DATALOGIC
INDUSTRIAL AUTOMATION

LASER MARKING

Laser Marking

PRODUCT GUIDE

Laser Marking System

DLA MARKING SYSTEM

COMPREHENSIVE PRODUCT RANGE COMBINED WITH EXCELLENT LASER MARKING EXPERTISE

Datalogic Automation provides a complete range of Laser Marking systems that offers state of the art technology, excellent performance, high quality with an uncomparable price/performance ratio.
Thanks to a comprehensive product portfolio with different laser source technologies and wavelengths, DLA Laser Marking Systems can be applied in a wide range of applications on almost any material. The wide range of wavelelengths and laser technologies allow Datalogic to be able to satisfy most permanent marking needs. Embedded digital platform and advanced software functions offer simple HMI interface, ease of use and ease installations. With the benefits of 4 indipendent axys control and dedicated I/O signal DLA Marking Systems can be applied in any kind of working conditions. DLA Marking systems offers 3 different laser technologies: **DPSSL Laser, Fiber Laser, CO2 Laser.**

DPSSL LASER

The vast experience of DPSSL technologies have generated the most comprehensive product portfolio in the market place offering solutions at different wavelengths: Infrared, Green, UV.
Thanks to innovative all-in-one concept DLA also provides the most compact DPSS Laser available on the market.

DPSSL key features:

- First in its class Laser Peak Power
- Infrared, Green, UV wavelength for optimum marking result on different type of material
- Excellent Beam Quality and Marking Accuracy

FIBER LASER

With 15+ years of experience in Laser Marking applications combined with state of the art technology, Datalogic has developed the most compact fiber laser offering benefits for ease of use, ease installation, high energy efficiency.

Fiber Laser key features:

- Ultra compact marking head for ease of installation
- Low electrical power consumption with high efficiency
- Excellent on both Metal and Plastic surfaces

CO2 LASER

CO2 technology provides permanent laser marking for industrial traceability and coding applications offering good marking quality, increased productivity in a clean working environment.

CO2 Laser key features:

- Excellent on Paper, Cardboard, Wood Plastics and on other organics
- Marking On Fly features compatibility with accelerated and start-stop systems
- Suitable for Coding on medium-high throughput production lines

