DATALOGIC™

DATALOGIC AUTOMATION

LASER MARKING

V-LASE SERIES

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. 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.

V-LASE PLATFORM

- The V-Lase platform derives from the long experience in the production of high performance and high quality DPSS laser sources. The V-Lase sources and markers @1064nm use the state-of-theart 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 availability of the system.
- 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 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.
- The V-Lase platform significantly extends the possibility of connection between the laser source and the operating system. The communication with the system is enabled by RS232. In addition, the V-Lase platform also has an I/O for the connection of the TTL and analogue signals. Ethernet connection is available for monitoring.

FEATURES & BENEFITS

- Extremely easy to integrate and configure
- High reliability
- Excellent beam quality for superior industrial marking applications
- High peak power and short pulse width for excellent marking on a broad range of materials
- Integrated state-of-the art marking kit including user friendly marking software
- Advanced diagnostic & easy connectivity

APPLICATIONS

This product series has been developed to satisfy to requirements of the following reference applications:

- Plastic and metal marking in automotive, solar & electronics and healthcare industries, among the others.

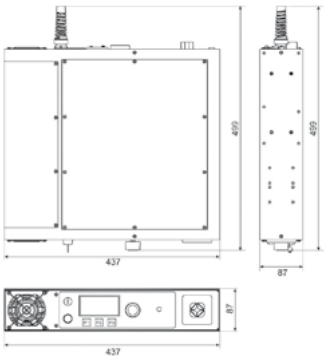
V-LASE

	V-LASE 10W	V-LASE 15W	V-LASE 20W
Wavelength	1064nm	1064nm	1064nm
Average Output Power * (typical)	10 W ± 5% CW	15 W ± 5% CW	20 W ± 5% CW
Repetition Rate Range	10 -200 kHz	10 -200 kHz	20 -200 kHz
Pulse Width	15ns@10kHz	10ns@10kHz	8ns@20kHz
Max Pulse Energy * (typical)	550uJ@10 kHz	700uJ@10kHz	650uJ@20 kHz
Aiming Beam	Class 2M Red Laser Diode; λ=635nm +/-5nm; 3mW		
Temperature Range	Operative 10°C to 35°C Storing 0 to 50 °C		
Cooling System	Air cooled		
Power Supply	DC 24V:28V		
Laser Power Consumption	typical 450 W maximum 600 W		
Connectivity	I/O signal; RS 232 & Ethernet for monitoring		
Optical Fiber Length	3m SMA connector		
Resonator Dimension & Weight	mm 114 x 125 x 448 kg 10		
Rack Dimension & Weight	mm 499 x 437 x 87 kg 12		
EEC Rules compliance	2004/108/EEC: “Electromagnetic Compatibility” 2006/95/EEC: “Low Voltage”		
EU Standard compliance	EN 61000-6-4, EN 61000-6-2, EN60204-1, EN60825-1		
Standard Marking configuration BASIC	VLASE 10W – 15W → BEX 9X; MiniScan8@1064nm; F-Theta 160S VLASE 20W → BEX 9X; MiniScan8@1064nm; F-Theta 160L		
Standard Marking configuration EVO	VLASE 10W - 15W → BEX 9X; MiniScan8@1064nm; F-Theta 160S; Mechanical Shutter&Power Meter VLASE 20W → BEX 9X; MiniScan8@1064nm; F-Theta 160L; Mechanical Shutter&Power Meter		
Options	Beam Expander 2X, 4X, 6X, 7.5X		

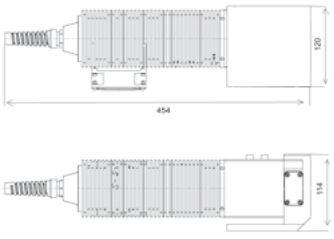
Objective F-Theta mm	63S	100S	160S	254S	100L	160L	254L	330L
Working distance mm	72	113	177	280	97	175	297	387
Working area (mm x mm)	35x35	50x50	100x100	140x140	60x60	110x110	180x180	220x220

S (small) > Ø = 47mm
L (large) > Ø = 90mm

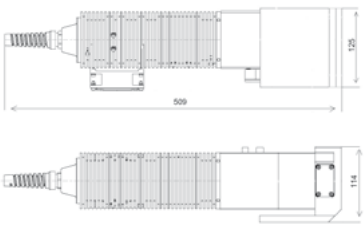
- Other focal lengths are available upon request



