

D DUO Series

# INDUSTRIAL DPSS LASER

High quality marking for plastics  
and delicate substrates



**D DUO Series** by **MACSA**

Reliable. Smart. Easy

# INDUSTRIAL DPSS LASER

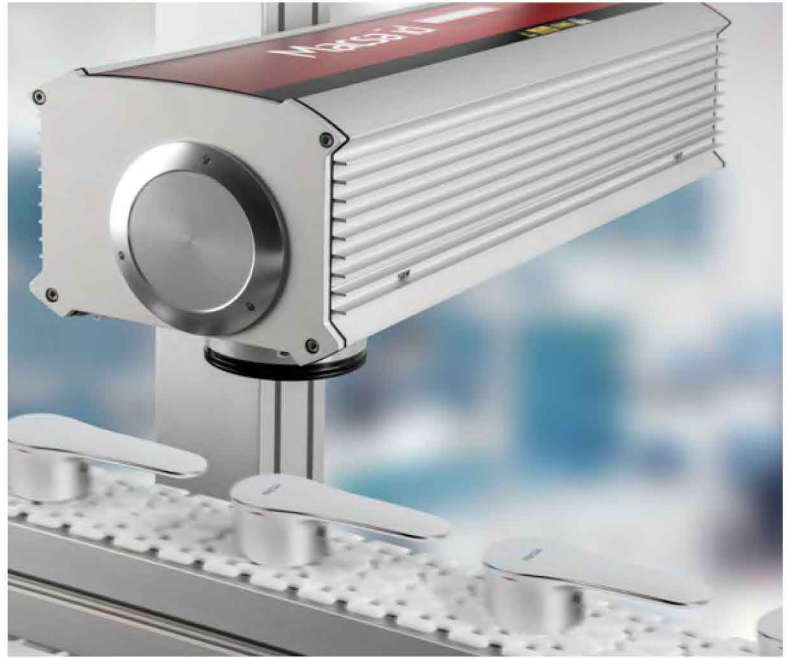
## D DUO Series

### 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**



**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...



# integra

by Macsa id



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

 **integranet** 4.0  
Your passport to Industry 4.0

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

## 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

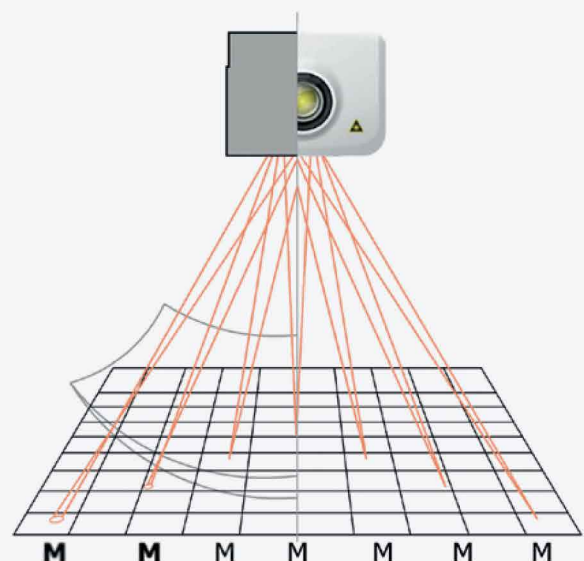


## 3D marking

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**

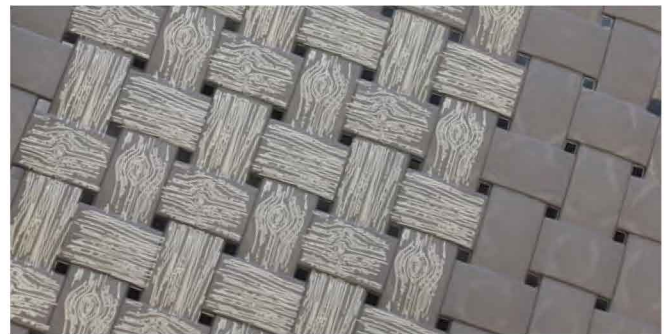
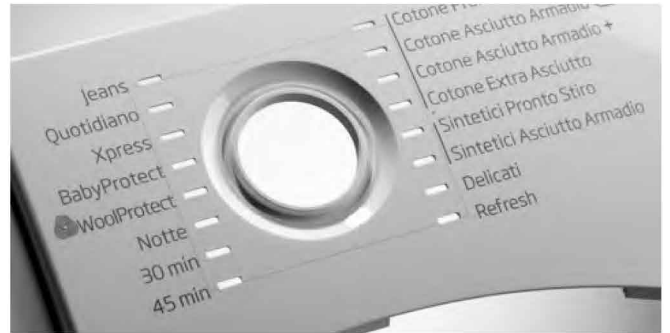


