Panasonic
INDUSTRY

NEW

CO_2 Laser Marker

LP-RH SERIES

FDA Conforming to FDA regulations | CE | UKCA | cULus Recognition | GB Conforming to GB 7247.1

Improved Speed and Precision!

2024.1

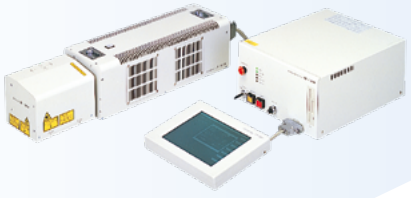
* Laser beam shown in the photo is simulated. Actual laser beam is infrared light and is invisible to the human eye.

Proof of trust: Over 10,000 units sold and installed

Our History of CO_2 Laser Markers

Panasonic Industry has been in the laser marker business since 1996.
The company has delivered a cumulative total of more than 10,000 laser markers to customers, thus contributing to their global production activities.
A new addition to our product lineup, the **LP-RH** series, next-generation CO_2 laser markers, offers remarkable improvement in marking and processing quality.

1996



LP-100 series

- **Touch panel for easy operation**
- Very small head
- Wide marking area of 90 × 90 mm 3.543 × 3.543 in
- Capable of marking on object moving at 60 m/min. 196.850 ft/min.
- Maximum scan speed of 2,000 mm/sec. 78.740 in/sec. (150 characters/sec.)

1998

LP-200 series

- Revolutionary design! **All-new tower head models!**
- Employs newly developed GPFC system that causes no distortion even at high speed
- 350-Degree rotating head for flexible setting of marking direction
- Maximum scan speed of 3,000 mm/sec. 118.110 in/sec.
- Accurate positioning in units of 10 µm 0.394 mil! Accurate engraving at exact marking position!

2004

LP-400 series

- **High-speed marking at a rate of 700 characters per second**
- **Short-wavelength laser (9.3 µm 0.366 mil) for sharp and clear marking**
- Model with 10-W laser output available
- Laser output stability of ±3% (typ.) or better (excluding some models)
- Maximum scan speed of 12,000 mm/sec. 472.441 in/sec. or 6,000 mm/sec. 236.220 in/sec.

* Laser beam shown in the photo is simulated. Actual laser beam is infrared light and is invisible to the human eye.

CO_2 Laser Marker

NEW LP-RH series

2023

Standard model (horizontal type)

Tower head model (vertical type)

LP-RH series

Average oscillator output	Average oscillator output	Average oscillator output
10-W type	20-W type	30-W type
Rotating head / Tower / 10.6 µm	Rotating head / Tower / 9.3 µm	Rotating head / Tower / 10.6 µm
55 / 110	110	55 / 110 / 160

Features

Improved speed and precision

►P.4

Equipped with the engine (VPE*) dedicated to the generation of vector data for marking and processing.
Improved laser scanning resolution and faster communication speed for galvano mirror positioning control
Faster and more precise marking

*: Vector Processing Engine

Simplifies facility designs

►P.5~

The standard models feature the highly acclaimed rotating mechanism successfully used in our previous models. The tower head models require less installation spaces to offer higher installation and setup flexibility.
The safety design, “interlock redundancy”, contributes to the designing of facility safety circuits.
Equipped with the data conversion function used in our previous models to enable safe replacement of existing units.

LP-RH series

Improved speed and precision

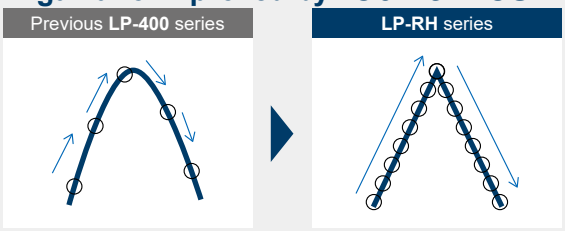
Dedicated engine and raster marking setting achieve clear and quick marking.

VPE* High-speed vector processing engine (VPE*)

The dedicated engine (VPE*) for the generation of vector data for marking and processing achieves high-speed marking. The resolution of positioning data for laser scan control has been increased fourfold and the communication speed for galvano mirror positioning control has also been made four times faster. The new engine realizes quicker and more precise engraving as compared to our previous models (**LP-400** series).

*: Vector Processing Engine.

Resolution of instruction signals to the galvano improved by four times



Smoother values of coordinates for interpolation of lines

○: Coordinate instruction value

Two-dimensional code Raster setting reduces takt times by about 40%* with no change in marking quality.

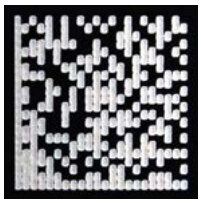
The raster marking setting optimizes the two-dimensional barcode engraving sequence to realize faster and higher-quality marking.

* When compared to previous **LP-400** series

Previous **LP-400** series Font setting

Each cell is printed separately.

Marking example

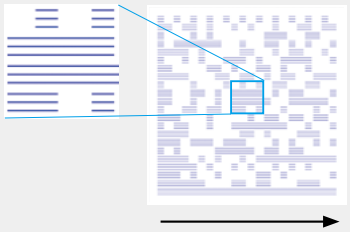


Marking time: 0.46 sec.

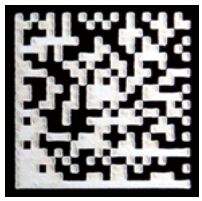
(Marking condition) Overall size: 7.2 × 7.2 mm 0.283 × 0.283 in, number of cells: 22 × 22, cell size: 0.30 × 0.30 mm 0.012 × 0.012 in

LP-RH series Raster setting

Cells are connected for engraving.



