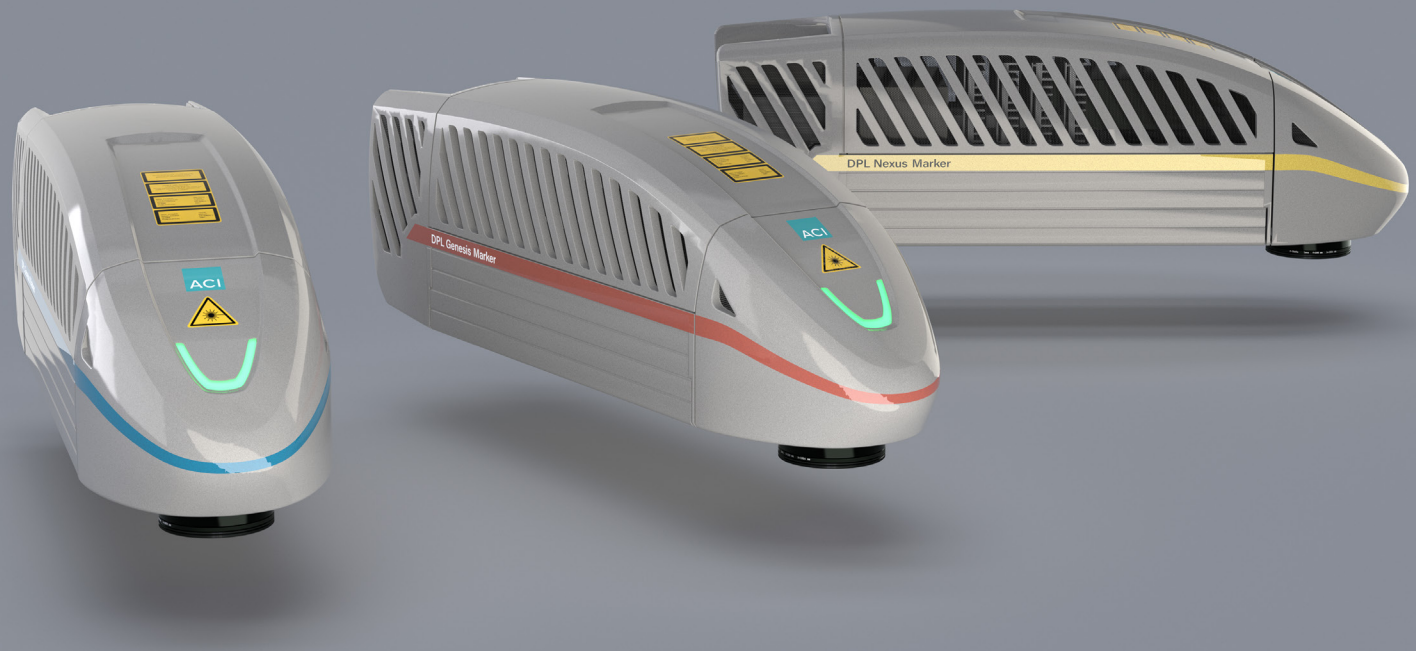
EN

Laser. Marking. Solutions.

ACI



Business Diode IR

Built to last

Laser marking with guaranteed quality

When marking a workpiece, the goal is to apply a permanent, high-contrast, high-resolution identifying mark to it. The impact on the material, along with any changes to its properties, must be kept to a minimum.