DLA MARKING PLATFORM

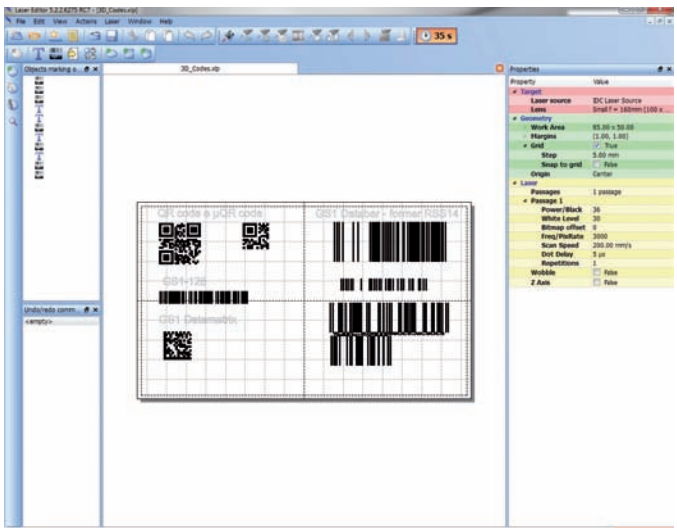
EASE OF USE AND INSTALLATION WITH THE DATALOGIC STANDARDIZED MARKING PLATFORM

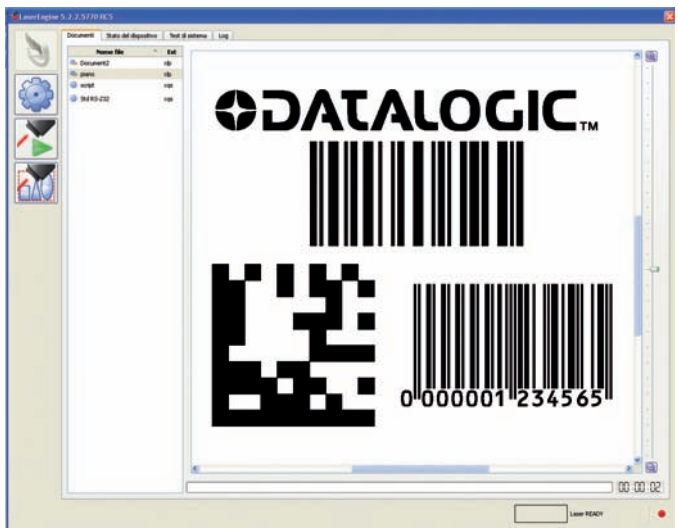
Thanks to advanced hardware architecture and LIGHTER Software, Datalogic offers a standardized Marking Platform common to all main product families. The DLA Marking platform is very powerful, easy to use, flexible and suitable for many different applications.
The Embedded digital platform and advanced software functions offer a “plug and play” solutions to be easily integrated inside a single operator attended working station or a fully automated marking center.

With the benefits of 4 independent axis controls and dedicated I/O signals the DLA Marking platform drastically simplifies the system design for System Integrators. We offer a complete, powerful and ease to use tool for Multi-Layer and Rotary Marking.
The LIGTHER graphical editor creates and edits strings of text, shapes, barcodes (e.g.128, EAN/UPC, 2/5, 3/9, GS1-128, RSS) and matrix codes (Datamatrix, QR codes,micro QR codes). It can also import logos in vectorial and raster formats.
LIGTHER Software guarantees benefits and advanced functions for different applications such as marking on fly, array marking, grey tones marking, mechanical axis control and rotating axis control.

LIGTHER is scriptable: this means that it can be easily integrated with legacy systems through a wide range of combinations of transmission media, protocols and architectures (master/slave, client/server, ...).

LIGTHER is exstendible: its scripting features can be extended through custom-developed plug-ins to deal with specific integration-related issues (custom components or protocols, patent protected algorithms, etc.).





V-LASE PLATFORM

V-LASE DESCRIPTION

The V-Lase platform has a long history of high performance and high quality DPSS laser sources. The V-Lase markers @1064nm use the state-of-the-art End Pumped Coupling Technology, which represents the leading-edge solution in the field of laser sources.
The platform is characterized by a standard compact case, continuous and precise power control and low power consumption. Moreover, special attention has been dedicated to the safety aspects. The proprietary end-pumped architecture using a TE cooled diode laser pump with unmatched MTBF, assures the reliability and longevity.
The V-Lase platform offers lasers with excellent beam quality, high peak power and short pulse width. The operator is able to precisely tune the power and pulse repetition rate. Very high brilliance in the laser spot, at longer focal lengths, makes the V-Lase platform ideal for marking a broad range of materials, even with large marking fields.
Designed for the very demanding 24/7 processes, the V-Lase platform offers unparalleled performance and represents the ideal solution for both direct part marking and label marking in every market segment including automotive, solar & electronics, packaging, as well as in medical surgical tools marking and other applications.

V-LASE

The V-Lase is a DPSS air-cooled laser marking source @1064nm, available in 10, 15 and 20W, that operates on the V-Lase platform.

APPLICATIONS
The excellent beam quality, necessary for marking a broad range of materials, is one of the winning characteristics of the V-Lase laser sources. Best results are obtained on steel, titanium, aluminium (bare, anodized or coated) as well as on plastics such as ABS, PP, PES, PET, PVC and many others.

UV-LASE

The UV laser source exploits the extensive experience and success of the DPSS family and is based on the mechanic optical architecture of Third Harmonic Generation (THG). The extracavity technology allows high efficiency conversion of the LBO nonlinear crystal and compactness of the laser source.

APPLICATIONS
The UV-Lase wavelength produces less mechanical distortion and less heat affected zones (HAZ) in comparison with longer laser radiations. The high performances of this laser source make it ideal for the very demanding marking and material process applications, such as glass and non-doped plastics in automotive, healthcare, aeronautic, solar electronics & other industries.