Marking example



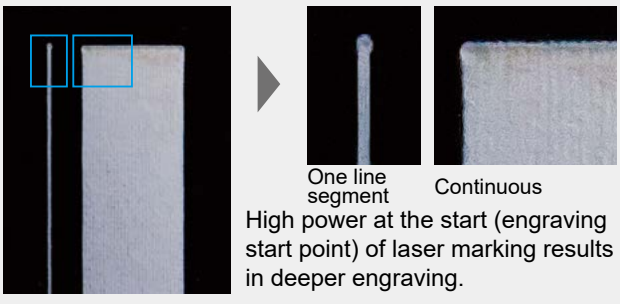
Marking time: **0.27 sec.**

(Marking condition) Overall size: 7.2 × 7.2 mm 0.283 × 0.283 in, number of cells: 22 × 22, cell size: 0.30 × 0.30 mm 0.012 × 0.012 in

Laser engraving startup power optimized to achieve uniform marking of start points

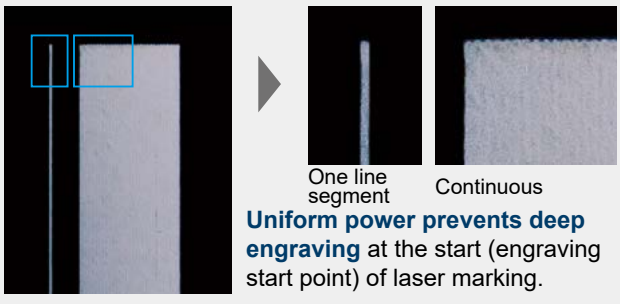
Excessive energy is applied at the start (engraving start point) of laser marking due to the balance between the initial velocity of the galvano mirror and the power fluctuation specific to laser, resulting in deeper engraving in some cases. To prevent it, it is necessary to finely adjust the parameters. The **LP-RH** series optimizes the laser engraving power at the start points in the oscillator level to achieve optimal marking without the need for parameter adjustment.

Previous **LP-430U**



High power at the start (engraving start point) of laser marking results in deeper engraving.

LP-RH series



Uniform power prevents deep engraving at the start (engraving start point) of laser marking.

Startup time reduced by about 80%*

The time from the startup of the laser marker system to the startup of laser oscillation is reduced by about 80% as compared to our previous model (**LP-400** series). The shorter startup time significantly reduces the waiting times at the time of facility startup, at the time of reset from power OFF triggered by safety circuit, etc.

* When compared to previous model (**LP-400** series)

■ Comparison of system startup time and laser excitation time

	Previous **LP-400** series	**LP-RH** series
System startup time	Approx. 75 sec.	**Approx. 10 sec.**
Laser excitation time	Approx. 15 sec.	**Approx. 5 sec.**

Significant reduction of system startup time and laser excitation time

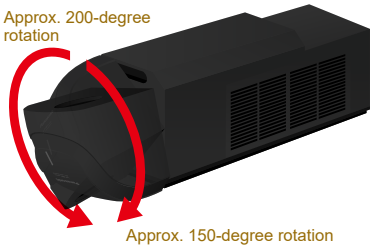
LP-RH series

Simplifies facility designs

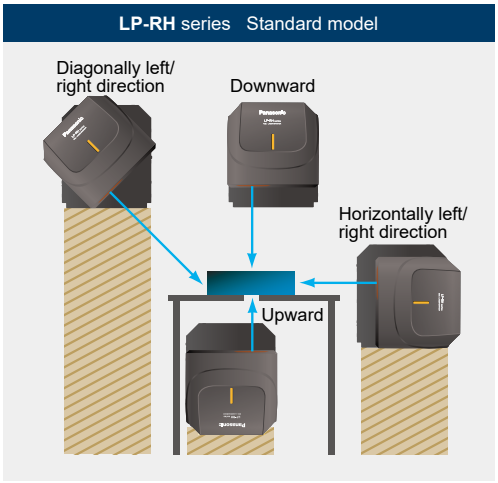
Head structured for flexible setup at anywhere, extra safety assured by safety design

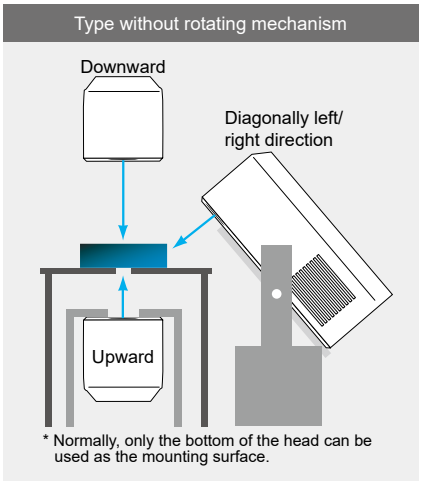
Head rotating mechanism **Standard models (horizontal type)**

The head is structured to allow flexible angle setting in a range of 350 degrees. The head angle can be rotated according to the marking surface angle to facilitate the installation along the line. This minimizes the installation spaces and eliminates the need for complex jig design. Simple jigs can be employed even when marking in the upward direction or at an oblique angle.



350-degree rotation in total

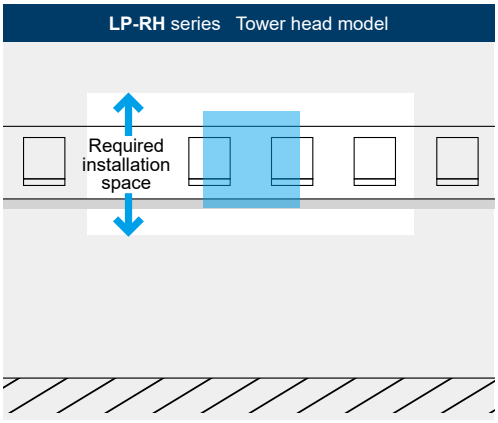


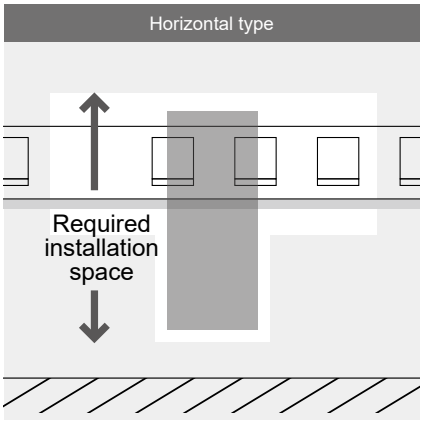


* Multiple units set up in different directions are shown in each of the above illustrations for the explanatory purpose.