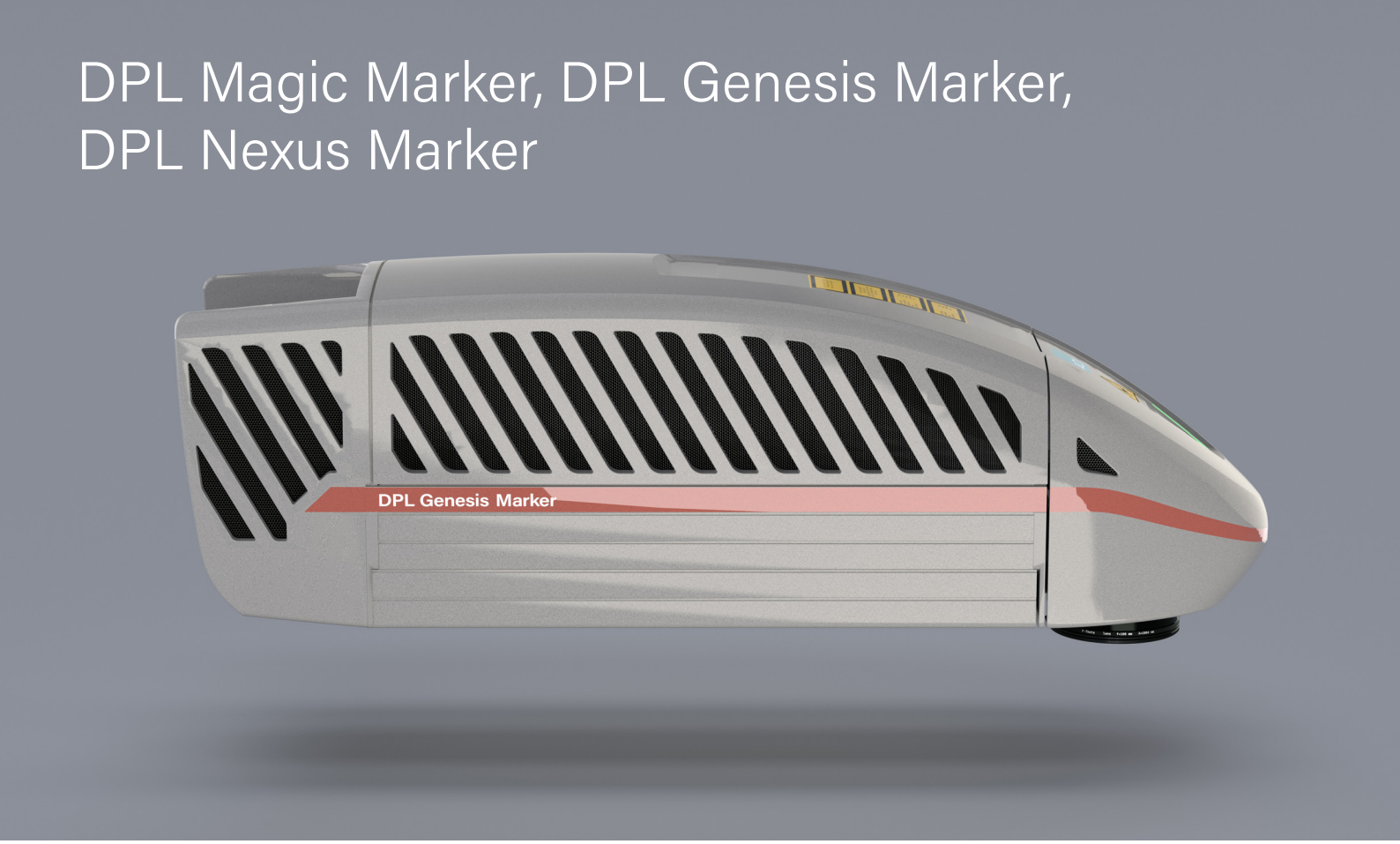
Business Diode IR laser systems are the perfect solution for fulfilling these requirements.

To ensure that they will always run smoothly, our products are subject to strict quality control at both the development and the production stage. This guarantees safe, reliable operation from machinery that will stand the test of time.

The functional, compact design of these laser systems is taking industrial laser marking to new places.

CONTENTS

DPL Magic Marker, DPL Genesis Marker, DPL Nexus Marker



Business Diode IR

The all-rounder among marking lasers

The systems in the **Business Diode IR** product series are diode-pumped solid-state lasers that operate in the wavelength range of 1064 nanometres. Thanks to their high levels of energy efficiency and beam quality, the infrared lasers are particularly suitable for fast and precise marking on various materials. They are used for processing individual parts through to large-scale production. All components of the laser are combined in a single housing.

→ Features/properties → Optional features → Technical specifications

Features/properties

- 100% air-cooled
- Low power consumption
- Control with external PC

Standard interfaces

- Wide input range of 85–264 V AC
- Eight digital inputs and outputs
- External safety circuit rated PLe

Safety first
Operator safety

The laser safety device (SD) is the core safety module in our laser marking systems. It complies with the safety function requirements set out in DIN EN ISO 13849-1, performance level e.