GREEN-LASE

The Green-Lase 4W and 10W laser sources and markers operate on the V-Lase platform and use Second Harmonic Generation (SHG) in an intracavity architecture, which maximizes LBO non-linear crystal conversion efficiency.

APPLICATIONS
The Green-Lase wavelength results in a lower “heat affected zone” compared with an infrared laser. This effective laser source thus offers significant advantages in marking applications with materials such as plastics that do not interact with the original infrared wavelength, as well as with semiconductors such as silicon (e.g. wafer marking). Superior absorption coefficient in semiconductor material used in solar cells makes this source ideal for photovoltaic applications (e.g.: thin film scribing).

TECHNICAL DATA

LASER MODEL	V-LASE 10W	V-LASE 15W	V-LASE 20W	UV-LASE 3W	GREEN-LASE 4W	GREEN-LASE 10W
Wavelenght	1064nm	1064nm	1064nm	355nm	532nm	532nm
Nominal power	10W	15W	20W	3W	4W	10W
Repetition Rate range	10 – 200 kHz	10-200 kHz	20 -200 kHz	20 – 80 kHz	15 – 200 kHz	20 – 100 kHz
Pulse Width	15ns@10kHz	10ns@10kHz	8ns@20kHz	8ns@30kHz	20ns@50kHz	18ns@50kHz
Max Pulse Energy	550uJ@10kHz	700uJ@10kHz	650uJ@20kHz	100uJ	200uJ@20kHz	340uJ@20kHz
Aiming Beam	Class 2M Red Laser Diode; λ=635nm +/-5nm; 3mW					
Power Supply	DC 24V:28V					
Cooling System	Air cooled					
Temperature Range	Operative 10°C to 35°C - Storing 0° to 50 °C					
EEC Rules Compliance	2004/108/EEC: “Electromagnetic Compatibility” 2006/95/EEC: “Low Voltage”					
EU Rules Compliance	EN 61000-6-4, EN 61000-6-2, EN60204-1, EN60825-1					

ULYXE FAMILY

ULYXE DESCRIPTION

Ulyxe lasers, 6W@1064nm, belong to the category of DPSS Active Q-Switched lasers. This family is extremely compact (only 42cm, 16.5") but offers all of the most advanced technological concepts. The Ulyxe family provides the best price/ performance ratio in the laser marking world. Thanks to its cost-effectiveness and competitive positioning, the Ulyxe family becomes the first choice in marking solutions even when compared with traditional marking techniques.
With its extreme compactness, the ULYXE family represents the ideal laser marking solution both in stand-alone configurations as well as OEM applications.

ULYXE

It perfectly combines compact dimensions with USB connection ease. The user-friendly Ulyxe Editor software is specifically developed to offer all key marking functions. The Ulyxe is available in polycarbonate case or metal case (Ulyxe PL).

ALL IN ONE ARCHITECTURE

The air cooled laser sources offer an ultra-compact design and includes the scanning head, digital control and monitoring functions. The outside cover on the units are equipped with a specifically designed high-tech case, available in different materials (polyurethane and metal) depending on different application requirements. The operator can easily interact and monitor the most important laser status and functions with an user friendly LCD/ touch screen control display.

ZEUX

It offers great compactness and full compatibility with the new marking platform (iMARKPCI board and Lighter software). Zeux offers an industrial design metal case.

TECHNICAL DATA

LASER MODEL	ULYXE	ZEUX
Wavelength	1064nm	1064nm
Nominal power	6W	6W
Repetition Rate range	15-200 kHz	15-200 kHz
Pulse Width	20-25 ns@20kHz	20-25 ns@20kHz
Max Pulse Energy	300uJ@15 kHz	300uJ@15 kHz
Connectivity	USB	PCI Express Slot
Aiming Beam	Class 2M Red Diode Laser; _=635nm +/-5nm; 3mW Second red pointer for focusing	
Power Supply	24VDC/13A	
Cooling System	Air cooled	
Temperature Range	Operative 15°C to 35°C Storing -5 to +55 °C	
EEC Rules Compliance	2004/108/EEC: "Electromagnetic Compatibility" 2006/95/EEC: "Low Voltage"	
EU Rules Compliance	EN 61000-6-4, EN 61000-6-2, EN60204-1, EN60825-1	

