## TECHNICAL DATA

| MODEL | | SPA 2 D-6 DPSS | SPA 2 D-10 DPSS | SPA 2 D-20 DPSS | SPA 2 D-5 GREEN | SPA 2 D-10 GREEN | SPA 2 D-1,5 GREEN PS | SPA 2 D-4 GREEN PS | SPA 2 D-5 UV | SPA 2 D-15 UV |
|---|---|---|---|---|---|---|---|---|---|---|
| IMAGE | |  | | |  | | | |  | |
| SYSTEM | Power | 6 W | 10 W | 20 W | 5 W | 10 W | 1,5 W | 4 W | 5 W | 15 W |
| | Technology | Compact Q-Switched DPSS laser Nd:YVO$_4$ | | | Compact Q-Switched DPSS laser Nd:YVO$_4$ | | DPSS PS | | Compact Q-Switched DPSS UV Nd:YVO$_4$ | |
| WAVELENGTH | nanometers | 1.064 nm | | | 532 nm | | | | 355 nm | |
| PULSELENGTH | nanoseconds | 3 to 80 ns | | | 2 to 10 ns | | 0,7 to 3 ns | | < 18 ns | |
| MAINS POWER SUPPLY | | 100 / 240 V AC | | | 100 / 240 V AC | | | | 100 / 240 V AC | |
| | | 50 / 60 Hz | | | 50 / 60 Hz | | | | 50 / 60 Hz | |
| | | (1 Phase + N) 450 VA | (1 Phase + N) 500 VA | (1 Phase + N) 500 VA | (1 Phase + N) 450 VA | (1 Phase + N) 600 VA | (1 Phase + N) 350 VA | | (1 Phase + N) 700 VA | |
| COOLING | Air/Water | Air (SE) / Forced Air (DE) | | | Air | | | | Air (SE) / Forced Air (WD) | Water |
| | Filtered Blower (200m³/h) | Opt. (DE) | | | Opt. | | | | - | - |
| | Filtered Blower (350m³/h) | Opt. (DE) | | | Opt. | | | | - | - |
| | TCU | Opt. (DE) | | | Opt. | | | | - | - |
| | Chiller | - | | | - | | | | - | 1000 W |

| FOCAL SPECIFICATIONS FOR LENSES without BE for XQS Head | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | M. Area | WD | FL | BD | PD | BD | PD | BD | PD | BD | PD | BD | PD | BD | PD | BD | PD | BD | PD | BD | PD |
| | 20x20 | 95 mm | 56 mm | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 7 | 13973 | 7 | 41919 |
| | 60x60 | 126 mm | 100 mm | 25 | 1184 | 34 | 1110 | 34 | 2220 | 23 | 1226 | 30 | 1380 | 23 | 368 | 23 | 981 | _ | _ | _ | _ |
| | 65x65 | 133 mm | 103 mm | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 12 | 4146 | 12 | 12439 |
| | 100x100 | 201 mm | 160 mm | 41 | 463 | 54 | 434 | 54 | 867 | 25 | 987 | 34 | 1110 | 25 | 296 | 25 | 789 | _ | _ | _ | _ |
| | 105x105 | 220 mm | 170 mm | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 20 | 1516 | 20 | 4549 |
| | 160x160 | 345 mm | 254 mm | 65 | 184 | 86 | 172 | 86 | 344 | 37 | 456 | 50 | 513 | 37 | 137 | 37 | 365 | _ | _ | _ | _ |
| | 175x175 | 347 mm | 254 mm | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 31 | 679 | 31 | 2036 |
| | 195x195 | 440 mm | 330 mm | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 40 | 403 | 40 | 1208 |
| | 212x212 | 446 mm | 346 mm | 88 | 98,7 | 117 | 92,6 | 117 | 185 | 41 | 385 | 54 | 434 | 41 | 116 | 41 | 308 | _ | _ | _ | _ |
| | 242x242 | 545 mm | 420 mm | 107 | 67,1 | 142 | 62,9 | 142 | 126 | 42 | 360 | 56 | 405 | 42 | 108 | 42 | 288 | _ | _ | _ | _ |
| | 290x290 | 580 mm | 470 mm | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | _ | 57 | 198 | 57 | 595 |
| | 325x325 | 710 mm | 570 mm | 145 | 36,5 | 193 | 34,2 | 193 | 68,4 | 60 | 176 | 80 | 198 | 60 | 52,7 | 60 | 141 | _ | _ | _ | _ |
| | 560x560 | 955 mm | 820 mm | 208 | 17,6 | 278 | 16,5 | 278 | 33,0 | 84 | 91,2 | 111 | 103 | 84 | 27,4 | 84 | 73,0 | _ | _ | _ | _ |

