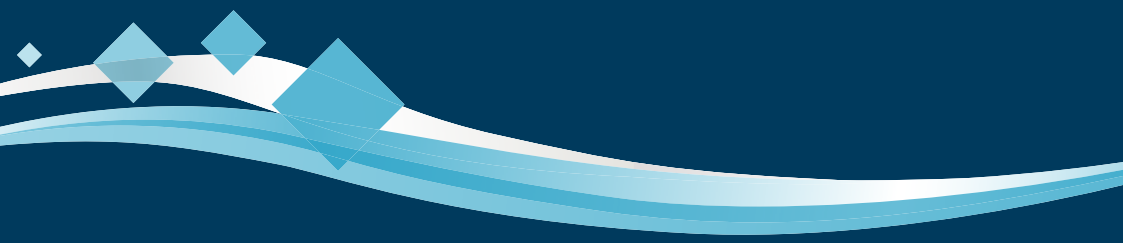
DOMINO

U-Series User Guide

U510 Standard



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U510 STANDARD USER GUIDE

U510 STANDARD

Domino Printing Sciences has a policy of continuous product improvement. The Company, therefore, reserves the right to modify the specification contained in this manual without notice.

For sales and service assistance visit the website below and select “Contact Domino in your country” for local technical support:

http://www.domino-printing.com

AMENDMENT RECORD

Amendment	Date
All parts at Issue 1	December 2021
All parts at Issue 2	January 2023

ORIGINAL EU DECLARATION OF CONFORMITY

EU DECLARATION OF CONFORMITY

Manufacturer
BROTHER INDUSTRIES, LTD., 15-1 Naeshiro-cho, Mizuho-ku, Nagoya, 467-8561, Japan

Trademark
DOMINO

Authorized Representative
Domino Laser GmbH, Fangdieckstrasse 75a, 22547 Hamburg, Germany

Product Type
Domino U-Series Laser Coding System

Model/Type Number(s)
U510 STANDARD consisting of Laser Head and an optional Control Panel

We herewith declare under our sole responsibility that the above-mentioned products meet the provisions of the following EU Directives and harmonized standards:

EU Directives

2006/42/EC	Machinery Directive
2014/30/EU	Electromagnetic Compatibility Directive
2011/65/EU	RoHS Directive

Applied Harmonized European Standards

EN ISO 12100:2010	EN ISO 11553-1:2008	EN 415-1:2014
EN 415-10:2014	EN ISO 11252:2013	EN ISO 14118:2018
EN ISO 14120:2015	EN 60204-1:2018	EN ISO 13849-1:2015
EN ISO 14118:2018	EN ISO 19353:2019	EN 61326-1:2013
EN 61000-6-4:2007/A1:2011	EN 61000-6-2:2005	EN 61000-3-2:2014
EN 61000-3-3:2013		

Further Applied European Standards
EN 60825 -1:2014
EN 61010-1:2010+A1:2019
EN 60529:1991+A1:2000+A2:2013

Name and address of the person authorized to compile the technical file:
Domino Laser GmbH, Fangdieckstrasse 75a, 22547 Hamburg, Germany

This declaration is valid from the product starting with serial number:
(relevant, incrementing serial number part in italic) E82106L21T*000001*
(digits 7 to 10 preceding the incrementing part are flexible based on manufacturing site/date)

Place, Date and legal Signature:

Nagoya, 2021-12-15

Minoru Yamamoto

Minoru Yamamoto
General Manager
Quality Innovation Department
Brother Industries, Ltd.
for the Manufacturer

Hamburg, 2021-12-15

i.V. M. Pauly

Martin Pauly
Director R&D - Laser,
Domino Laser GmbH,
for the Authorized Representative

TRANSLATION OF THE ORIGINAL DECLARATION OF CONFORMITY

Manufacturer

BROTHER INDUSTRIES, LTD., 15-1 Naeshiro-cho, Mizuho-ku, Nagoya, 467-8561, Japan

Trademark

DOMINO

Authorized Representative

Domino Laser GmbH, Fangdieckstrasse 75a, 22547 Hamburg, Germany

Product Type

Domino U-Series Laser Coding System

Model/Typer Number(s)

U510 STANDARD consisting of Laser Head and an optional Control Panel

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2014/30/EC Electromagnetic Compatibility Directive
2011/65/EU RoHS Directive

Applied harmonised European Standards

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ORIGINAL UK DECLARATION OF CONFORMITY

DOMINO

UK DECLARATION OF CONFORMITY

Manufacturer
BROTHER INDUSTRIES, LTD., 15-1 Naeshiro-cho, Mizuho-ku, Nagoya, 467-8561, Japan

Trademark
DOMINO

Authorized Representative
Domino UK Limited, Bar Hill, Cambridge CB23 8TU, UK

Product Description
Domino U-Series Laser Coding System

Model/Type Number(s)
U510 STANDARD consisting of Laser Head and an optional Control Panel