Installation footprint: Smaller than a B5 sheet of paper **Tower head models (vertical type)**

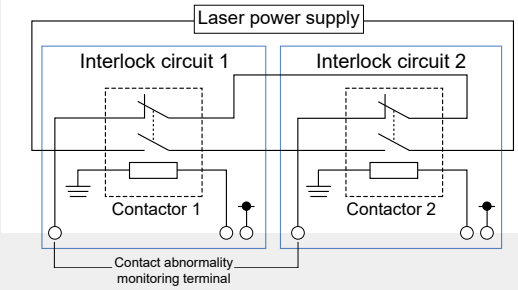
The head measures 230 mm × 175 mm 9.055 in × 6.890 in and is smaller than B5 size. The LP-RH series can be installed easily in existing lines, without worrying about a lack of space. The new series also allows for compact equipment designs, so it significantly reduces the required installation space and helps cut the cost of facilities such as line machines and floor lighting systems.





Safety design “interlock redundancy”

The **LP-RH** series is equipped with redundant interlock circuits. The interlock circuits use contactors to reliably cut off the laser power supply, thus contributing to the designing of equipment safety circuits.



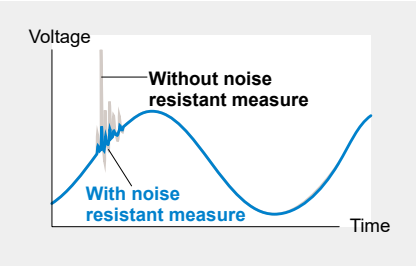
LP-RH series

Simplifies facility designs

Downtime reduction and interchangeability with previous Panasonic Industry products

Controller with superb noise resistant design

The controller features noise suppression parts to provide improved resistance to noise.
It responds to a broader range of frequency than our previous models and further reduces the noise level.
The new controller prevents problems caused by unexpected electrical noise.



Display of communication history

The record of serial communications between the laser marker and external device can be displayed. This contributes to the reduction of downtimes during facility startup or in case of equipment trouble.
The history data can be saved in a CSV file.

Operating data / periodic maintenance notification setting

Operating data such as laser irradiation time and the number of shutter operating times can be displayed and checked. The **LP-RH** series is equipped with a function to notify maintenance need according to operating conditions. This function is useful for planning maintenance.

Interchangeable with previous Panasonic Industry head

The installation dimensions and mounting hole size/layout of the **LP-RH** series are the same as those of the previous head (**LP-400** series).
Furthermore, marking data and communication commands are also interchangeable.

* Marking quality, operation, etc., must be checked in advance.

Previous **LP-400** series

LP-RH series

Full interchangeability

Installation dimensions, mounting holes

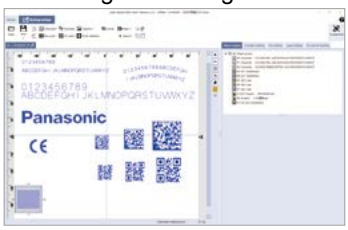
Software aids marking / processing operations and achieves results exactly as intended.

Laser Marker NAVI smart

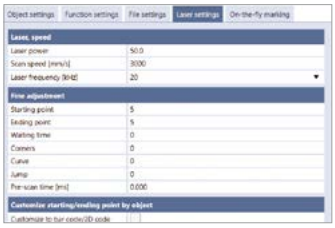
The software allows for easy marking setting and easy maintenance. It reduces the man-hours required for installation and operation.

Simple 3-step setting

(1) Lay out the character strings and figures to engrave.



(2) Set the laser irradiation condition.



(3) Start laser irradiation for test marking.

TrueType font marking

The TrueType font selected using the **Laser Marker NAVI smart** software can be set directly in the laser marker so that the marking is engraved in that font.

Font editing

The **Laser Marker NAVI smart** software has a font editing function. This function enables the user to modify the font shape easily according to applications.

Display of estimated marking time

The approximate marking / processing time is calculated based on the entered marking data and laser light condition and displayed. When creating setting data off-line, it is possible to calculate the takt time without operating the machine.

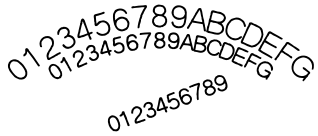
Excellent marking layout flexibility

The shape and layout of the characters / figures to be engraved can be adjusted flexibly.
A complex layout, including upper-case letters, fan-shape character arrangement, slanted character arrangement, reversed character marking, equally-spaced arrangement, proportional arrangement, etc., can be set easily.
In addition, the **LP-RH** series supports various types of barcode and two-dimensional code.

■Font size (typical)

0123456789
ABCDEFGHIJKLMNOPQRSTUV
abcdefghijklmnopqrstuvwxyz
0123456789
ABCDEFGHIJKLMNOPQRSTUV
abcdefghijklmnopqrstuvwxyz

■Fan-shape/slanted character marking



■Kanji characters

製造日　賞味期限　型式名　品番　警告　注意　危険　管理外　単位
日本製　入力　出力　電源　巨種

■Code

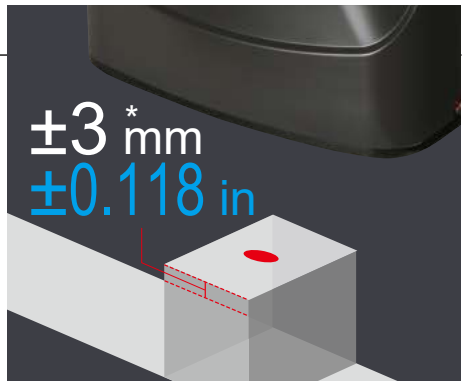
*QR Code is a registered trademark of DENSO WAVE INCORPORATED.