| | | | | | |
|---|---|---|---|---|---|
| MARKING HEAD | XQS Internal | Std. | Std. | | Std. |
| MARKING HEAD ACCESSORIES | Beam Exit at 0° | Opt. | - | | Std. |
| | Beam Exit at 90° | Opt. | Std. | | Std. |
| | Focal Distance Indicator | Std. | Opt. | | Opt. |
| | Marking Area Indicator | Opt. | Std. | | Std. |
| CONTROL | Touch Screen TSL-V3 | Opt. | Opt. | | Opt. |
| | PC with Marca Software | Opt. | Opt. | | Opt. |
| SOFTWARE | ScanLinux | Opt. | Opt. | | Opt. |
| | MarcaTouch OS 2.00 | Std. | Std. | | Std. |
| | Marca Full Graphics PC Softw. | Std. | Std. | | Std. |
| | TCPIP Protocol | Opt. | Opt. | | Opt. |
| | Profinet Protocol | Opt. | Opt. | | Opt. |
| | OPC-UA Protocol | Opt. | Opt. | | Opt. |
| | Internal Barcode Generator | Opt. | Opt. | | Opt. |
| SAFETY | ElectroMechanical Shutter | Opt. | Opt. | | Opt. |
| | Performance Level d Safety Kit | Opt. | Opt. | | Opt. |
| ACCESSORIES | | Diode Marking Pointer - Encoder Kit - Mounting Support - Photocell Kit | Diode Marking Pointer - Encoder Kit - Mounting Support - Photocell Kit | | Diode Marking Pointer - Encoder Kit - Mounting Support - Photocell Kit |
| ENVIRONMENTAL CONDITIONS | Operating Temperature | 15 °C (50 °F) to 40 °C (104 °F) | 15 °C (50 °F) to 40 °C (104 °F) | | 15 °C (50 °F) to 40 °C (104 °F) |
| | Humidity | < 95 %, non-condensing | < 95 %, non-condensing | | < 95 %, non-condensing |
| | Vibrations | No vibrations | No vibrations | | No vibrations |
| | Protection Rate | SE (Standard Environment) | SE (Standard Environment) | | SE (Standard Environment) |
| | | DE (Dusty Environment) | - | | WD (Washdown Environment) |
| DIMENSIONS AxBxC | Head | 196 x 146 x 563 mm | 196 x 146 x 563 mm | | 196 x 146 x 662 mm |
| | Cabinet | 200 x 650 x 525 mm | 200 x 650 x 525 mm | | 200 x 650 x 525 mm |
| WEIGHT | Net Weight | 28 kg | 28 kg | | 18 kg |
| | Gross Weight | 30 kg | | | 20 kg |


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Macsa id
*a code you can trust*

# SPA2 D

## GREEN | UV

High quality marking for plastics
and delicate substrates











## One platform, multiple substrates

DPSS lasers for coding in the packaging sector. They provide legible markings of the highest quality, which are permanent and sustainable in all production environments.

Available in dfferent enclosures in order to mark plastics, delicate substrates and for laser coating ablation in the FMCG markets.

PRODUCT BROCHURE

## SPA2 is much more than a laser system

The SPA2 range of laser coders is the next generation of Macsa's successful SPA, Smart Packaging Application, laser platform.
The SPA2 range adds more power options including pulsed CO2 lasers.

SPA2
SMART PACKAGING APPLICATIONS

# SPA2 D
# GREEN | UV

SMART | RELIABLE | CUTTING-EDGE

SPA2 D diode pumped solid state lasers are widely used in packaged goods applications including bottles, tubs and liquid dispensers. They are typically used to code plastic substrates (excluding PET and PVC).