We herewith declare under our sole responsibility that the above-mentioned products meet the provisions of the following UK statutory instruments and designated standards:

UK Statutory Instruments
The Supply of Machinery (Safety) Regulations 2008 No. 1597
The Electromagnetic Compatibility Regulations 2016 No.1091
The Restriction of the Use of Certain Hazardous Substances in Electrical Equipment Regulations 2012 No.3032

Applied UK Designated Standards

EN ISO 12100:2010	EN ISO 11553-1:2008	EN 415-1:2014
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Nagoya, 2021-12-15

Minoru Yamamoto

Minoru Yamamoto
General Manager
Quality Innovation Department
Brother Industries, Ltd.
for the Manufacturer

Cambridge, 2021-12-15

R Richard Hall

Richard Hall
Group Development Director
Domino UK Limited
for the Authorized Representative

TRANSLATION OF THE ORIGINAL UK DECLARATION OF CONFORMITY

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Trademark

DOMINO

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Domino UK Limited, Bar Hill, Cambridge CB23 8TU, UK

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PREFACE

WARNING:	Laser Radiation. Risk of Injury.
	**This equipment must only be installed by a technician that has successfully completed a U510 laser training course to Domino standards. It must only be operated by trained and competent users.**
	Read and obey the safety precautions in the Product Manual before operating this equipment. **If unable to access the Product Manual, contact your local support office.**
	This document is intended to provide basic safety information. It is not a substitute for the Product Manual.

INTENDED USE OF EQUIPMENT

The U510 STANDARD is an industrial laser coder. It is designed for coding onto a variety of substrates and products. For specific details, contact your local support office.

TARGET AUDIENCE

This document describes basic information and is aimed at anyone coming into contact with the equipment.

Domino expects that all operators receive product training before operating the equipment.

The equipment must only be operated by trained and competent users.

Domino U510 STANDARD laser coding system is manufactured by Brother Industries Ltd.

For Sales and support, contact your local Domino support office.

For instructions and operation, refer to the Product Manual, this can be found and downloaded from web site below:

https://mydomino.domino-printing.com/resources/U510-manual

WARNING, CAUTION AND NOTE DEFINITIONS

WARNING:	**A hazard which can cause death or injury.**
	**Avoidance..... Do/Do not....** A warning is used to alert the reader to hazards that will cause loss of life, physical injury or ill health. It includes how to avoid the risk.

CAUTION:	*A hazard which can cause damage to equipment or environment.*
	*Avoidance..... Do/Do not.....* A caution is used to alert the reader to hazards that will cause damage to equipment or the environment. It includes how to avoid the risk.

Note: *Contains important information.*

Symbols

The symbols listed below are used in this product manual to highlight specific warnings and cautions used in the procedure below the symbols.

Warning or Caution. Read and comply with the text underneath this symbol to avoid loss of life, physical injury or damage to equipment.

Risk of laser radiation.

Risk of fire by igniting flammable material.

Risk of coming into contact with electricity.

Risk of mechanical parts which can come together in a crushing movement.

Disconnect power before carrying out maintenance or repair.

U510 STANDARD LASER CODER

WARNING:	Class 4 Laser. Risk of personal injury.
	**Fit the coder with class 1 laser safety guarding before it is operated or made ready for use.** This is necessary to safeguard against accidental exposure to direct or scattered radiation. Guidance on creating and fitting laser guarding can be found in part 1 of the Product Manual. **Avoid eye or skin exposure to direct or scattered radiation.** Set up a laser safety zone and wear appropriate eye protection if laser radiation above class 1 may become available. Information about the correct type of Protective Safety Goggles can be found within the Product Manual. Contact with direct or scattered laser radiation can cause permanent damage to the eyes, up to instant blindness, burn human tissue and start fires. UV-A light near 355 nm can cause photochemical reactions of the skin, accelerated skin aging and potentially skin cancer, depending on the exposure duration. When working near class 4 UV lasers, cover as much of the skin as adequate. This product provides class 4 laser radiation from their laser aperture on the scan head. This radiation is an invisible, ultraviolet laser radiation with a wavelength of 355 nm and a maximum power of 12 W. Leakage wavelengths are 880 nm < 1 mW, 1064 nm < 3 mW and 532 nm < 1.5 mW. Before the product is made ready for use fit the laser aperture into a class 1 laser safety guarding and make sure that the laser energy will not act as an ignition source in your environment. This is necessary to safeguard against accidental exposure to direct or scattered radiation and fire risks. Guidance on creating and fitting laser guarding can be found within this Product Manual. Before the product is used make sure that fumes, particles and gases that are created during the lasing process are safely removed. This can be achieved by installing an extraction system that is adapted to the planned lasing process.

This manual has been produced for use for the Domino U510 STANDARD Laser Coder. This manual is designed to reinforce and complement any training program available with the product. It is not designed to replace a training program.