Convenient functions to support marking operations

Focus adjustment function

The focus adjustment function facilitates the condition setting during installation and setup.
When the workpiece height changes or the marking line width is increased, the work distance can be adjusted in a range of 3 mm 0.118 in* without moving the head or jig.

* Varies depending on models.

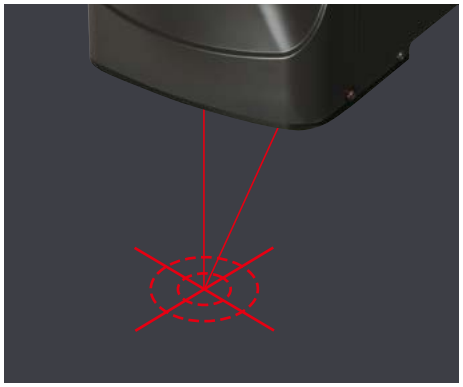


* Varies depending on models.

Display of guide

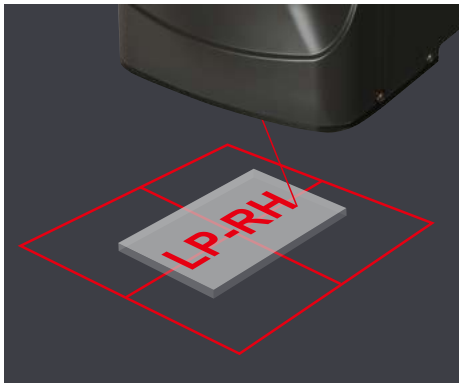
Work distance

Whether the distance from the laser marker head to the workpiece's marking surface is at the position of the work distance can be checked.
The position where the obliquely emitted red laser pointer (dot) is closest to the center of the red guide laser (cross mark) emitted perpendicularly from the head is the guideline work distance.



Marking area / marking object

The bright red guide laser beam traces and shows the marking detail and marking position. The marking area and marking position can be visually checked before initiating the actual marking operation.
This enables easy and accurate adjustment of marking positions.



Options to suit individual facility designs

Open network connectivity (option)

Use of the industrial network unit (option) enables connection of the laser marker to EtherNet/IP or PROFINET, thus allowing the setting of marking details and laser setting via open network.

* EtherNet/IP unit (**LP-ANW10**) and PROFINET unit (**LP-ANW11**) are sold as options.
* EtherNet/IP is a registered trademark of Open DeviceNet Vender Association, Inc. (ODVA).
* PROFINET is a registered trademark of PROFIBUS and PROFINET International.

Touch panel console (option)

The touch panel console (**LP-ADP50**) exclusively designed for laser markers is available as an option. It enables easy setting, confirmation and change of marking conditions and marking details without a PC at hand.
The touch panel console features an ergonomic design. It can be held with the hand and operated or installed to the facility.

* Optional function extension board (**LP-AEB10**) is required for connection.

Excellent maintainability to ensure many years of safe use

Extensive maintenance parts are available to expand the range of maintenance that can be performed by the user.
The **Laser Marker NAVI smart** software manages the maintenance history and notifies periodic maintenance needs.

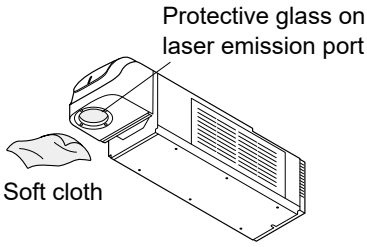
Routine maintenance

Clean the unit regularly according to the usage conditions in order to maintain stable marking quality.
Blow off dust from the protective glass on the laser emission port with an air duster for optical lens, and then wipe with a soft cloth.
If dust adheres to the air filters, exhaust port or cooling fan in the controller, the cooling performance reduces and can cause degradation of marking performance or equipment malfunction. Remove dust using a vacuum cleaner and dry cloth.

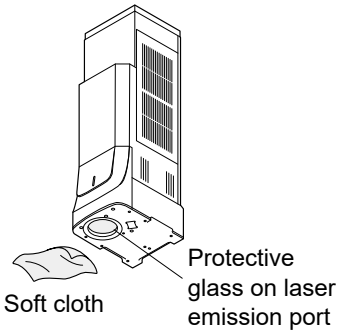
Cleaning the protective glass on the laser emission port

Head

Standard model (horizontal type)



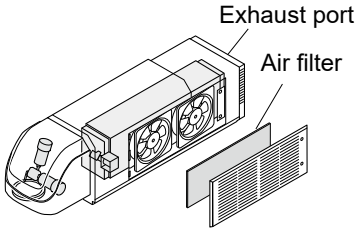
Tower head model (vertical type)



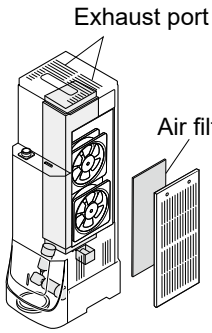
Cleaning the air filters, exhaust port and cooling fan

Head

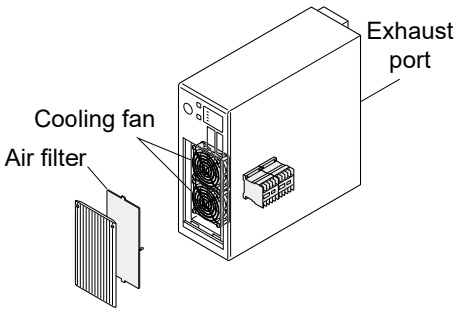
Standard model (horizontal type)



Tower head model (vertical type)



Controller

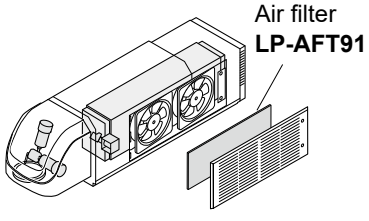


Limited-life parts and consumables replaceable by users

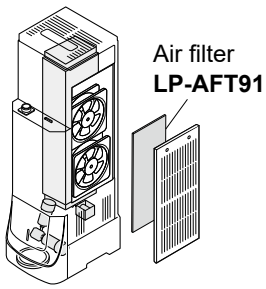
The air filters, controller cooling fan and interlock contactors are designed for easy replacement by users.