- UV and Green wavelength options enable challenging substrates to be coded and for marking plastics with minimal thermal impacts.
- Ideal for marking delicate substrates and for laser coating ablation.
- DUO dual processor technology enables high-speed andhigh-quality printing with variable data.
- 10.1-inch touch screen controller with context sensitive HELP and on-line instruction videos.
- Protection enclosure is available for washdown (IP65) environments.



**SE** Standard Environment

SPA 2 D DPSS / SPA 2 D GREEN / SPA 2 UV



**DE** Dusty Environment

SPA 2 D DPSS



**WD** Washdown IP55 / IP65

SPA 2 UV









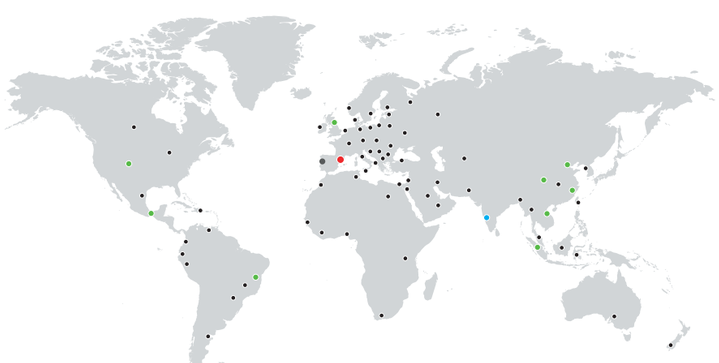

## Why Macsa id?

Macsa id is one of the 4 leading companies in the world in coding and marking lasers. It offers the widest range of lasers to code and mark both in the productive sectors (food, beverages, pharmaceutical, healthcare, cosmetics ...) as well as in the industrial ones (industry, automotive, aeronautics, defense, construction materials ...).

Macsa id is recognized as a world leader in technological innovation in lasers for marking and coding. The company invests more than 10% of its turnover in R&D every year.

Macsa id
in more than
80 countries

- MACSA Headquaters
- MACSA Branch Offices
- MACSA Distributors
- MACSA JV



## The most complete range of CO2, Fiber and DPSS lasers on the market

### CO2
Available from 10 to 450W

### Fiber
From 20W to 200W

### Fiber Film
From 20W to 100W

### DPSS
From 6 to 20W
(also Green & UV available)

### PRECISION
Several features including Macsa's propietary VCS to ensure high print quality even on high-speed production lines.

VCS® Vibration Compensation System

### VERSATILITY
Integrated into any production line, it can encode over a wide range of materials using 3D printing options.

3D printing

### RELIABILITY
Production environments can test the reliability of laser systems. SPA2 lasers are designed to operate reliably in dusty or damp environments even when subject to extreme temperatures.

RAF® Reverse Air Flow

### ADAPTABILITY
Wide range of essential and extra accessories to optimise the laser's performance.

Macsa Accesories

### SIMPLICITY
Videos and support material to facilitate its installation and integration.

MARCA software®

### CONNECTIVITY
The lasers include the TCP/IP protocol in order to have complete control of the system from most standard communications.
The new SPA2 platform includes the integration of the most widely used industrial communication protocols such as Profinet and OPC-UA. These are both available in all models upon request.

PROFINET® OPC UA

## SOFTWARE AND SERVICES

integranet 4.0




Maintaining Service

Equipment performance

### MONITORING AND PREDICTIVE MAINTENANCE
From any place and at any time, data is provided in real time to increase productivity, improve e ciency and reduce downtime. It allows monitoring of the status of the equipment from any remote device which can allow the reception of alerts. IntegraNET allows our service engineers to receive Diagnostics in real time to detect problems before they occur and prevent expensive downtimes.

### REMOTE ASSISTENCE
IntegraNET allows field technicians and Macsa id engineers to interconnect and exchange information through video calls.

### INCREASED EFFICIENCY
The collected data is integrated with the different software of Macsa id modules for production management, traceability and effciency of the production lines.

ecoding Driven by Nature

**NO CONSUMABLES**
A clean technology that does not produce waste.

**ENVIRONMENT FRIENDLY**
No harmful emissions are generated, thus benefitting the work environment and the planet.

**CLEAN**
For a cleaner and healthier workspace.

**ENERGY EFFICIENT**
Maximum quality and coding speed with just the right amount of energy.