WARNING:	**Class 4 Laser. Risk of personal injury.**
	**Do not use controls or adjustments of performance or procedures, other than those specified in this manual.** **Do not apply changes or modifications that are not expressly approved by the manufacturer.** **To do so may result in hazardous radiation exposure and may void the user's authority to operate the equipment**

CAUTION:	*LASER RADIATION. Class 2 LASER PRODUCT. Risk of personal injury.*
	*DO NOT STARE INTO BEAM.* *This product optionally emits class 2 laser radiation for aiming purposes from the laser aperture on the scan head. This radiation is a visible red laser radiation with a wavelength of 630-670 nm and CW power of <1mW.*

CAUTION:	*It is mandatory to use Warning Labels translated into local language.*
	*If another language than English is needed you must attach the translations.* *Please follow the chapter "Mandatory Labelling With Warning Labels During Installation" in this manual.* *The Product Manual explains the optional necessary use of more of the delivered warning labels for the installation.* *Please read chapter "Installation Depending Local Language Labelling During Installation".*

CAUTION:	*Heavy Lifting the Laser Unit weights above 18 kg.*
	*The weight of the complete Laser Unit is 21 kg. Take appropriate care if the unit is moved during installation or repair.* *The unit may only be moved by after domino standards appropriate in lifting techniques and risk assessment trained technicians.* *Depending on the individual physical lifting capabilities and the planned lifting move more than one technician may be necessary to distribute the weight in a safe way.*

PRODUCT/BATTERY END OF LIFE

WARNING:	**Flammable Material. Risk of Fire or Explosion.**
	Do not dispose the battery in a fire, hot oven, by mechanically crushing or cutting. Obey local waste regulations when disposing of batteries.
	Do not store or leave the battery in high of low extremes of temperature.
	Do not store or leave the battery in a location that is subject to low air pressure at high altitude.

CAUTION:	*Hazardous Material. Risk of damage to equipment and environment.*
	*If the battery needs replacement: The battery is a CR2032 battery. Obey local waste regulations when disposing of the battery and PCB.*

Recycling information in accordance with the WEEE and Battery Directives

Product mark

Battery mark

European Union only

The product/battery is marked with one of the above recycling symbols. It indicates that at the end of life of the product/battery, you should dispose of it separately at an appropriate collection point and not place it in the normal domestic waste stream.

LASER SPECIFICATION (SOURCE)

Coding Laser

Item	Specification	Notes
Wavelength	355 nm	Invisible Beam
Laser Type	Nd: YVO_4 - THG	
Laser Oscillation	Pulsed	
Nominal Output Power	6 W	From the laser
Pulse Repetition Frequency Range	0 - 500 kHz	
Pulse Duration	5- 50 ns	
Max. Output Power	12 W	From the coder in single fault worst case conditions
Max. Pulse Energy	0.2 mJ	
Beam Divergency	0.2 - 0.6 mrad	
Leakage Wavelength	880 nm < 1 mW 1064 nm < 3 mW 532 nm < 1.5 mW	
MPE (Maximum Permissible Exposure)	10000 J/m^2	For a pulse train at PRF0 and 30000 s exposure
NOHD (Nominal Ocular Hazard Distance)	21800 m	For a pulse train at PRF0 and 30000 s exposure
Laser Class	4	

Aiming Beam laser diode without control electronic

Item	Specification	Notes
Wavelength	655 nm	Visible Beam
Laser Type	Laser Diode	
Laser Oscillation	CW (Continuous Wave)	
Max. Output Power	7 mW	From the laser diode
Beam Divergency	θ// : 6-12° θ ⊥ : 22-38°	
Laser Class	3B	

LASER SPECIFICATION (PRODUCT)

Coding Laser

Item	Specification	Notes
Wavelength	355 nm	Invisible Beam
Laser Type	Nd: YVO_4 - THG	
Laser Oscillation	Pulsed	
Nominal Output Power	4.5 W	From the coder
Pulse Repetition Frequency Range	50 - 500 kHz	
Pulse Duration	5- 50 ns	
Max. Output Power	12 W	From the coder in single fault worst case conditions.
Max. Pulse Energy	0.2 mJ	
Beam Divergency	22 mrad	
Leakage Wavelength	880 nm < 1 mW 1064 nm < 3 mW 532 nm < 1.5 mW	Leakage Wavelength
MPE (Maximum Permissible Exposure)	10000 J/m^2	For a pulse train at PRF0 and 30000 s exposure
NOHD (Nominal Ocular Hazard Distance)	400 m	For a pulse train at PRF0 and 30000 s exposure
Laser Class	4	

Aiming Beam

Item	Specification	Notes
Wavelength	655 nm	Visible Beam
Laser Type	Laser Diode	
Laser Oscillation	CW (Continuous Wave)	
Max. Output Power	1 mW	From the coder
Laser Class	2	