Head

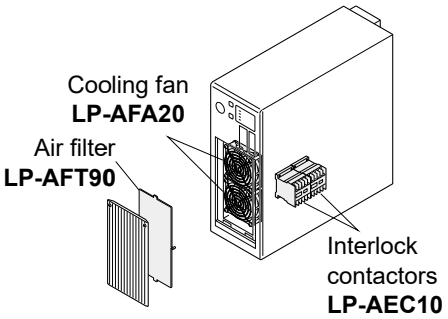
Standard model (horizontal type)



Tower head model (vertical type)



Controller



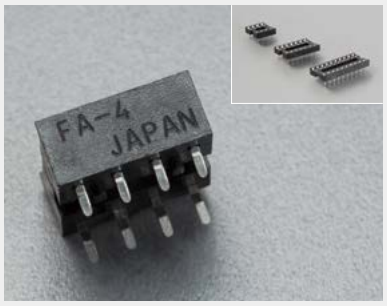
⚠ Be sure to turn off the power supply to the laser marker and disconnect the AC power cable before conducting maintenance. Otherwise, you may be accidentally exposed to laser light or sustain electrical shock.

Examples of marking/processing application

Marking

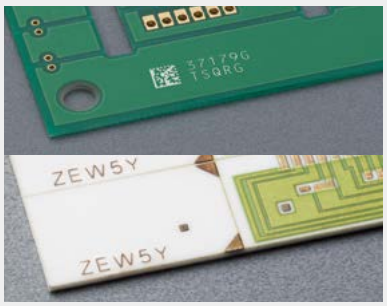
Molded resin parts


Electronic parts



Connectors

Ceramic substrates



Circuit boards

Retort pouches

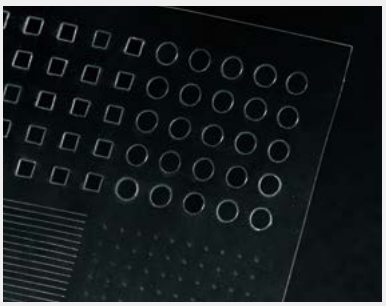
Cosmetic products

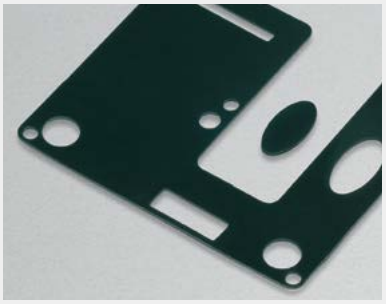
Aluminum packaging materials

Processing

Laser labels (marking + half-cutting)


Cable sheath stripping

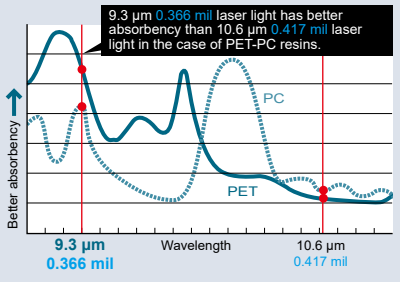

Films (processing)


Rubber gaskets (cutting)

Advantages of 9.3 µm 0.366 mil short-wavelength laser in marking on resins such as PET and PC

The laser light with a wavelength of 9.3 µm 0.366 mil matches well with resins' absorption characteristics so it minimizes damage to the resins and adds clear markings by melting only the surface layer without resulting in deep engraving. It causes very little swelling on the surface and suppresses pin hole generation to provide highly visible markings. Thanks to the high resin absorbency, the thermal effect on the surrounding area is minimized, thus achieving excellent processing results. The 9.3 µm 0.366 mil laser also offers improved precision.

[Example of resins' absorption characteristics graph]



Installation support

Services

Before anything, please contact us.

If you have any questions or need further information, please feel free to contact our dealer near you.
https://industrial.panasonic.com/ac/e/salesnetwork/index.jsp

▼

Proposal of the most suitable model

We propose the most suitable model for your marking / processing need, cycle time and budget based on our extensive experience.

▼

Proposal of installation of laser marker to equipment

If you are planning to install a laser marker to your equipment, we discuss about equipment specifications and the communication specifications for communicating with the laser marker.

▼

Free test and test report

Using workpieces borrowed from your company, we conduct a marking / processing test for free. We will submit marking samples together with the test report.

Support

Attendance to operation commencement, provision of operating instruction and guidance

We provide support to the commencement of equipment operation and give operating instructions to operators if so requested by the customer.

▼

Post-installation support

We can respond to your maintenance need. For example, we can perform on-site maintenance or replace the installed laser markers with replacement units and conduct detailed inspection and maintenance on the removed units at our service base.

SPECIFICATIONS

Optical specifications / scanning specification

Model No.	Standard model (horizontal type)	LP-RH300S	LP-RH200S	LP-RH100S	LP-RH301S	LP-RH101S	LP-RH305S
	Tower head model (vertical type)	LP-RH300T	LP-RH200T	LP-RH100T	LP-RH301T	LP-RH101T	LP-RH305T
Scanning system		Galvano scanning method					
Marking field (X, Y)		110 mm × 110 mm 4.331 in × 4.331 in			55 mm × 55 mm 2.165 in × 2.165 in		160 mm × 160 mm 6.299 in × 6.299 in
Work distance (Note 1)		185 mm 7.283 in			111 mm 4.370 in		262 mm 10.315 in
Scan speed (Note 2) (Note 3)		12,000 mm/sec. max. 472.441 in/sec. max.			6,000 mm/sec. max. 236.22 in/sec. max.		12,000 mm/sec. max. 472.441 in/sec. max.
Applicable line speed (Note 2)		240 m/min max. 787.402 ft/min max.			120 m/min max. 393.701 ft/min max.		240 m/min max. 787.402 ft/min max.
Character height / width (Note 2)		0.100 mm to 110.000 mm 0.004 in to 4.331 in			0.100 mm to 55.000 mm 0.004 in to 2.165 in		0.100 mm to 160.000 mm 0.004 in to 6.299 in

