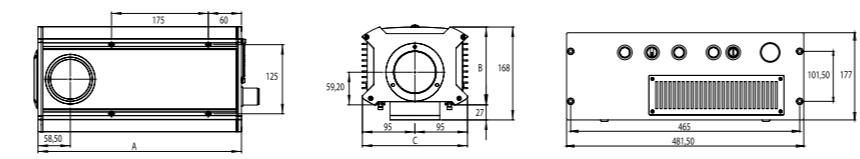


Fast and powerful lasers for marking delicate substrates with high contrast marking.

Meet the needs of each industry at an affordable price



D Duo Series



| D-DUO & GREEN DUO & UV (DPSS) |  |  |         |  |         |  |             |  |         |  |             |             |         |             |  |
|-------------------------------|--|--|---------|--|---------|--|-------------|--|---------|--|-------------|-------------|---------|-------------|--|
| MODEL                         |  | Series D DUO   |         |  |         | GREEN DUO PS   |             |  |         | UV   |             |             |         |             |  |
| POWER                         |  | 6W   | 10W     | 20W  |         | 5W   | 10W         | 1,5W   |         | 5W   |             |             |         |             |  |
| WAVELENGTH                    |  | 1.064 μm   |         |  |         | 532 nm   |             |  |         | 355 nm   |             |             |         |             |  |
| LASER SYSTEM                  |  | D - 5000 DUO   |         |  |         | GREEN  |             |  |         | UV   |             |             |         |             |  |
| MAINS SUPPLY                  |  | 100V - 240V<br>50 / 60 Hz<br>(1 Phase + N)<br>300 VA   |         | 100V - 240V<br>50 / 60 Hz<br>(1 Phase + N)<br>400 VA |         | 100V - 240V<br>50 / 60 Hz<br>(1 Phase + N)<br>300 VA |             | 100V - 240V<br>50 / 60 Hz<br>(1 Phase + N)<br>400 VA |         | 100V - 240V<br>50 / 60 Hz<br>(1 Phase + N)<br>600 VA |             |             |         |             |  |
| DIMENSIONS                    |  | Head   |         |  |         |  |             |  |         | 314x106x108 mm                                       |             |             |         |             |  |
|                               |  | Rack   |         |  |         |  |             |  |         | 550x480.5x177 mm                                     |             |             |         |             |  |
| WEIGHT (Falta comprovar)      |  | Net weight: 28Kg<br>Gross Weight: 33Kg   |         |  |         |  |             |  |         | Net weight: 18Kg<br>Gross Weight: 20Kg               |             |             |         |             |  |
| COOLING                       |  | Air  |         |  |         |  |             |  |         | Water  |             |             |         |             |  |
| SYSTEM                        |  | Resonator of the laser source, DACs board, drivers of the scanners, and galvanometric scanners built into the laser and marking head. Control and power electronics, CPU, power supplies and laser source pumping unit built into the control rack.  |         |  |         |  |             |  |         |  |             |             |         |             |  |
| FOCAL SPECIFIC.               |  | TECHNOLOGY   |         |  |         | D DUO  |             |  |         | GREEN  |             |             |         | UV          |  |
|                               |  | MA (mm)  | WD (mm) | FL (mm)  | BD (μm) | PD (KW/cm2)  | PD (KW/cm2) | PD (KW/cm2)  | BD (μm) | PD (KW/cm2)  | PD (KW/cm2) | PD (KW/cm2) | BD (μm) | PD (KW/cm2) |  |
|                               |  | 55x55  | 141     | 100  | 16      | 5825   | 9709        | 19417  | 10      | 12333  | 13875       | 2081        | 5       | 43278       |  |
|                               |  | 100x100  | 205     | 163  | 26      | 2192   | 3654        | 7308   | 17      | 4642   | 5222        | 783         | 9       | 16289       |  |
|                               |  | 168x168  | 347     | 254  | 41      | 903  | 1505        | 3009   | 26      | 1912   | 2151        | 323         | -       | -           |  |
|                               |  | 212x212  | 458     | 346  | 56      | 487  | 811         | 1622   | 35      | 1030   | 1159        | 174         | -       | -           |  |
|                               |  | 242x242  | 554     | 420  | 68      | 330  | 551         | 1101   | -       | -  | -           | -           | -       | -           |  |
|                               |  | 500x500  | 889     | 815  | 132     | 88   | 146         | 292  | -       | -  | -           | -           | -       | -           |  |
| SOFTWARE                      |  | <ul style="list-style-type: none"> <li>• ScanLinux V5.2.7 and later.</li> <li>• Marca Software V5.6.9 and later.</li> <li>• Internal Barcode.</li> </ul>   |         |  |         |  |             |  |         |  |             |             |         |             |  |
| USER INTERFACE                |  | <ul style="list-style-type: none"> <li>• Touch Screen.</li> <li>• Hand Held Terminal.</li> <li>• Pc.</li> </ul>  |         |  |         |  |             |  |         |  |             |             |         |             |  |
| CONTROLLED BY                 |  | <ul style="list-style-type: none"> <li>• Hand Held Terminal with ScanLinux software.</li> <li>• Touch Screen with ScanLinux software.</li> <li>• Full Graphics Interface: includes Marca software™, dongle and Ethernet cable (TCP / IP).</li> <li>• Marca Lite Software: includes Marca™ software, dongle and Ethernet cable (TCP / IP).</li> </ul> |         |  |         |  |             |  |         |  |             |             |         |             |  |
| LASER SOURCE                  |  | <ul style="list-style-type: none"> <li>• End pumped Nd:YAG resonator by an optical fiber.</li> <li>• Beam pointer (optional red diode).</li> </ul>   |         |  |         |  |             |  |         |  |             |             |         |             |  |
| ACCESSORIES                   |  | Handheld Terminal-Touch Screen Terminal - Beam pointer - Encoder Kit - Photocell Kit - Alarm Kit Fume Extractor - Mounting support - Mounting Bracket U-ARM - Marking paper - Protection goggles - Air Cooling Kit - Water Cooling Kit (only for UV)   |         |  |         |  |             |  |         |  |             |             |         |             |  |
| ENVIRONMENTAL CONDITIONS      |  | +15°C (59°F) at 40°C (104°F) external temperature with 50% Duty Cycle or 36°C(100°F) external temperature with 100% Duty Cycle. Humidity between 10% and 95%, without condensation. UV working humidity: 30-80%. No vibrations.  |         |  |         |  |             |  |         |  |             |             |         |             |  |