LASER CODER SPECIFICATION

	U510 STANDARD
Electrical Requirements	100-240 VAC, max. 3A, 50/60 Hz
Maximum Power Consumption	300 VA
Nominal Laser Power	Min. 4.5 W at a wavelength of 355 nm
Max. (Peak) Laser Power	12 W
Laser Type	Nd: YVO_4 - THG Laser
Duty Cycle*	100%
Code Types	Logos, bar codes, 2D codes, graphics, text, etc.
Characters per second*	1,000
Product Line Speed*	350 m/min.* 1138 ft/min.*
Character Height	0.6 mm – field size (0.02 in – field size)
Fonts	16 fonts, multi-language including full Unicode
Laser Head	Anodized aluminium construction
Dimensions (L x W x H)**	580 X 180 X 200 [mm]
Weight	21 kg
Operating Temperatures	10 °C to 40 °C
Environmental Humidity	Max. 90% RH, non-condensing
Cooling	Air (Fan Cooled)
IP Rating	IP55
Performance Level (PL)	ISO13849-1:2015 Category 4 PLe considered from the safety inputs

*Duty Cycle and Characters per second and production line speeds are substrate and code dependent

**Dimensions measured overall for shortest version

Use this product indoors under the conditions listed below:

- Altitudes: less than 2000 m or approximately 6500 ft
- Power supply voltage fluctuation: ± 10%
- Pollution degree: 2
- Transient over-voltage: Category II

Switch Off Time

The laser is safe 40 ms after opening the safety circuit.

INTENDED USE OF EQUIPMENT

The U510 STANDARD laser coding system is intended for fully automated coding of packaging materials and products by laser radiation.

If the laser coding system is used for any other purpose, all liability claims will be refused.

Always obey the technical specifications listed.

The manufacturer is not liable for any material or personal damage resulting from non-intended use.

The laser coding system can only be operated by competent, authorized and trained personnel who are familiar with and obey the procedures in this manual.

It is recommended to do a risk assessment about laser coder integration as stated by ISO13849 and ISO11553. Hazards from laser material processing are reported in ISO11553 (e.g. dusts, emissions, fires or explosion and other hazards).

HEALTH AND SAFETY

General

U510 STANDARD laser coding systems are designed and manufactured in accordance with international standards and technical specifications. The equipment conforms to current

technology and approved safety requirements.

The required safety standard can only be achieved if the safety actions are completed and maintained. It is the equipment operator's duty to plan these actions and continuously check them.

U510 STANDARD laser coding systems are designed for fully automated coding of packaging materials and products by use of laser radiation.

Fit the coder with class 1 laser safety guarding before it is operated or made ready for use.

When operating, maintaining or repairing this product, by a competent person, without a verified Laser Class 1 housing always wear laser eye protection that satisfies the conditions listed below:

- Optical density (OD value) for wavelength 355 nm is 7 or more, for 532 nm is 4 or more and for 1064 nm is 4 or more.
- As sold, this is a Class 4 Laser Product. During operation, it will emit up to 12 W of pulsed invisible UV laser radiation at a wavelength of 355 nm.

Note: Laser safety goggles (DLB6 IRLB8 (OD 8+)) can be ordered from Domino (Domino part number EPT074032SP).

WARNING:	**Laser Radiation. Risk of Injury.**
	**Do not look at direct and reflected light from the laser, even when wearing laser eye protection.** **Laser eye protection protects the eyes from scattered light. Laser eye protection cannot protect eyes from direct or reflected light.**

Obey instructions listed below:

- Only use the laser system after it has been installed and guarded to Class 1 laser safety standards (IEC60825-1:2014).
- Only use the equipment for its intended purpose.
- Only operate the equipment in good, serviceable condition.
- Regularly check safety installations.
- Use approved tools/equipment.
- Ensure the user guide is complete and in a legible condition at the laser coder's location.
- Ensure rules and laws about accident prevention are available and obeyed.
- Only qualified/authorized personnel is allowed to operate, maintain, and repair the laser coding system.
- Instruct personnel about safety and environmental protection.
- Ensure personnel are familiar with the product manual and safety instructions.
- Do not remove safety and warning signs from the laser coding system.
- Ensure safety and warning signs are maintained in a legible condition.
- Use an industrial waste disposal company and obey local laws/regulations, when disposing of the laser coder.

Specific Dangers

Electrical Energy

WARNING:	High Voltage. Risk of Injury.
	**Work on live electrical components must only be performed by authorized personnel. The maximum operating voltage of the U510 STANDARD is the connected mains voltage.**
	If power supply becomes defective, stop operation of the laser coding system immediately. The laser coding system can only be repaired by authorized personnel.
	Do not open the laser coding unit. Only expressly authorized personnel can open the laser coding unit.

Note: The mains voltage to be maintained is shown on the Product Plate.