Laser specifications / Other basic specifications

Model No.	Standard model (horizontal type)	LP-RH300S	LP-RH200S	LP-RH100S	LP-RH301S	LP-RH101S	LP-RH305S
	Tower head model (vertical type)	LP-RH300T	LP-RH200T	LP-RH100T	LP-RH301T	LP-RH101T	LP-RH305T
Applicable regulations and certifications		FDA Regulations, CE Marking [Machinery Directive (Declaration of Incorporation), EMC Directive, RoHS Directive], UKCA Marking [Supply of Machinery (Safety) Regulations (Declaration of Incorporation), EMC Regulations, RoHS Regulations], UL/c-UL Recognition, Chinese Standard GB 7247.1					
Marking laser	Marking laser	CO_2 laser, Class 4 laser					
	Wavelength	10.6 µm 0.417 mil	9.3 µm 0.366 mil	10.6 µm 0.417 mil			
	Oscillator average output	30 W	20 W	10 W	30 W	10 W	30 W
	Average output for marking (Note 4)	30 W	18.2 W	10 W	30 W	10 W	30 W
	Laser oscillation system	CW oscillator					
Guide laser, laser pointer		Red semiconductor, Wavelength: 655 nm 0.0258 mil, Class 2 laser, Maximum output: 1 mW or less					
Beam stop		One shutter is equipped inside of head					
Workpiece status		Stationary object, Moving object					
No. of registerable files		10,000 files					
No. of marking data pieces (No. of registerable objects)		2,000 objects/file					
Marking data	Character	West-European alphabet (A to Z, a to z, Latin-1 characters), numeric, symbol, user defined characters (up to 50 characters can be set) Japanese characters: Katakana, Hiragana, Kanji (JIS level-1 and level-2) Simplified Chinese characters: GB 2312 level-1 and level-2					
	TrueType	TrueType fonts stored in the PC with **Laser Marker NAVI smart** installed (Note 5)					
	Bar code	CODE39, CODE128, ITF, NW-7, JAN/UPC GS1 DataBar (GS1 DataBar Limited, GS1 DataBar Stacked, GS1 DataBar Expanded, etc.), GS1 Composite Code (GS1 DataBar Limited CC-A, GS1 DataBar Stacked CC-A, GS1-128 CC-A, etc.)					
	2D code	QR code, Micro QR code, iQR code, Data Matrix, GS1 Data Matrix, PDF417					
	Graphic file (Note 6)	VEC, DXF, HPGL, BMP, JPEG, AI, EPS					
	Point and shapes	Point radiation, line, circle, arc					
Character arrangement		Straight line, Arc, Proportional, Justify					
I/O port		I/O terminal block (40-pins), I/O connector (40-pins)					
Communication interface		EIA-RS-232C, Ethernet, EtherNet/IP (Note 7), PROFINET (Note 7)					
Dedicated software (Note 8)		**Laser Marker NAVI smart**, Logo Data Editing Software, **ExportVEC**, Font Maker					
Supported OS (Note 9)		Windows® 11 Pro 64bit, Windows® 10 Pro 32bit / 64bit					
Laser marker NAVI smart connection method		USB, Ethernet					
Laser marker NAVI smart display language		Japanese, English, Simplified Chinese, Traditional Chinese, German, Korean					
Required time for system startup		Approx. 10 seconds					
Required time for laser excitation		Approx. 5 to 10 second max.					
Power voltage		90 V to 132 V AC or 180 V to 264 V AC (including ±10% voltage fluctuations), Frequency: 50/60 Hz (Note 10)					
Power consumption (Consumption current) (Note 11)	At 100 V AC	760 VA or less (8.5 A or less)		370 VA or less (4.1 A or less)	760 VA or less (8.5 A or less)	370 VA or less (4.1 A or less)	760 VA or less (8.5 A or less)
	At 200 V AC	720 VA or less (4.0 A or less)		430 VA or less (2.4 A or less)	720 VA or less (4.0 A or less)	430 VA or less (2.4 A or less)	720 VA or less (4.0 A or less)
Grounding method		Direct earth for the head and controller respectively					
Cooling method		Head: Forced air-cooling, Controller: Forced air-cooling					
Operating ambient temperature (Note 12, 13)		0 °C to +40 °C +32 °F to +104 °F, Storage: -10 °C to +60 °C +14 °F to +140 °F					
Operating ambient humidity (Note 12)		35 to 85% RH					
Overvoltage category / Pollution degree		II / 2					
Use location		Indoor; at an altitude of 1,000 m 3280.840 ft or below					
Installation direction		Head: In all directions, Controller in assembled condition: Vertically or horizontally					
Weight	Head	Approx. 19 kg		Approx. 17 kg	Approx. 19 kg	Approx. 17 kg	Approx. 19 kg
	Controller	Approx. 12 kg					
Battery (mounted in product)		Graphite fluoride-lithium primary battery, AFPX-8801 (BR-2/3A): 1 pc., Weight: Approx. 14 g					

Notes: 1) There is some degree of variation between individual units of the same model.
2) The value shown here is the configuration range that can be input. The setting values that can keep the quality of marking or processing vary depending on the setting details and the target materials.
3) Depending on the setting data, the available scan speed might be limited.
4) Output at processing point when power is set to max. (default setting).
5) Some of the languages or character types are not supported by this laser marker. Characters written from right to left such as Arabic or Hebrew, characters based on ligature such as Indian languages cannot be input.
6) VEC is a graphic file format dedicated for the laser marker. To use AI or EPS files, convert them to VEC format with the dedicated software "**ExportVEC**".
7) Available when the optional network unit is installed to the controller.
8) The software is available from our Internet website.
9) OS versions of which Microsoft has ended support are excluded.
10) The frequency switches automatically.
11) The typical value of the inrush current at startup is as follows: (Duration time is 10 ms or less.)
At 100 V AC: 90 A, At 200 V AC: 180 A
12) Common to the controller and head. No condensation or freezing shall be allowed. If there is a gap between the stored temperature and operating temperature, make sure to have the product get used to the operating ambient temperature gradually prior to use to prevent the dew condensation.
13) Laser output may vary due to ambient temperature fluctuations.

