

+ **99.9%**
Uptime

+ **Ultimate Precision**
in large marking areas and challenging focal distances
(UV lasers only)

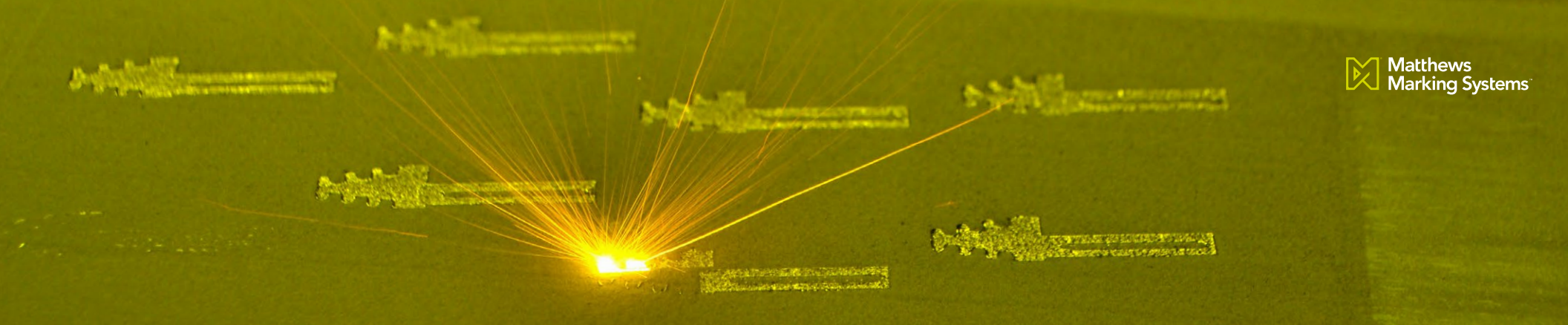
+ **Sustainability**
Consumable-free



FIBER FILM & UV LASERS

TTO PRINTERS

Maintenance & Downtime	99.9% uptime & minimal maintenance <i>(no moving parts or consumables)</i>	Increased downtime & maintenance <i>(ribbon changes, ribbon jams, printhead cleaning/replacement)</i>
Cost Efficiency	Higher initial investment, far lower long-term operational cost	Lower initial investment, far higher long-term operational cost <i>(ribbons, ink, printheads)</i>
Traceability & Compliance	Permanent, tamper-proof marks meet regulatory standards & stringent traceability requirements	Marks prone to damage, not tamper-proof, risk for regulatory standards and traceability requirements
Durability & Longevity	Permanent marks for enduring supply chain handling throughout the product's lifecycle	Marks applied by ribbon are subject to wear or fading, particularly in harsh environments or during handling
Sustainability	Clean process, no consumables, minimal waste	Used ribbons and spent ink cartridges lead to environmental concerns



MPERIA® UV LASERS are fast, powerful lasers that use cold-marking to permanently mark a range of plastics, metals, and flexible films with high contrast and definition.



MPERIA® FIBER FILM LASERS deliver excellent performance based on the latest fiber laser technology. Operating with a continuous wavelength allows them to mark films without damaging the substrate, delivering ultra-high quality codes without interruption. Additionally, MPERIA® Fiber Film Lasers are compact and easily integrate into packaging machinery for OEM applications or directly into an existing production line.

LASERS COST MORE UP FRONT, BUT IN REALITY ...

Yes, the initial capital investment for any laser is going to be greater than the capital outlay for the average TTO printer.

However, the Total Cost of Ownership (TCO) over a 5-year period proves a significant advantage in Return on Investment (ROI) for laser.

Despite the higher initial cost, **laser marking can achieve between 50%–70% in cost savings relative to thermal transfer overlay (TTO) printing.** In medium-to-high production volume environments, the ROI for a laser purchase can be as little as 17 months; and this doesn't include the forced costs of downtime for consumables replacement or maintenance (which is higher on TTO vs laser).

Though TTO can be cost-effective for small-scale operations or short-term use, laser marking is a far better choice for long-term, high-volume operations. Additionally, laser marking is far superior for traceability initiatives due to permanent marking on substrates.