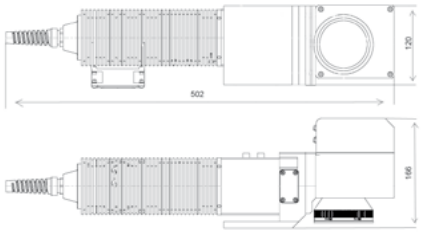
CONTROL UNIT (RACK)



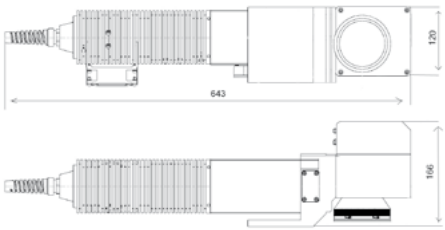
BASIC source resonator



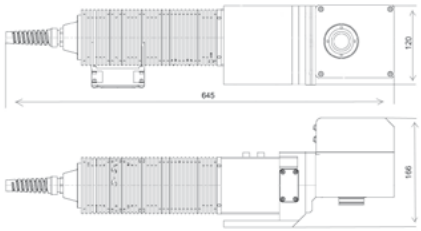
EVO source resonator



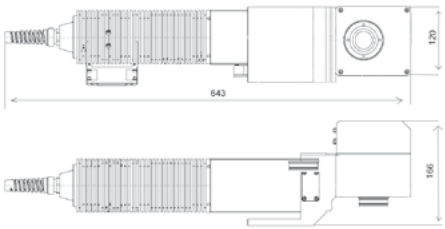
BASIC marker resonator



EVO marker resonator



BASIC marker resonator



EVO marker resonator

MARKING KIT

The marking kit allows system integrators to easily interact with the laser marking system. The kit consists of two components: a PCI electronic board (iMarkPCI) that provides control signals to the laser and a powerful software (Lighter) that provides a graphical user interface to create marking layouts and automate the laser marking process through integration with legacy systems. The Lighter graphical editor creates and edits text strings, 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.

Lighter marking kit guarantees key advances in marking software functions and applications such as marking on fly, array marking, grey tones marking, mechanical axis control, rotating axis control and others. Lighter 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, ...). Lighter is extensible: 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.).

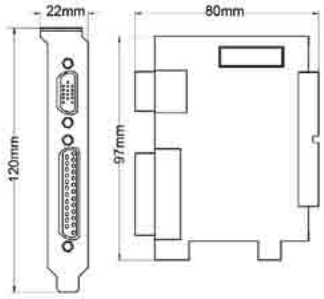
TECHNICAL SPECIFICATIONS IMARK MARKING KIT

User interface	Languages	English, Italian, German, Spanish, French, Polish, Japanese, Traditional Chinese, Simplified Chinese, Korean
PC compatibility	Supported OS	Windows 7 / Vista / XP
	Board slot	PCI Express (1x)
Galvo performance	Repeatability	< 10um short term positioning accuracy
	Precision	< 50um galvo positioning precision
	Long term drift	< 100um long term positioning drift
	Speed	Up to 10.000 mm/s
Character type	Font	Original single line, True Type, Open Type, Type1, Type42
	Languages	European, Asian, Arabic, Cyrillic and Hindi languages supported
	Text type	Fixed text, date and time, serial number, batch code, fully customizable code
Code type	Barcode	2to5, Code39, Code128, UPC, EAN (GS1 ready)
	Stacked	PDF417, Code16K, RSS Family
	Matrixcode	Datamatrix, QRcode, microQR
Logo image	Types	HPGL, PLT, DXF, DWG, BMP, JPG, TIF, GIF, PNG
Integration	Marking capabilities	Standing, Rotary axis, On the fly (marking in motion)
	Mechanical Axis	Up to 4 mechanical axis driving capabilities (stepper motor)
	I/O	Up to 16 digital inputs and 16 digital output fully programmable
	Encoder	Dual line high resolution encoder input (on the fly option)

V-LASE ACCESSORIES

The following accessories are available to simplify installation and optimize product performances:

- Power Supply
- Support for fitting to standard19” rack
- Ethernet interface module for monitoring
- Lens adapters
- F-Thetas



iMark board

PCI Express board

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