OPTIONS

AC power cable

Use the cable that complies with the regulations and standards of the country / region where the product is used.

Type			Model No.
AC power cable	Rating 125 V AC	PSE standards compatible cable (Japan)	**LP-ACA10**
	Rating 250 V AC	PSE standards compatible cable (Japan)	**LP-ACA11**
		CE marking compatible cable (Europe) (Note 1)	**LP-ACA12**

Note: 1) The plug of the 250 V AC, CE-compliant cable (for Europe) conforms to the following standards.
VDE, DEMKO, NEMKO, FIMKO, SEMKO, OVE, KEMA, CEBEC

Touch panel console / Expansion board

Type	Model No.
Touch panel console	**LP-ADP50**
Expansion board (Note 2)	**LP-AEB10**

Note: 2) When the expansion board is installed to the controller, the following functions can be used.
- Connect a touch panel console or a commercially available monitor to the laser marker and use it for monitoring and setting during operation.
- The displacement sensor is connected to the laser marker to correct the work distance.

Industrial network unit

Type	Model No.
Industrial network unit for EtherNet/IP	**LP-ANW10**
Industrial network unit for PROFINET	**LP-ANW11**

* EtherNet/IP is a registered trademark of ODVA (Open DeviceNet Vender Association, Inc.).
* PROFINET is a registered trademark of PROFIBUS & PROFINET INTERNATIONAL.

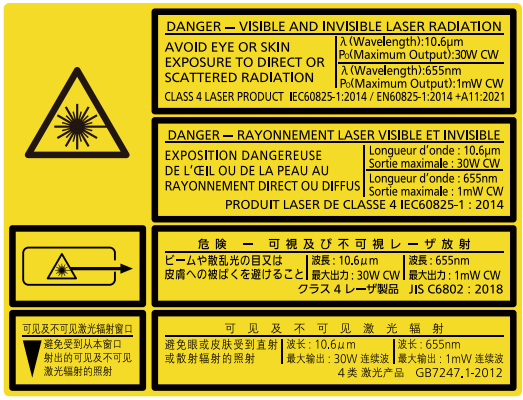
Maintenance and service parts

Type		Model No.
Controller air filter (replacement part)	Set of 2 fans	**LP-AFT90**
Head air filter (replacement part)	Set of 2 fans	**LP-AFT91**
Cooling fans of controller (for replacement)	Set of 2 units	**LP-AFA20**
Unit power cable (for replacement)	5 m 16.404 ft type	**LP-ACP20-5**
Signal cable (for replacement)	5 m 16.404 ft type	**LP-ACS10-5**
Contactor unit for Interlock (for replacement)		**LP-AEC10**

[Important note]

About laser light

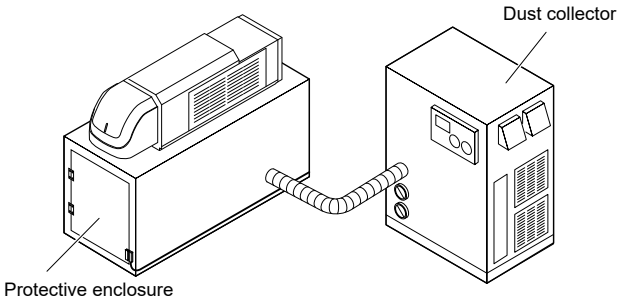
- This product is a Class 4 laser product as defined by the JIS standards. Do not look directly toward the laser light or touch the laser light or its reflections. Be sure to take the required safety measures in accordance with the standards.
- The labels shown at the right are affixed on the product. (The labels are not affixed on the products shown in this catalog.)
- The laser light is an infrared light and invisible to the human eyes. Exercise caution when the laser oscillator is operating.



Warning, explanation, aperture labels

Use of dust collector recommended

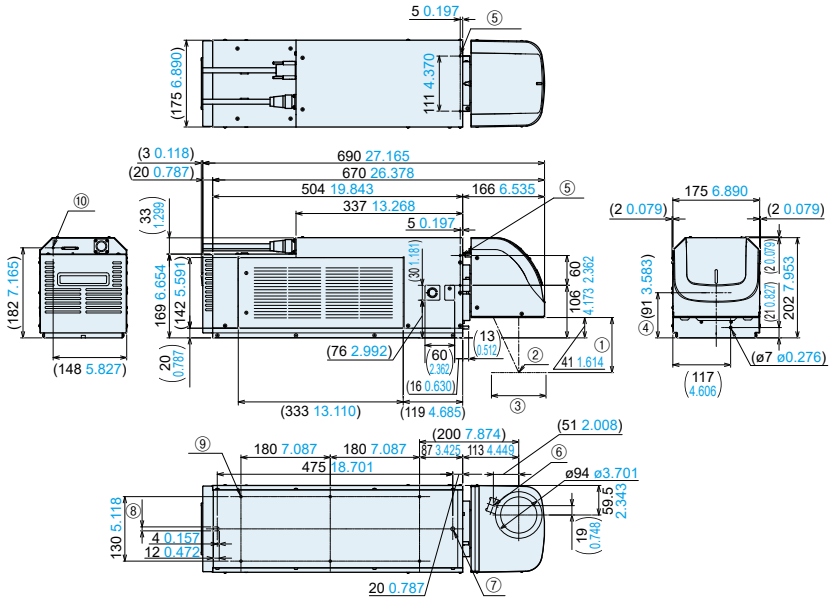
- Some materials generate a toxic gas or smoke during laser marking, and this may cause adverse effects on the human health or laser marker. In such a case, use a dust collector. For more information, please contact our sales representative.