Harmful Dusts and Vapours

WARNING:	Harmful Dust and Vapours. Risk of Injury.
	**Use an appropriate extraction system to reduce harmful dust and vapours to a level that complies with the allowed maximum concentration of pollutants at the workplace.**

When radiating materials using a laser, harmful dusts and vapours can be produced. The user is responsible for appropriate measures, e.g. an exhaust system, to reduce such harmful dusts and vapours to a level that complies with the allowed maximum concentration of pollutants at the work place.

Lenses

CAUTION:	*Sensitive Equipment. Risk of Damage to Lenses.*
	*Do not touch the lenses. Oils and dirt can cause damage to the laser.*

CAUTION:	*Sensitive Equipment. Risk of Damage to Lenses.*
	*Remove the lens cover before operation.*
	Cover the lens with lens' protective cover to avoid accidental water splashing. Cover the lens during cleaning and maintenance of the system.

If the lens has become dirty, it must be thoroughly cleaned and dried before any operation. See page 35.

Crushing

WARNING:	**Moving Products. Risk of Crush Injury.**
	**Before working on a laser system secure the environment against mechanical risks!**

Scan Head Mirrors

The scan head mirrors are located behind the lens. Do not access or touch the scan head mirrors.

CAUTION:	*Sensitive Equipment. Risk of Damage to Mirrors.*
	*Do not touch the mirrors. Oils and dirt can cause damage to the laser.* *If the mirror is touched, carefully clean with Isopropyl Alcohol.*

Laser Coding Process

WARNING:	**Fire Hazard. Risk of Injury.**
	**Do not code onto unspecified materials. For example, flammable or explosive materials.**
	Ensure laser parameter settings are correct for the job. **Do not allow the laser to code onto the same area (ensure the product keeps moving).**
	Do not allow flammable gases or materials to accumulate inside the working area.

Fire risks are listed below. The list is not considered to be complete. Local conditions must be considered.

- Coding on not specified material (e.g. easily inflammable or explosive materials). Invalid parameter settings.
- Invalid parameter settings due to corrupted code data.
- Coding constantly on the same product (no product movement).

Guarding

Guarding is an initial part of the laser safety.

Laser guarding must be constructed and certified by specialists that are trained and have understood the use of the local laser regulations. The here mentioned international standards are a good starting point but may not fulfil all local regulations.

This Domino laser coding system can emit class 4 laser radiation through the lens of the scan head when the dual channel safety circuit is closed and the system is powered.

Before powering the system, you must ensure that the environment is securely guarded against accidental exposure to direct or scattered radiation.

Inside the laser guarding suitable measures against the risk that the laser energy may act as an ignition source must be provided.

A risk assessment for your guarding considering all risks e.g. fault conditions like stuck or missing products, wrong laser parameters and projects, single worst fault conditions and foreseeable misuse is strongly recommended. We recommend using the standard ISO 12100:2010 "Safety of machinery - General principles for design - Risk assessment and risk reduction"

The goal is to provide guarding that fulfils all necessary safety expectation.

An option is to follow the standard IEC 60825-1 Safety of laser products - Part 1: "Equipment classification and requirements" and certify the guarding to be a laser class 1 guarding.

More detailed laser guarding information is available in the standard IEC 60825-4 Safety of laser products - Part 4: Laser guards”

As your guard will be part of a machinery setup also the expectation from the standard ISO 14120 "Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards" must be taken into account.

If you need support in planning and verifying your laser guard, please contact Domino.

Interlock Switches

Fit interlock switches to all access guards to prevent access to the laser output lens and coding area. Connect interlock switches to the laser control circuit so that the laser beam is disabled when the guard is removed/opened.

Emergency Off

Integrate the laser into the emergency off circuit of the machine into which the laser is integrated. Install an emergency off push button near the laser coding systems which turns off the laser. Connect the emergency off push button via the interlock circuit to the controller.

Ensure the Laser can be turned off by key switch turn or mains power supply shut down.

Mandatory Labelling With Warning Labels During Installation

The laser system is fitted with international graphical laser warning signs and numbers of laser performance data based on Standard IEC 60825-1 “Safety of laser products” during manufacturing.

To ensure that the meaning of the graphical laser warning symbols is understood, the laser safety standard defines supplementary text on these signs to increase comprehension.

Signs with the supplementary text in English language are attached during manufacturing.

It is mandatory to apply extra signs in local language as defined in local standards (e.g. The Machinery Directive for EU countries) if the local language differs from English. These labels have been delivered together with this manual in a “Language Kit”.

Before applying any label ensure the surface is clean (dust, oil and grease free) and that the surface fits the adhesive on the label kits.

Shutter

The U510 STANDARD is equipped with a shutter to prevent uncontrolled laser radiation from exiting the scan head.