Optional features

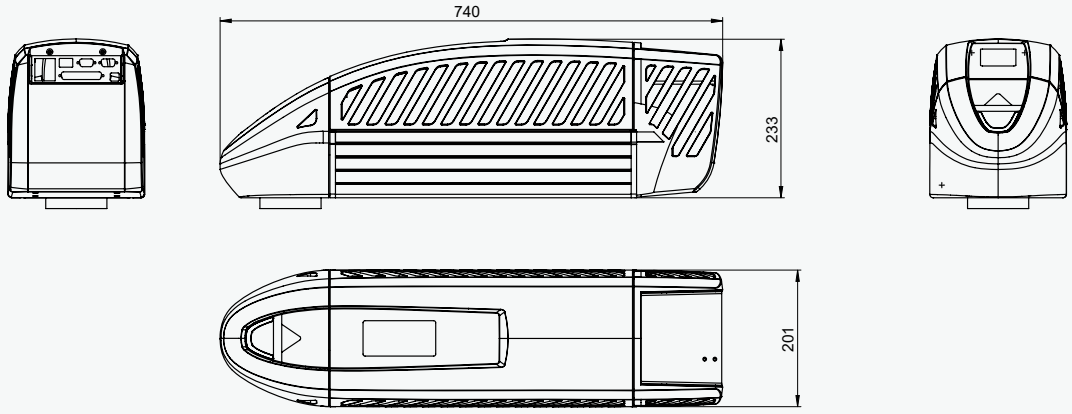
- Imaging systems for automatic object identification (AOI) and camera-assisted positioning of markings (CPM)
- Code readers
- Different lenses for different marking area sizes

The systems in the **Business Diode IR** series are a solution in accordance with laser protection class 4. ACI also offers all laser systems in conjunction with various laser stations for operation in accordance with laser protection class 1. This means that these laser systems can be used either as manual workstations or as integration components in an automated system.

DPL Magic Marker, DPL Genesis Marker, DPL Nexus Marker
Dimensions/view

Laser head

Dimensions (L × W × H)
740 x 201 x 233 mm



Technical specifications

DPL Magic Marker, DPL Genesis Marker, DPL Nexus Marker
Business Diode IR

Laser type	Nd:YAG		
Laser power	5 W Magic Marker	8 W Genesis Marker	12 W Nexus Marker
Beam quality	$M^2 < 1.2$		
Wavelength	1064 nm		
Pulse widths	15–100 ns		
Pulse repetition rate	1–100 kHz		
Laser class	4, optionally 1		
Size of marking area	Optionally: 60 x 60 mm/110 x 110 mm/180 x 180 mm		
Power consumption (max.)	450 W Magic Marker	550 W Genesis Marker	600 W Nexus Marker
Mains connection	85–264 V AC/6 A/50–60 Hz		
Weight	20 kg		
Dimensions (L×W×H)	704 × 201 × 233 mm		
Software	Magic Mark V3		
Interfaces	USB interface for communication between control PC and marking laser, interlock connection, SD-ready, laser-control interface with eight digital inputs/outputs as an interface for production line, power input module		
Functional safety acc. to DIN EN ISO 13849-1	PLe		

Applications

The **Business Diode IR** series marking lasers are ideal for metal marking. Thanks to their outstanding beam quality, clean, precise markings can be realised on metals, plastics and ceramics. There are different power outputs from which you can choose, depending on the application and the time available for the marking process. If direct laser marking of the material is not possible, special laser films are available as an alternative, which can be marked permanently and to a high level of quality using the **Business Diode IR** series lasers.

Engraving on ceramics

Scale marking on calliper made of anodised aluminium

Laser engraving on chrome-plated instrument handle

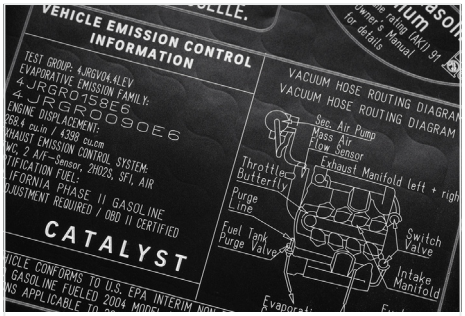
Laser marking on counter housing made of plastic

