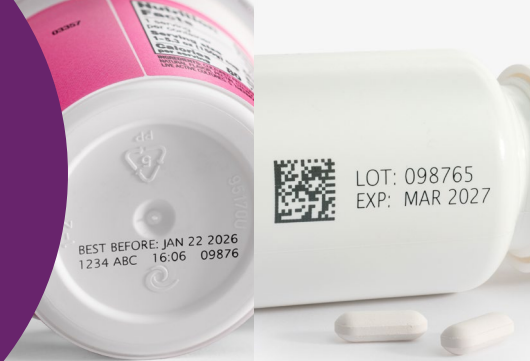# markem·imaje
a **DOVER** company

## 5-Watt UV laser coder
# SmartLase® UV500



### Ultra Powerful. Ultra Fast. Ultra Flexible.

**UV laser technology is the perfect solution for challenging materials.**

The SmartLase® UV500 delivers the most precise, high-quality coding with the added benefit of minimal heat transfer. This leaves the substrate surface integrity intact—perfectly suited for high-density and delicate materials. Benefit from exceptional performance in high-speed applications with the added value of solvent-free, chemical-free, permanent markings—even complex 2D codes. All with Markem-Imaje's signature reliability, ease of integration and operation.

The SmartLase® UV500 ensures high speed and quality. Plus, you gain the flexibility to mark on the most challenging substrates.

### Your benefits

- Unique marking method, unique marking algorithm
- No chemicals, no consumables—contributing to sustainability goals
- Lower OpEx thanks to less maintenance and fewer line stoppages
- Intuitive user interface
- Industry 4.0 ready—enabling advanced packaging intelligence
- Compact, safe and powerful

## Product features

### High-definition, damage-resistant, permanent codes

- Our unique combination of a proprietary marking algorithm, a high-speed digital scanning head and the fine laser beam provides ultra-fast and high-quality marking
- Minimal to no interference with material integrity
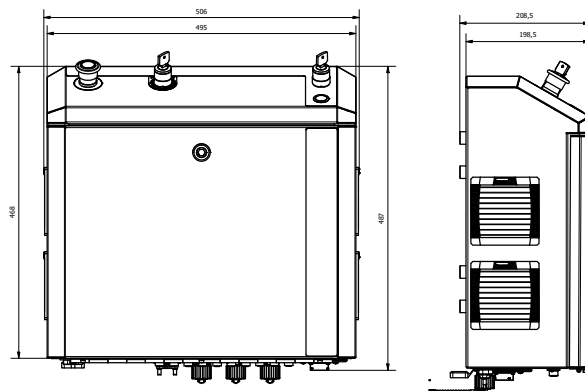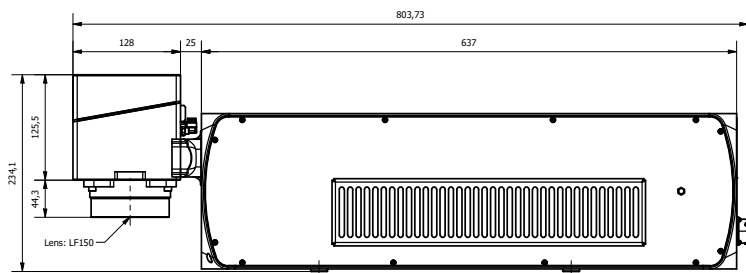- Protection against counterfeiting with permanent laser marking

### Lower OpEx, higher efficiency and chemical-free

- No consumables needed
- Virtually maintenance-free
- Higher reliability means higher productivity and fewer line stoppages
- Eliminating solvents and chemicals contributes to achieving sustainability goals

### Industry 4.0 ready, reliable and safe

- Industry 4.0 optimised with a variety of industrial interfaces such as Ethernet/IP, PROFINET, NGPCL and full-featured CoLOS® software support
- Designed for challenging manufacturing environments with Ingress Protection up to 55
- Meets the highest standard of safety for E-stop and interlock circuits integration per ISO 13849-1 up to PLe

## Laser type and properties

5 W, 355 nm UV laser coder, with digital galvanometer control

## Applications/substrates

- Polymers and hard polymers: HDPE, LDPE, PP, PVC, PS, PE, etc.
- Flexible film packaging
- Aseptic packaging (Tetra Pak®)
- Glass
- Automotive and industrial parts