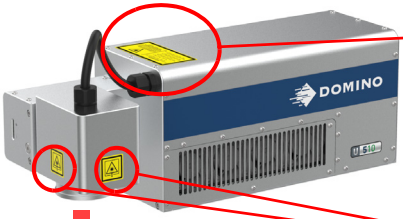
The shutter is part of the interlock control circuit and ensures a redundant blocking of the beam path while the dual channel laser safety circuit is open, or the safety relay is disengaged.

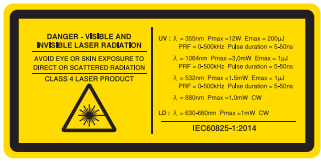
The shutter opens the beam path only while the laser safety circuit is closed and the safety relay has been reset by an external signal.

So the laser beam source can stay activated while the system is in stand by with opened safety circuit and laser radiation is safely stopped from exiting the system.This results in faster restarts and increases laser power stability.

Laser Coder Warning Labels

U510 STANDARD





Warning Label and Explanatory Label

Laser Emitting Aperture

Aperture Label

Labels on the Type Sign

Find below the labels used on the type sign and their description

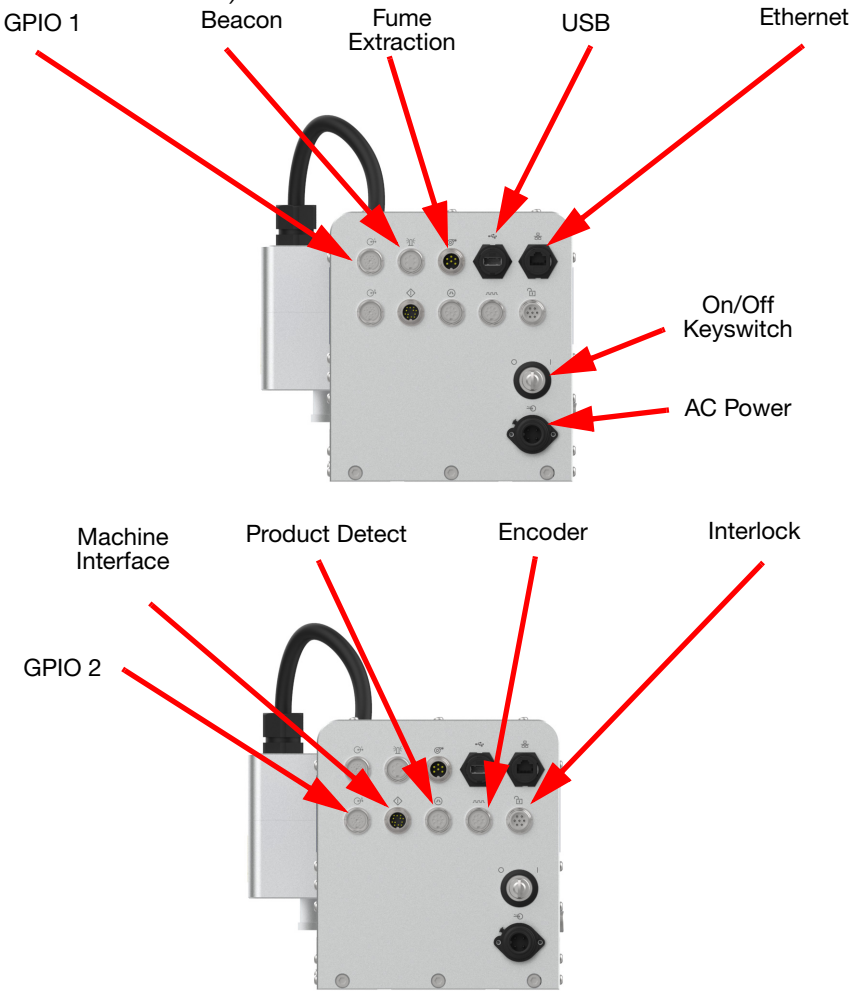
Label	Description
EC REP	Authorized representative in the European Community
UK REP	Authorized representative in the United Kingdom
SN	Serial Number
	Date of Manufacture
#	Model Number
	Manufacturer

CONTROLS AND INDICATORS

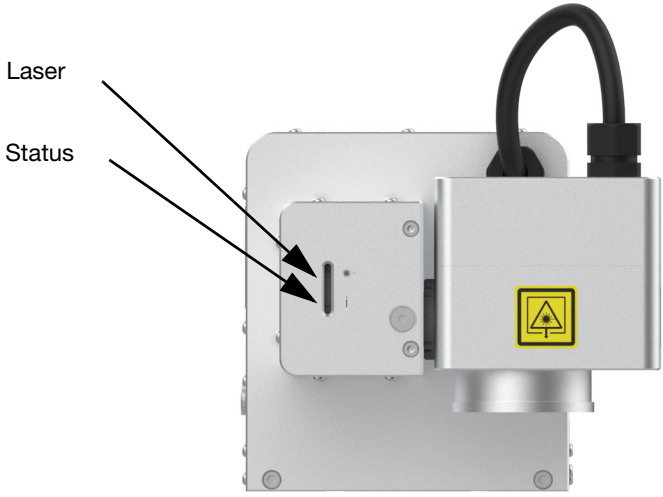
The User Interface, Indicator Lamps and Software icon functions are described below:

Controls (U510 STANDARD)

Note: The On/Off Key Switch starts and stops the laser coder (fans and laser tube start).