Laser engraving on a step drill made of HSS steel

Laser marking on counter housings made of plastic

Laser marking on reflection light scanner made of plastic

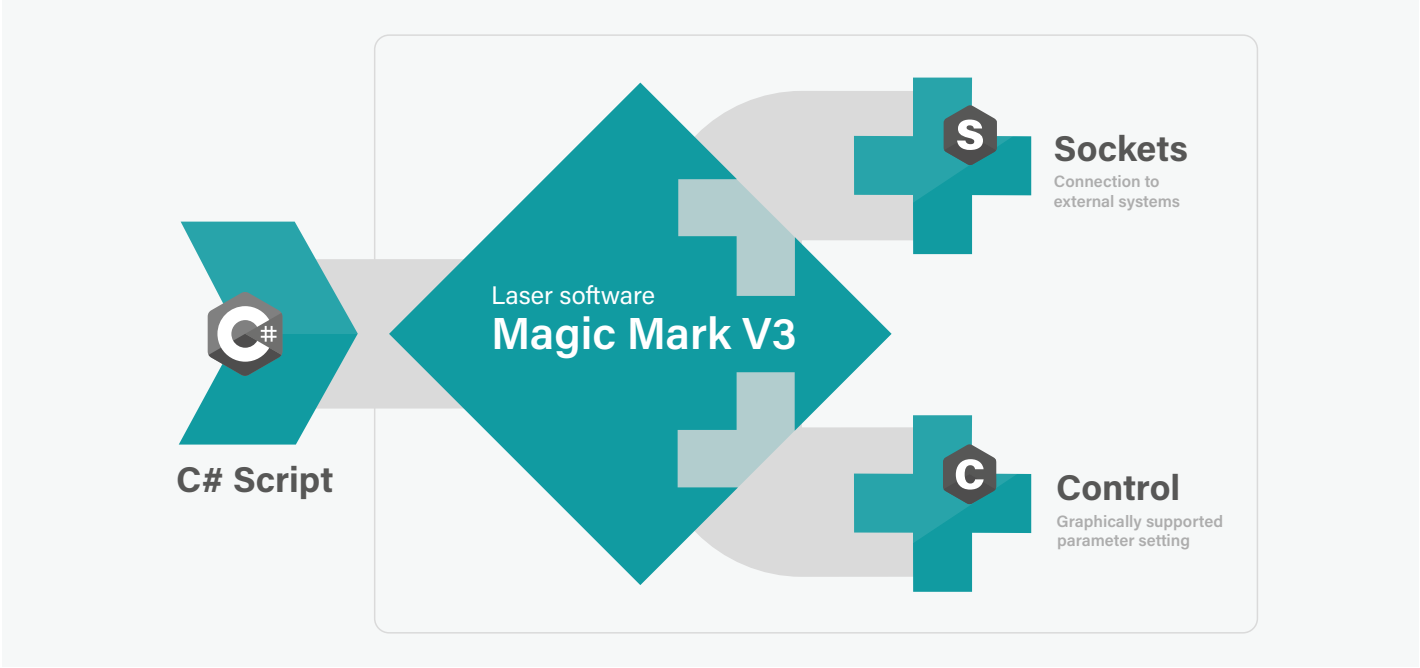
Day-night design on car operating element



Laser marking on industrial film

Software-based control

The modern software architecture of the **Magic Mark V3** laser marking software enables targeted access to all available functions and allows users to control the laser and laser peripherals (workstation/axis of rotation, etc.).



Internal programming
VB.Net [Winwrap Basic] integrated into Magic Mark V3

External programming
C#.Net [MS Visual Studio]
Access to class library

Benefits of Magic Mark V3

Software package included in the scope of supply

Predefinable parameter sets

Easy addition of features using plugins

Partnership with ACI Laser
Benefits for customers

The search for excellent partnerships is at the heart of everything we do. We offer our customers sustainable solutions based on all-encompassing advice, reliability and stability.

ACI Laser embodies:

✓ Development & Production that is *Made in Germany* with over 20 years of experience

✓ Complete solutions from a single source: Laser systems, protective housings, software and accessories

✓ Customisable laser systems

✓ Functions can easily be added to the software using plugins

Made in Germany

Laser. Marking. Solutions.

We would be happy to advise you.

We guarantee you a tailor-made, all-in-one solution that meets the requirements of your application. Our experienced sales team provides you with comprehensive, in-depth advice. We look forward to hearing from you.

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