\* MA: Marking Area | FL: Focal Length (The distance between the center of the lens and the surface to be marked.)  
WD: Working Distance (The distance between the laser system base and the surface to be marked.)  
BD: Spot Beam Diameter | PD: Power Density  
These values are an approximation, and they are different for each laser system, due to the different optical paths.



Version MAY 2018

# D DUO Series INDUSTRIAL DPSS LASER

High quality marking for plastics and delicate substrates



Coding, tracing and marking solutions worldwide



D DUO Series by MACSA  
Reliable. Smart. Easy



# INDUSTRIAL DPSS LASER

## D DUO Series

### A family of industrial DPSS lasers.

D DUO lasers are designed for industrial laser marking applications. In-built motion control, TCP-IP communication and digital I/O make it possible to integrate the laser in to most production lines. Alternatively D-Duo lasers can be installed in workstations for standalone applications.

They are fast and powerful lasers **designed for marking delicate substrates and for coating ablation**. High contrast marks can be achieved with no thermal damage to the substrate.

The lasers are available in a range of different powers meaning that they can meet the needs of most applications at an affordable price.



Dual processor architecture for fast cycle times even with variable data.

D DUO lasers are short pulse, high peak power lasers and are available in 1064nm, 532nm (Green) and 355nm (UV) wavelengths.

**Compatible with the iLaserBox range of workstations**

## D DUO

### For delicate substrates

The D-5000 SERIES is an end-pumped DPSS Laser system, on a Nd:YV04 active medium. Ideal for marking delicate substrates and coating ablation.

- D-5000 lasers have short pulse width to minimize thermal impact
- Compact head design is ideal for high-speed, on-line integration
- D-5000 lasers include full 3 axis motion control for driving external axes.



## D DUO UV

### For thermo formed and exotic plastics

The D 5000 UV 5 is a DPSS Laser system, based on a Nd: YV04 active medium.

- Solid state Nd: YV04 laser  $\lambda = 355\text{nm}$
- Wide range of materials – Thermo-formed and exotic plastics.
- Water-cooled
- Single phase power input
- Easily integrated into automated production line or the iLaserBox range of workstations

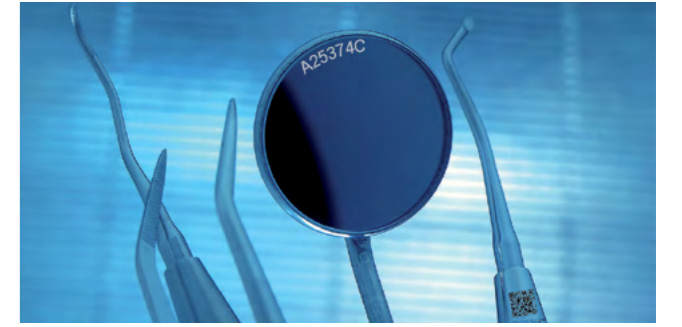


## D DUO GREEN

### For marking plastics with minimal thermal impact

The gLASER series is a DPSS Laser system, based on a Nd: YV04 active medium. gLASER series deliveries a high beam performance at a wavelength of 532nm.