## Marking speed (max.)

**Characters/sec:** Up to 2000 char/s

**Product per hour:** 150,000 pph*

**Line speed:** Up to 900 m/min*

## Print features

**Number of text lines:**
Limited only by character height and allowable print area

**Character height:**
From 0.2 mm to allowable print area

**Fonts:** English/Latin, Arabic, Cyrillic, Hebrew, Korean, Japanese (Katakana, Hiragana, Kanji), Chinese (Hanzi) OCR, TrueType** and Unicode

**1D barcodes:**
Code 39, Code 128, Code 2 of 5 (industry), I2 of 5, EAN 8, EAN 13, Code 128-A, Code 128-B, UPC-A, UPC-E, EAN 128, ITF 14

**2D barcodes:**
Data Matrix ECC200, QR Code, HIBC QR Code, Micro QR Code, Aztec, DotCode and HIBC Aztec

**Logos, graphics:**
DXF, PLT, FPS, EPS, PS, SVG, AI, CDR, PDF**

**Data automation:**
Static, user-prompted, alphanumeric counter, serial, external promotional codes (CoLOS® only), multi-code/calculated field (e.g., yyyymmddnnn)

**Time/date handling:**
Standard, custom, time / day offsets, prompting BBE date (CoLOS® only), start week, update and rounding rules, custom calendars

**Print field manipulation:**
Linear, angular, rotation, circular, scaling

## Certifications/Approvals***

CE, RoHS, REACH, US-Canada NRTL safety mark, FCC Part 15B

## Interface and control

**Connections:**
Ethernet, PoE and industrial, RS-232, USB, digital I/O, custom programmable outputs, product sensor, encoder, shutter, fume extractor controls, alarm beacon, start/stop, dual channel safety interlocks

**Direct laser control:**
TCP/IP, UDP, RS-232, NGPCL
Optional: PROFINET or EtherNet/IP

**Job set up pointing diode:**
Available as standard. Configurable to show content outline, content field or visualise the content characters for easy job changeover

**User interface:**
10"/250 mm touch screen user interface in: Arabic, Chinese, Croatian, Czech, Dutch, English, French, German, Hebrew, Italian, Korean, Polish, Portuguese, Romanian, Russian, Slovenian, Spanish, Swedish, Turkish and Vietnamese

**Other UI options:**
Remote PC access via VNC

**Standard lens 1:**
Print area: 150x150 mm / Focal Length: 250 mm/ Working Distance: 342 mm

**Standard lens 2:**
Print area: 330x330 mm / Focal Length: 511 mm / Working Distance: 652 mm

**Optional lens:** Up to 500 mm width

**Misc:** Standard Markem-Imaje laser accessories: encoder, sensors, beacon towers, fume extractors, etc.

## Physical characteristics

**Ingress protection:** Marking unit: IP52, optional IP55
**Remote UI:** IP66
**Controller:** IP54

For more detailed information, consult paragraph "Operating temperature range" in the next column

**Safety performance level:**
The highest standard of safety for E-stop and interlock circuits integration per ISO 13849-1 up to PLe; Category 4 machine safety

## Operating temperature range:

| Printer marking unit | Operating temperature range |
|---|---|
| IP52 with integrated cooling | 5° C (41° F) to 35° C (95° F) |
| IP55 with external air blower required | 5° C (41° F) to 35° C (95° F) |
| IP55 with external air chiller and plant air source required | 5° C (41° F) to 45° C (113° F) |
| Controller unit | Operating temperature range |
| IP54 | 5° C (41° F) to 40° C (104° F) |

**Operating humidity:**
10 to 95% non-condensing

**Electrical power supply:**
100 – 240 V AC, 50-60 Hz, 350 W

**Controller dimensions:**
503 mm x 468 mm x 210 mm

**Printhead dimensions**
790 mm x 217 mm x 234 mm

**Controller weight:** 20.3 kg (44.7 lbs)

**Printhead weight:** 28.4 kg (62.6 lbs)

**Umbilical length:** 3 m, 6 m, 10 m

**Outer material:**
Controller cabinet: stainless steel
Printhead: stainless steel and anodised aluminium

**Cooling:**
IP52 – integrated fan cooling system
Optional IP55 – external cooling system
Plant air might be required

## Remote services***

Our intelligent self-support solution
Live helpdesk support with remote video capabilities

* variable based on specific application requirements and substrates
** may require Markem-Imaje support
*** more available upon request



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