INDICATOR LAMPS



U510 STANDARD

The Laser LED is powered by switching on the laser via the software.

The table below illustrates what colour lights are shown on the Beacon, UI, Status LED and Laser LED for each status:

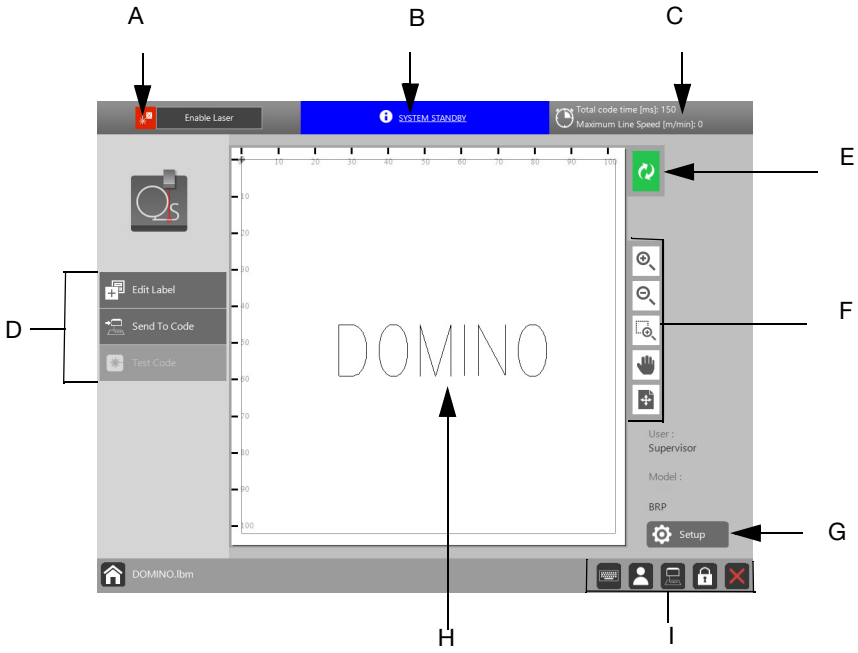
State	**Beacon**	**UI**	**Laser Indicator LED**	**Status Indicator LED**
Initialising	Blue	Blue	Off	Flashing Green
System Standby	Blue	Blue	Flashing Blue	Green
Ready to Code	Green	Green	Blue	Green
Coding	Green	Green	Blue	Flashing Green/ Amber
Warning	Amber	Amber	Depends on coder state	Depends on coder state
Error	Red	Red	Flashing Blue	Red

USER INTERFACE

The software LMEditor QS is operated using a PC. An entry is made with the left mouse button if a PC is used.

HOME SCREEN

When starting the software, the Home screen illustrated below is displayed.



Item	Name	Description
A	Laser Enable/Disable	Enable or Disable the laser.
B	Status Bar	Displays the coder and alert status. If more than one alert is present, the highest priority alert is displayed. Select the status bar to view and acknowledge alerts. • Green - Condition normal, no action required. • Amber - Attention required, but does not prevent coding unless in standby mode. • Blue - Condition prevents coding. If coding was enabled and the reason for this fault is no longer valid, the system will automatically re-enable coding. • Red - The condition prevents coding and requires immediate correction.
C	Total Code Time	Displays the current label coding time (ms).
C	Maximum Line Speed	Displays the maximum line speed (m/min).
D	Main Menu Selection	• Edit or create a new label • Send to Code • Test Code
E	Refresh	Refresh the label preview.

Item	Name	Description
F	Label Preview Navigation	Zoom and navigation options for the label preview.
G	Setup	Coder setup options.
H	Label Preview	Main working area. Used for settings and label data creation.
I	Sub Menu	• Screen keyboard on/off • Login/logout • Status when connected to coder, or coder connection. • Lock screen. • Quit LMEditor QS

INSTALLATION

The installation of the laser coding system may only be performed by technicians trained according to Domino standards. See the U510 Product Manual on more details about installation.

INITIAL OPERATION

WARNING:	**Laser Radiation. Risk of Injury.**
	**Initial operation of the laser coder must only be performed by a competent engineer.**

CAUTION:	*Sensitive equipment. Risk of damage to Laser Coder.*
	Do not connect or disconnect electrical connections when the Laser Coder is switched on.

