

CO₂ laser markers: LP-300 series

Due to the midrange infrared wavelength spectrum, Panasonic's LP-310-C Laser Marker is perfectly suited to permanently mark resins, enamel surfaces, glass and organic materials such as paper, wood, rubber or leather.

In comparison to conventional printing processes such as inkjet printing or tampon printing, the laser marker system is a purely optical tool that does not come into direct contact with the material it is marking. Hence it is not subject to wear and tear and requires no additional consumables such as toner, ink or solvents.

In addition to its superior marking quality with clear contours, the LP-310-C is nearly maintenance-free and hence produces few service or follow-up costs.

FDA
Conforming to
FDA regulations
(some models only)

CE
Conforming to Low Voltage
and EMC Directive
(some models only)

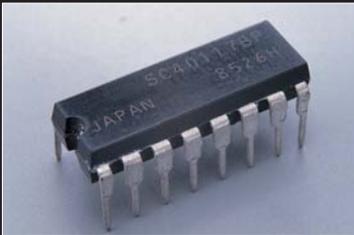




The LP-300 series CO₂ laser marker is an “entry-level” device designed for accurate and distinct marking applications on various materials.



Cable



IC



Switch (resin part)



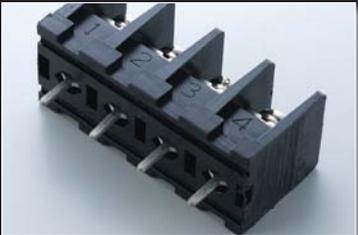
Laser labels (marking & half cutting)



Connector



Silicon tubing



Terminal block (resin part)



Connector



Retort pouches



Compared to stamping methods

- Environment** Because no ink or solvents are used, marking is environmentally friendly.
- Maintenance** No plates or molds are used, so no maintenance time is required.
- Running cost** Running costs consist of electricity costs only. No plate costs or ink costs.
- Productivity** Marking details can be created easily on a computer and sent to the laser marker. Dates and serial numbers can also be generated automatically.
- Marking quality** Because a non-contact method of marking is used, the characters do not become blurred. Even curved surfaces and narrow spaces can be marked.

Compared to engraving methods

- Environment** Similar: little waste.
- Maintenance** No plates or molds are used, so no maintenance time is required.
- Running cost** Running costs consist of electricity costs only. No need to create new templates.
- Productivity** Marking details can be created easily on a computer and sent to the laser marker. Dates and serial numbers can also be generated automatically.
- Marking quality** Because a non-contact method of marking is used, the characters do not become blurred. Even curved surfaces and sloped surfaces can be marked.



Compared to inkjet printers

- Environment** Environmentally friendly because no ink is used and no industrial waste is generated from solvent, filters, etc.
- Maintenance** Filling and replacing ink and replacing filters is not required at all. No stoppages for maintenance are needed. No specialist training is required, either.
- Running cost** Running costs consist of electricity costs only. No costs are incurred for ink, solvents, filters or pumps.
- Productivity** Marking details can be created easily on a computer and sent to the laser marker. Dates and serial numbers can also be generated automatically.
- Marking quality** Because marking characters along a line is possible, visibility is excellent. A wide range of variations such as fan-shaped and sloped-line characters are possible. Logos and model indicators can also be marked.

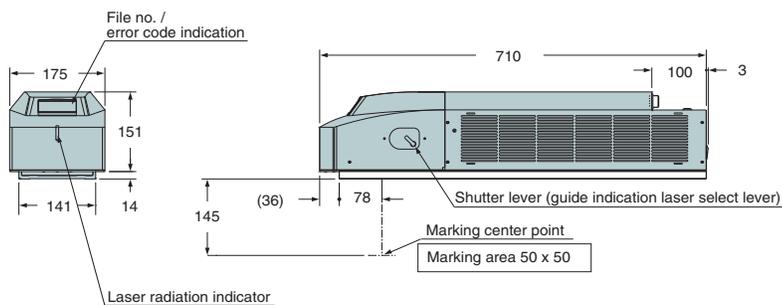
Functionality

<p>Marking the current date</p> <p>Manufacturing date: 15. 01. 31 ↓ Use-by date: 15. 03. 01 ↓ Manufacturing date: 15. 08. 08 ↓ Use-by date: 15. 09. 05</p>	<p>Counter</p> <p>000001 000001 000100 000100 ↓ ↓ ↓ ↓ 000002 000011 000099 000090 ↓ ↓ ↓ ↓ 000003 000021 000098 000080 ↓ ↓ ↓ ↓</p>	<p>Lot marking</p> <p>Manufactured on Oct 5th → 2004A Manufactured on Oct 5th → 2004B Manufactured on Oct 5th → 2004C</p>
<p>Arced and tilted</p> <p>0123456789 0123456789</p>	<p>Various fonts</p> <p>ABCDEFGHIJ ABCDEFGHIJ</p>	<p>Various settings</p> <p>Standard Characters Note: The LP-300 series are CO₂ laser markers.</p> <p>Bold characters Note: The LP-300 series are CO₂ laser markers.</p>
<p>Logo marking</p> <p>Panasonic</p>		

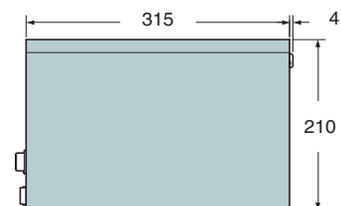
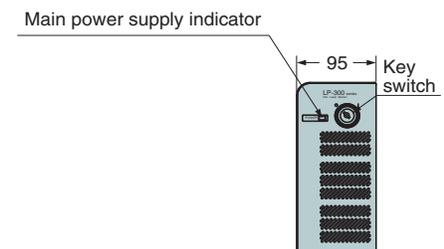
Item	Model	LP-310-C
Work distance		145mm
Marking field		50mm x 50mm
Scanning speed max.		2000mm/s
Average output		12W
Ambient temperature		0 to +40°C (no condensation or frost), storage: -10 to 50°C
Ambient humidity		35 to 85% RH (no condensation or frost)
Marking method		Galvanometer scanning method
Marking laser		CO ₂ laser λ = 10.6μm, laser class 4
Guide laser		Semiconductor λ = 655nm, laser class 2; 1mW
Array of character		Straight line, proportional/typewriter, arced, tilted
Type of characters		Capital & small characters, numerals, katakana, hiragana, kanji (JIS level 1 & level 2), symbols, user-defined characters (up to 50 types)
Logos/Graphics		DXF
Cooling method		Forced-air cooling
Supply voltage		90 to 132VAC or 180 to 264VAC (auto-changing), 50/60Hz
Power consumption		700W or less
Inputs		Laser stop, file no., trigger, counter reset, emergency stop
Outputs		Alarm, marking ready, counter end
Communication ports		RS232, digital I/Os
Marking condition		Static
Functions		<ul style="list-style-type: none"> • correction of intersection • test marking • current date/time marking • lot marking • guide laser • file transfer/file reading • expiration date/time marking • bold marking • error history display • counter marking • marking image display • CAD marking • Saved file list • Serial data communication
Weight of head		13kg
Weight of controller		5kg (Power supply)

Dimensions

LP-300 head



LP-300 power supply



* All measurements in mm