



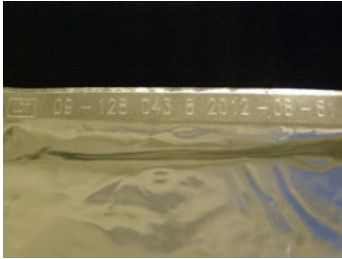
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Press Release

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Laser Marking Laminated Aluminum Foil Pouches

Aluminum foil is a common material for packaging a variety of food and non-food products. It offers durability, resistance to chemical degradation, and impermeability to water vapor and gases, in addition to being relatively inexpensive compared to similar packaging materials. By adding one or more layers of thin, transparent plastic films (like polyethylene or polypropylene), another layer of resistance to water vapor transmission is created, while providing a means to effectively heat seal the package.



For this purpose, the greatest benefit gained by the addition of the plastic film is the ability to use a CO₂ laser to mark information - including expiration dates, product IDs, and tracking numbers - on the outer plastic surfaces. The laser provides a permanent, readable mark, whereas ink or adhesive labels are easily damaged or removed, resulting in the loss of critical information.

This product ID was created using WinMark Pro's "Simple" stroke font with 25 watts of power at 10 inches per second. The entire mark was created in only 1.03 seconds

For this application, the customer wanted to mark a product ID on laminated poly/aluminum foil pouches. A Synrad 25 W laser was used for these tests along with an *FH Flyer* marking head equipped with a 200 mm focal length lens, all controlled by Synrad's *WinMark Pro* software. This setup produces a focused spot size of 290 μm (0.011") on the foil packaging. The mark file consisted of a string of 20 characters, plus the rectangular Lot logo, measuring 98.3 mm x 6.4 mm (3.87" x 0.25") . For a power level of 25 watts, the mark *Velocity* was set to 254 mm/sec (10 ips).



This close-up image shows the embossed, slightly raised mark on the outer plastic surface of the foil pouch.

The resulting mark was completed in a cycle time of 1.03 seconds and is highly legible. The CO₂ beam easily melts the plastic film, producing an easily readable, slightly raised mark with an embossed look.

For pre-publication queries contact: Jeryl Adcock (jeryla@laserlines.co.uk)
For sales/technical queries contact: Gary Broadhead (garyb@laserlines.co.uk)



Laser Lines Ltd
Beaumont Close | Banbury | Oxon | OX16 1TH | UK

T: +44 (0) 1295 672500 | E: +44 (0) 1295 672550
E: info@laserlines.co.uk | W: www.laserlines.co.uk

Directors: R A Wilkin (Managing) | G D Broadhead | S P Knight | M J Turner | S Hall
Registered No. 4021637 England. Registered Office: Beaumont Close | Banbury | Oxon | OX16 1TH. VAT Registration No. GB 915 7430 25