CAUTION:	*Sensitive equipment. Risk of damage to Laser Coder.*
	*Remove the protection cap from the output lens before operating the Laser Coder.*

- Remove the protection cap from the laser output lens.
- At the rear panel, turn on the laser coder by turning the On/Off key switch clockwise.
- Wait until the STATUS indicator on the coder head has illuminated.
- Start the LMEditorQS software on your PC.
- Check the items listed below:
  The fan on the laser head unit is running.
  The STATUS indicator on the laser head unit is illuminated.
  The fume extraction system, where fitted, has started, and no faults are displayed.

TURN ON

CAUTION:	*Sensitive equipment. Risk of damage to Laser Coder.*
	*Remove the protection cap from the output lens before operating the Laser Coder.*

- Remove the protection cap from the laser output lens.
- At the rear panel, turn on the laser coder by turning the On/Off key switch clockwise.
- Wait until the STATUS LED on the coder head has illuminated.
- Start the LMEditorQS software on your PC.
- Check the items listed below:
  The fan on the laser head unit is running.
  The STATUS indicator on the laser head unit is illuminated.
  The fume extraction system, where fitted, has started, and no faults are displayed.

SELECT A LABEL FOR CODING

- Select *Home* > *Edit Label*.
- Select *Open.*
- Select a label.
- Select *Send to Code*.
- Select *Home.*

START CODING

- Select *Enable Laser* in the top left corner of the *Home* screen.
- The U510 STANDARD will code when a Code Go signal is received, or when *Test Code* is pressed.

  Note: A Code Go signal can only be used in static mode. A Code Go signal cannot be used when marking on the fly.

STOP CODING

- Select *Disable Laser* in the top left corner of the Home screen.

TURN OFF

- At the rear panel, turn off the laser coder by turning the On/Off key switch anticlockwise.
- Shut down the LMEditorQS software on your PC
- Replace the protection cap on the laser output lens.

MAINTENANCE

The maintenance procedures are described in the Product Manual.
Download the Product Manual from website below:
https://mydomino.domino-printing.com/resources/U510-manual

Regularly remove debris from the installation. Follow all procedures of the on site training. See the fume extraction for more details on removing debris.

Cleaning the lens

WARNING:	**Laser Radiation and High Voltage. Risk of Injury.**
	**Remove mains plug before cleaning the lens**

CAUTION:	*Sensitive Equipment. Risk of Damage to Laser.*
	*Do not use compressed air line to clean the lens.*
	Do not use water to clean the lens
	Be careful not to scratch the lens during cleaning

The lens must be checked monthly for dust, and if necessary be cleaned with (absolutely clean) compressed air from a can.

For all other dirt, the lens must be cleaned with 99,9% Isopropyl Alcohol and the Domino lens cleaning kit. The kit consists of two parts (both are needed):

- EPT033842 - SP Lens Cleaning Cotton Balls (Set of 50)
- EPT033843 - SP Lens Cleaning Cotton Swabs (Set of 100)

Cleaning procedure as follows:

(1) Take an unused cotton ball and soak it in Isopropyl Alcohol.

(2) Lightly wipe with ONE PASS ONLY across the surface of the lens.

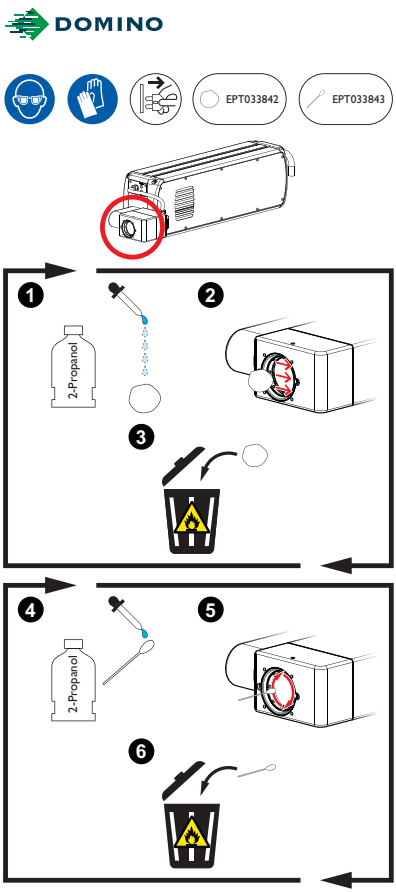
(3) Inspect the cotton swab. If dirt or oil is present, repeat steps (1) to (2).

(4) Take an unused cotton swab and soak one end in Isopropyl Alcohol.

(5) Lightly wipe across the border area of the surface of the lens.

(6) Inspect the cotton swab. If dirt or oil is present, repeat steps (4) to (5)

(7) Use an unused cotton swab to lightly wipe excess liquid from the lens.


DOMINO
EPT033842
EPT033843
1
2-Propanol
2
3
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2-Propanol
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Domino U-Series User Guide

Domino Printing Sciences plc has a policy of continuous product improvement, the Company therefore reserves the right to modify the specification contained within this document without notice.

For additional documentation, including other available languages, either scan the QR code, or go to https://mydomino.domino-printing.com

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