power of Visual Images

Security solution offers unique product protection opportunity for plastic moulding suppliers

**I**t is widely agreed that counterfeited and rebuilt products strongly damage reputations and are therefore a severe threat to manufacturers of original merchandise and Brand Owners.

A recognised solution to this problem is to adopt a holistic brand authentication device and apply this at item level.

U-NICA is a global acting entrepreneurial group with a presence in Switzerland, Germany and the Principality of Liechtenstein. U-NICA operates as a platform for providing brand-owners and manufacturers of original products with state-of-the-art security features and systems to set up a barrier against counterfeiting, tampering, grey marketing trading and similar threats.

The Group's long-term experience and competence in the field of security solutions and the 'Pool of Competence' it has built in the areas of printing, physics, chemistry, electronics, equipment, and security devices guarantee a highly professional approach to product development and security consultation services.

U-NICA focuses on the latest and most advanced scientific disciplines closely related to nano, bio and imaging technology. The strong priority on the frontier of engineering and science enables U-NICA to face the even smartest fraudulent attacks to branded and original products with a firewall of adequate security features.

Of particular interest to Brand Protection users is intraGRAM™ - a revolutionary security feature, that is part of the portfolio of the U-NICA Group - since it can be used universally for the protection of injection-moulded parts and components.

Plastics products, which make up a large proportion of the goods and packaging in our society today, are themselves especially prone to being duplicated in a more or less convincing fashion. Here, intraGRAM™ from U-NICA can provide powerful support in distinguishing original plastic products from their "fakes", offering a visible security

protection system that is surprisingly effective.

This security feature, consisting of microscopic, 'diffractive' grid-like structures, can be incorporated directly into any injection-moulded product or one with a surface capable of receiving an imprint. The interference pattern formed when light is directed on to the treated surface creates a 'rainbow' refraction effect. This means that consumers are able to verify the intraGRAM™ themselves with the naked eye. The structures, created on the nanoscopic scale, can adopt any design as desired by the original goods manufacturer, who can integrate their creation into existing manufacturing processes quickly and economically.

Once production is underway, every single moulding cycle increases the economic benefits since the cost of the origination is recovered in volume production. Life cycle tests on the mould inlay indicate that the feature is capable of surviving the life of the mould.

The fact that an intraGRAM™ is created exclusively within the mould manufacturing process, coupled with the technological barrier of its origination and production, guarantees a very high level of protection against replication attack. This is achieved through high quality standards in production and if these are not met, it will not be possible to create the nanostructural surface needed to deliver this unique visual security feature.

Factors critical for quality, such as the temperature of the plastic mass, the injection moulding speed, the equipment temperature and the cycle time, must all be monitored carefully to ensure a satisfactory result.

Since intraGRAM™ exceeds the resolution of "dot-matrix" holograms, which are viewed as high-quality security features and currently enjoy a wide range of applications in the serious product protection industry, this solution offers attractive benefits. In conclusion, intraGRAM™ is highly recommended as a commercial security

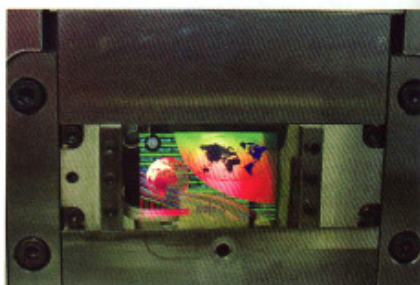


Illustration shows the intraGRAM™ plastic injection mould with diffractive pattern ready to transfer image to plastic component



Illustration shows some plastic products carrying the intraGRAM™ image created during the moulding process

feature that increases its value precisely because it adds to the competence of original manufacturers in producing their moulded components.

### For further information:

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