- D DUO Green lasers are short pulse, high peak power lasers
- Ideal for marking plastics with minimal thermal impact.
- Air cooled
- Single phase power input
- Available as PS model with shorter pulse width and higher peak power
- Easily integrated into automated production line or the iLaserBox range of workstations

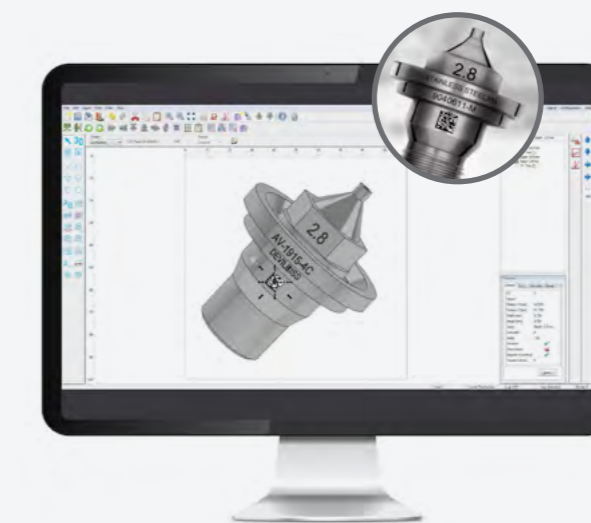
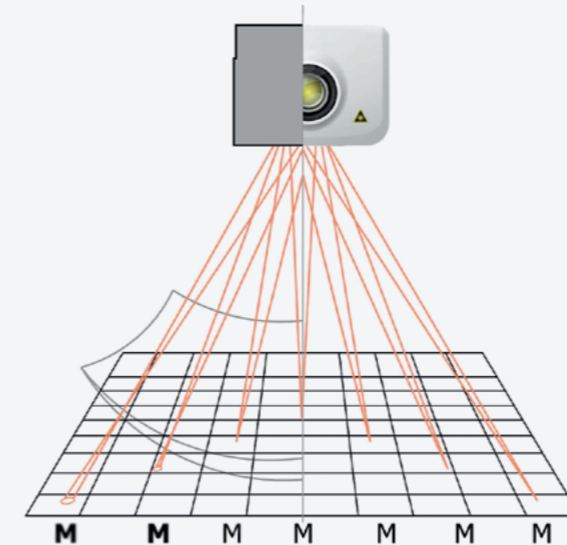


## 3D marking

2D marks can be mapped to regular 3D geometries such as cylinders, spheres and cones. Additionally irregular geometries can be loaded as 3D CAD files in to Marca software enabling 2D marks to be mapped to irregular 3D surfaces.

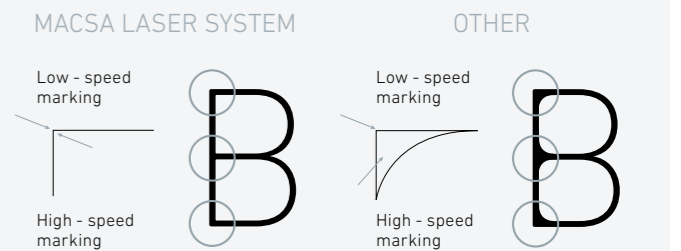
The Macsa 3D scan head greatly simplifies the mechanical handling of 3D geometries and can eliminate the need for rotary and robotic handling devices. This can significantly increase productivity.

### 3-D Print Head transform your 2D laser to 3D



## DUO by Macsa

Dual Processor Technology Lasers by Macsa allows high precision marks to be produced even with variable data with no loss of performance. This technology dedicates one processor to data processing and the other to controlling the laser.



**Macsa lasers are very easy to use thanks to our powerful proprietary marking software.**

Macsa makes it simple to code and mark precisely and consistently. A userfriendly software to create text, 1D and 2D codes, 3D graphics, graphical files, etc...



**The modular software to control, manage and optimize the production line.**



Solution of monitoring services, predictive maintenance, remote assistance and production support