AREX

AREX DESCRIPTION

The AREX family represents the ultimate Fiber Laser marking system with unmatched compactness.
Thanks to state-of- the-art technology the AREX allows high speed marking on metal and plastic materials which increases system productivity typically needed for the Automotive and Electronics industry.
The ultra compact marking head allows easy mechanical installations in the production line or inside a machine with limited space. With the smallest marking head footprint (112x298x90 mm), the AREX drastically simplifies system design by extending the field of use of marking technology in a wide range of applications from stand alone marking solutions as well as production lines. Available with 10W and 20W laser power emission, AREX is simple to set up using the LIGHTER software platform.

Thanks to the easy to use HMI, operators can define any kind of Label, Logo, Text, Datamatrix and Bar codes for Laser Labelling and Traceability applications. Advanced software functions allow users to work in many different conditions including operator attended work stations and fully automated marking centers.
The AREX implements advanced embedded digital platform for complete marking system control and diagnostics.
The AREX is equipped with 4 independent axis controls (X,Y,Z, Rotary axis) to implement Multi-Layers and Rotational Marking.
Dedicated encoder input is applied for Marking On Fly even in accelerated and varible speed conditions. The AREX's low power consumption and excellent power efficiency classifies it as the top in its category.

TECHNICAL DATA

LASER MODEL	AREX 10W	AREX 20W
Wavelength	1060 – 1080 nm	1060 – 1080 nm
Nominal power	10W	20W
Leakage	< 50 mW	< 80 mW
Peak power	5 kW	10 kW
Pulse Width	100 nsec	100 nsec
Aiming Beam	1 mW @ 635 nm	
Cooling System	Air cooled	
Temperature Range	Operative 10°C to 35°C Storing 0°C to 50°C	
EEC Rules Compliance	2004/108/EEC: "Electromagnetic Compatibility" 2006/95/EEC: "Low Voltage"	
EU Rules Compliance	EN 61000-6-4, EN 61000-6-2, EN60204-1, EN60825-1	

EOX

EOX DESCRIPTION

THe EOX is a CO2 Laser for laser coding and marking applications. The EOX family offers high quality permanent marking on a wide range of materials including cardboard, ceramic, wood, plastics and painted or anodised metal. Combining excellent laser beam quality and advanced control, the EOX family is suitable for accurate industrial traceability, as well as, highly productivity coding applications.
the CO2 laser is available in 2 laser emission versions: 10W and 30W with the same Marking Platform but with different mechanical configurations because of power categories. 10W versions is offered in ALL-IN-ONE case with very compact dimensions. 30W versions benefits of a compact Marking Head combined with a Control Rack equipped with power supply and control unit.

Both 10W and 30W versions provide axis controls and an encoder port for Marking On Fly (MOF) typically required for Coding applications. Advanced MOF features allows complete synchronication between Marking head and moving objects applicable even in accelerated or start-stop movement conditions.
MOF increases production lines throughput with linear speed up to 75mt/min and 12.000 pcs/hour.
CO2 marking system is very attractive for coding application thanks to Low cost operation as a result of low maintenance and no requirement for expensive consumables.
EOX meets flexibility requirements thanks to extended marking area up to 140x140mm (focal lens depending).
Reliable and safe, EOX family provides a clean technology with short return of investment and minimal maintenance.

TECHNICAL DATA

LASER MODEL	EOX 10W	EOX 30W
Wavelength	10, 6 µm	10, 6 µm
Nominal power	10W	30W
Range Frequency	10-25000 Hz	
Aiming Beam	Class 2M Red Diode Laser; _=635nm +/-5nm; 3mW Second red pointer for focusing	
Power Supply	24VDC/13A	
Cooling System	Air cooled	
Temperature Range	Operative 15°C to 40°C Storing -10 to +60 °C	
EEC Rules Compliance	2004/108/EEC: “Electromagnetic Compatibility” 2006/95/EEC: “Low Voltage”	
EU Rules Compliance	EN 61000-6-4, EN 61000-6-2, EN60204-1, EN60825-1	