# D DUO GREEN

## 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



A computer monitor displaying a 3D model of a laser nozzle with '2.8' and 'A25374C' markings. A circular inset shows a close-up of the nozzle tip.

## 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 LASER SYSTEM

Diagram showing low-speed marking (a square) and high-speed marking (a triangle) for the Macsa system.

A large letter 'B' with a circular laser mark overlaid on it.

### OTHER

Diagram showing low-speed marking (a square) and high-speed marking (a curve) for other systems.

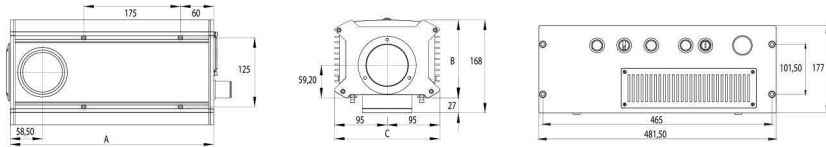
A large letter 'B' with a circular laser mark overlaid on it.

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 50 / 60 Hz (1 Phase + N) 300 VA		100V - 240V 50 / 60 Hz (1 Phase + N) 400 VA		100V - 240V 50 / 60 Hz (1 Phase + N) 300 VA		100V - 240V 50 / 60 Hz (1 Phase + N) 400 VA		100V - 240V 50 / 60 Hz (1 Phase + N) 600 VA		100V - 240V 50 / 60 Hz (1 Phase + N) 600 VA			
DIMENSIONS		Head		601x190x141 mm								314x106x108 mm			
		Rack		550x480.5x177 mm											
WEIGHT (Falta comprobar)		Net weight: 28Kg Gross Weight: 33Kg										Net weight: 18Kg 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		
					F -	6	10	20	F -	5	10	PICO	F -	5	
		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.



# 2M

DUENNE

- CODIFICA E MARCATURA INKJET E LASER
- PERSONALIZZAZIONE DI IMBALLI AD ALTA DEFINIZIONE ANCHE A COLORI
- MARCATORI TECNOLOGIA HP
- CODIFICA A TRASFERIMENTO TERMICO SU FILM PLASTICI
- SISTEMI DI STAMPA ED APPLICAZIONE ETICHETTE
- STAMPANTI A TRASFERIMENTO TERMICO E INK JET A COLORI
- SOLUZIONI PERSONALIZZATE
- SISTEMI SPECIALI
- MATERIALI DI CONSUMO
- ASSISTENZA TECNICA

www.istartm.com

**Macsa id**  
a code you can trust

(00) 34 93 873 87 98  
macsa@macsa.com  
www.macsa.com



Macsa ID Headquarter  
Pl. Pla de Santa Anna  
08272 Sant Fruitós de  
Bages (Barcelona)  
Tel: +34 938 738 798  
Spain

Macsa ID UK  
13d Old Bridge Way  
Shefford  
Bedfordshire  
SG175HQ  
+44 (0)1462 816091  
UK

Macsa ID Portugal  
Rua Eng. Frederico Ulrich n. 2650.  
4470 - 605 Moreira Maia  
Tel: +351 229962204  
Portugal

Macsa ID Malaysia  
E-8-03, The Gamuda Biz Suites  
No.12, Jalan Anggerik Vanilla 31/99,  
Kota Kemuning,  
40460 Shah Alam  
Selangor  
Malaysia

Macsa Coding Technology (shenzhen) Co, Ltd  
East side of 2/F, 7 Building  
Lijincheng Technology Industry Park  
Jihua Road  
Longhua Street, Longhua District  
518100 Shenzhen  
Tel: +86 0755-23611591  
China