



INTEGRABLE LASER MARKER

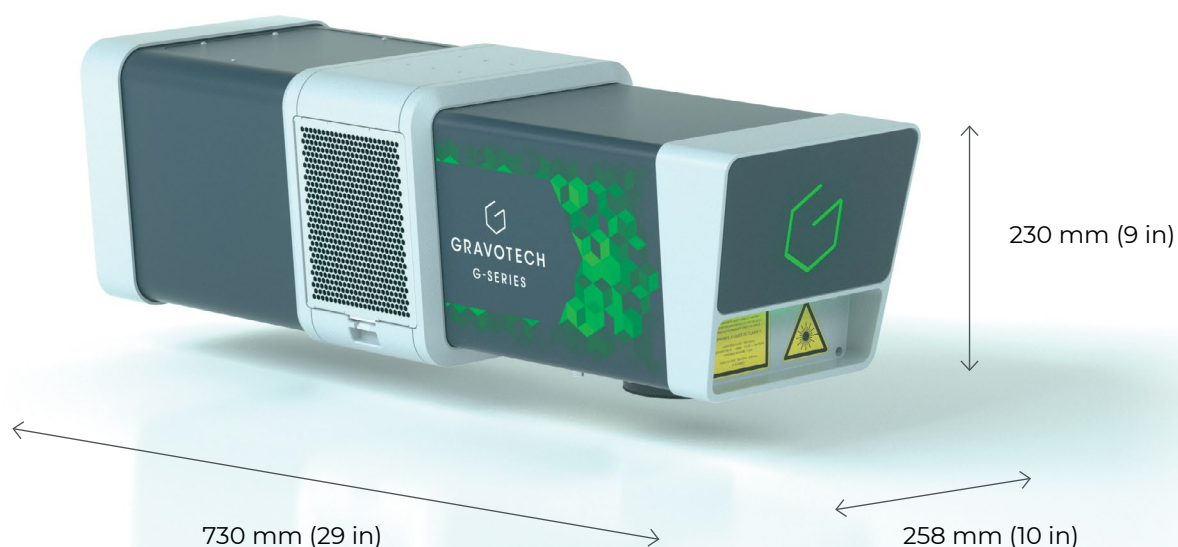
**GREEN LASER**



**GRAVOTECH**  
EXPRESSION OF THINGS



Green laser marker is designed for complex and cold markings on materials not reactive to other wavelengths. In addition, the Green laser has a small spot diameter that offers unsurpassed marking quality and accuracy on a wide range of materials.



### **COLD LASER MARKING**

Cold laser marking refers to marking and treatment carried out with minimal thermal stress. Laser beam concentration allows marking without generating heat into parts, avoiding any burning or damage. This marking doesn't alter the material and is an ideal solution for marking soft materials and sensitive components.

### **ULTRA-HIGH-DEFINITION MARKING**

Gravotech has developed green laser engravers that guarantee small and fine markings, it offers a fine spot size of 20  $\mu\text{m}$  and small markings with exceptional resolution while limiting thermal stress on the material. Small 2D Datamatrix, detailed logo, precise removal of thin layers of coating: the Green Series can meet all of your application challenges.

### **MARK THE IMPOSSIBLE**

Its versatility is almost unrivaled. This range uses a 532 nm wavelength to mark materials that would not normally react to infrared wavelengths: from rough to the most transparent plastics, reflective metals (copper, silver, gold), ceramic, cardboard, wood.

SEE OUR VIDEO



## KEY FEATURES



### Perfect Laser For Electrical Equipment

All electrical devices are using plastic with specific properties:

Insulating properties, not to conduct electricity.

Fire-resistant through the use of special flame retardant additives.

Can withstand high temperature.

These technical plastics with additives do not react to standard IR laser (1064 nm).

Green laser works perfectly and offers a contrasted marking to replace inkjet and label solutions.

You can use it for the CE & normative marking, technical specifications, pins & terminal references, etc.

This Green laser marker saves time and money as it requires no consumables and is a high productivity and eco-friendly solution.



### Precious Metal Specialist

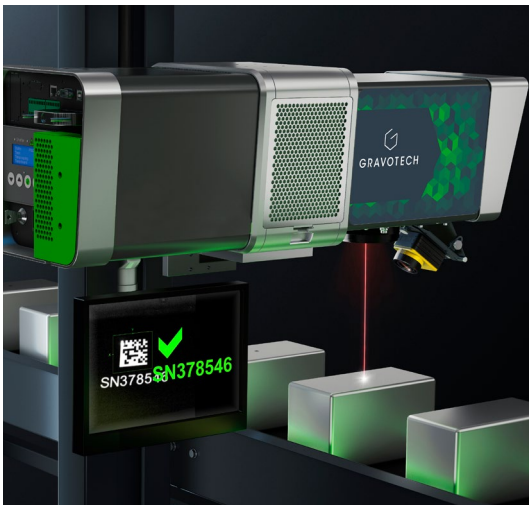
The Green series laser reacts perfectly with precious metals such as gold & silver but also on other highly reflective materials such as copper, stainless steel, and brass.

The very high absorption rate of 5320 nm wavelength gives a contrasted marking resistant to corrosion.

