

Title (en)
LASER-WRITABLE FILM

Title (de)
LASERBESCHRIFTBARE FOLIE

Title (fr)
FEUILLE POUVANT ETRE MARQUEE AU LASER

Publication
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Application
EP 03796055 A 20031125

Priority
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Abstract (en)
[origin: WO2004050380A1] The opaque inscription layer (2) is applied to a portion of the underside of the transparent top film (1) and is comprised of thin lamellar metal particles (3) incorporated into a matrix material (4) like a printing ink. The inscription layer (2) can be applied to the underside of the top film (1) using printing techniques. Aluminum flakes are particularly well-suited for use as the metal particles (3) and can be commercially obtained in particle sizes of around 15 nm with submicron thicknesses. When viewed through the top film, the inscription layer has a silvery white color of a high brilliance. Due to the incorporated metal particles (3), the inscription layer (2) depicts a medium that can be locally modified by irradiating it with a laser beam. The particle structure is effectively destroyed at the location of laser irradiation whereby rendering the inscription layer (2) locally transparent. When the laser beam is displaced over the inscription layer (2) along a path, which corresponds to the desired inscription, it leaves behind the inscription in the form of a transparent track.

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IPC 8 full level
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CPC (source: EP)
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Citation (search report)
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Cited by
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