The risk of blackening and smearing is reduced by the low heat delivered by the laser beam.

You have no waste of materials as the laser marking is very thin and localized. It is also perfect to mark on thin metal sheets, there is no deformation due to heat with the laser.

Market Examples: Stores & Jewels, traceability of precious metals such as gold and silver, traceability of medical devices.



### Vision Manager – One Solution For Marking & Reading

The vision manager package helps you read codes and texts during and after the marking process, to ensure that the marking has been done properly and keep 100% traceability of your products.

Efficiency and performance: reading camera with lighting, auto-focus system and protective lens.

Easy to use: You are just a few clicks away from complete control of 1D/2D codes and your text (OCR fonts).

Gradation of the marking: Quality control of the readability of the codes (Grade).

Quality checking: sending status information and history to the PLC, activation of alarms, activation of the system to reject the faulty part.

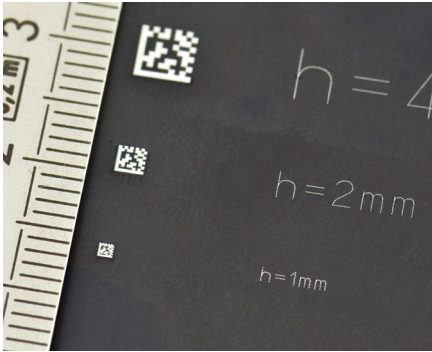
LEARN MORE ABOUT THIS PRODUCT



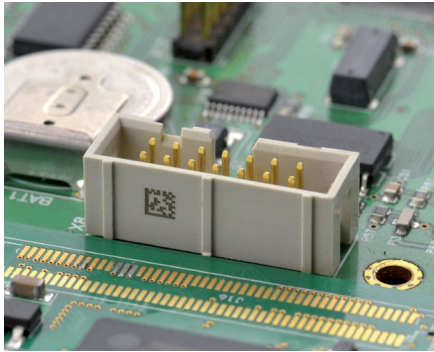
# APPLICATIONS



Marking on flame retardant plastics



Ultra small marking



Cold marking on sensitive parts



Versatility on multi-material parts



Marking on precious metals



Thin layer ablation

# MATERIAL CHARACTERISTICS

Technology		GREEN
Materials	Metals	■
	Plastics	■
	Ceramic	■
	Electrical and medical ceramic	■
	Wood, varnished wood	■
	Leather, textile	■
	Silicon, rubber	■
	Paper, cardboard, cork	■
	Engraving materials	□ ■

□ = Engraving / Deep Marking    ■ = Marking / Etching

MAKE YOUR SAMPLES





## SOFTWARE



### Embedded on the Laser

This Green laser marker can work independently in a production line and generate all data necessary to your identification without a computer, and communicate it to your PLC in real-time.

It can serialize your parts instantaneously, generate unique ID with complex marking content (timestamps with multiple formats, variables, counters, shift codes) and update the text and 1D/2D codes predefined in your templates.



Developed by Gravotech, Lasertrace is a unique software specially designed to create marking files to be loaded in the laser system. It includes a graphic composition to add text, logos and codes like Datamatrix in your marking templates.

## SERVICE & SUPPORT



### Training

Our training modules are designed to optimize your use of our solutions and are available for our full range of machines, software and accessories.



### Technical support

We bring you local support in your language in more than 50 countries, where we have established presence directly and with our distribution partners.



### Maintenance

Thanks to experience gathered with Gravograph and Technifor and our global presence in more than 50 countries with 150 Gravotech technicians and our distributor partners, we can offer you a wide range of services.

## SECURITY CONCEPT



### Mini-inline

Innovative solution for a secure and permanent laser part marking.

Gravotech has designed a turnkey marking solution that will fit perfectly on your production lines.

Mini-inline is a class-1 nozzle to secure the marking process without designing a costly class-1 enclosure.

Designed for marking of large industrial parts: This class 1 solution is fully customizable to fit your parts perfectly.

Recommended for large parts and flat surfaces, Engine crankcase, Gearbox housing, Stamped body parts, Fuel tanks, Long parts.

# TECHNICAL DATA

## GREEN SERIES

Model	G5
Laser technology	DPSS
Power	5W-10W
Peak power	70 kW
Frequency	10-100 KHz
Scan speed	Up to 10000 mm/s (393.7 in/s)
Marking area Available lenses	F100: 65 x 65 mm (2.6 x 2.6 in) F160: 110 x 110 mm (4.3 x 4.3 in) F254: 150 x 150 mm (6.9 x 6.9 in)
Communication interfaces (standard)	Ethernet TCP/IP; Terminal block 8I / 8O; Laser Safety Dedicated I/O; RS232; USB
Fieldbus	PROFINET or ETHERNET IP
Display	Integrated screen with control panel for real-time supervision, easy diagnosis, software updates, memory back-up...
Marking specifications	+60 Gravotech fonts, Possible to convert User & TTF fonts, All formats of barcode and 2D codes, Logos
Operating temperature	15 to 35°C (59 to 95 F)
Rated voltage	100 - 240 V AC
Marking head weight	19.8 kg (43.65 lbs)
Marking head cable length	All-in-One laser
Marking head installation direction	All positions
Laser Safety Classification	Class 4



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