DIMENSIONS (Unit: mm in)

CAD data can be downloaded from our websit

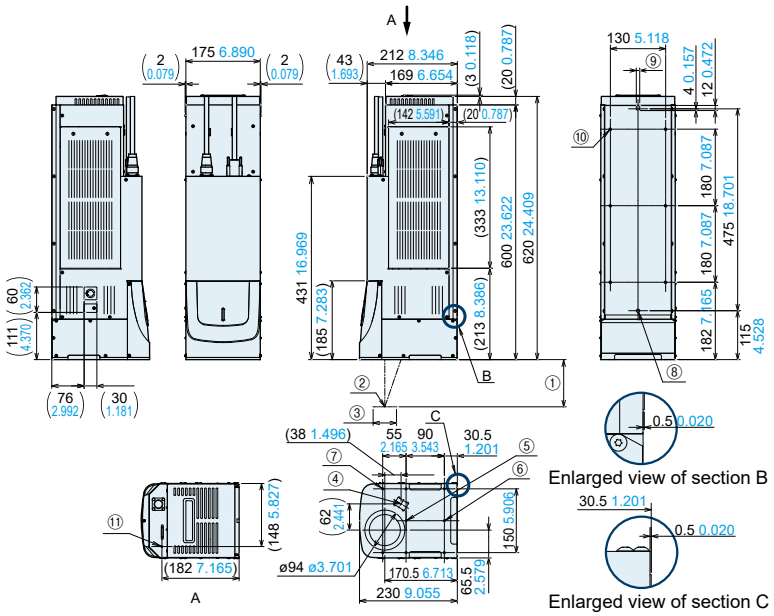
Head: Standard model (horizontal type)



No.	Description
①	Work distance: **LP-RH300S / LP-RH200S / LP-RH100S**: 185 mm 7.283 in **LP-RH301S / LP-RH101S**: 111 mm 4.370 in **LP-RH305S**: 262 mm 10.315 in
②	Center of marking field
③	Marking field (X, Y): **LP-RH300S / LP-RH200S / LP-RH100S**: 110 mm × 110 mm 4.331 in × 4.331 in **LP-RH301S / LP-RH101S**: 55 mm × 55 mm 2.165 in × 2.165 in **LP-RH305S**: 160 mm × 160 mm 6.299 in × 6.299 in

No.	Description
④	Center of scanner section rotation
⑤	Screw hole for fixing protective enclosure and others (2 locations each on top surface and two side surfaces): M4 screws, depth 10 0.394
⑥	Laser pointer emission port ø19 mm ø0.748 in
⑦	Head positioning pin hole: ø8 ø0.315 $^{+0.01}_{0}$, depth 4 0.157
⑧	Head positioning pin hole: Elongated hole ø8 ø0.315 $^{+0.01}_{0}$ × 12, depth 4 0.157
⑨	Head fixing screw hole (six holes): M6 screw, depth 15 0.591
⑩	Screw for frame ground: M4 screw, depth 5 0.197

Head: Tower head model (vertical type)



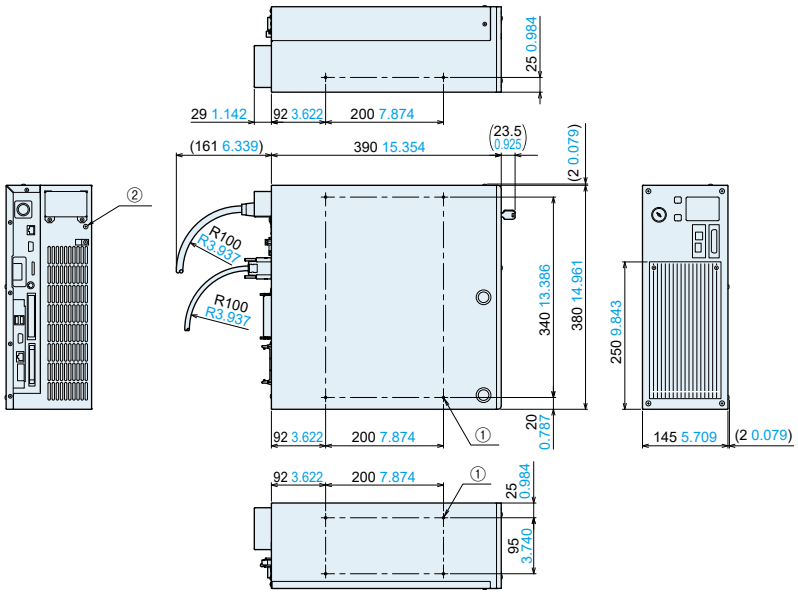
No.	Description
①	Work distance: **LP-RH300T / LP-RH200T / LP-RH100T**: 185 mm 7.283 in **LP-RH301T / LP-RH101T**: 111 mm 4.370 in **LP-RH305T**: 262 mm 10.315 in
②	Center of marking field
③	Marking field (X, Y): **LP-RH300T / LP-RH200T / LP-RH100T**: 110 mm × 110 mm 4.331 in × 4.331 in **LP-RH301T / LP-RH101T**: 55 mm × 55 mm 2.165 in × 2.165 in **LP-RH305T**: 160 mm × 160 mm 6.299 in × 6.299 in

No.	Description
④	Laser pointer emission port ø19 mm ø0.748 in
⑤	Lens-side head positioning pin hole:ø4 ø0.157 $^{+0.06}_{+0.02}$, depth 6.5 0.256
⑥	Lens-side head positioning pin hole: Elongated hole ø4 ø0.157 $^{+0.06}_{+0.02}$×5, depth 6.5 0.256
⑦	Lens-side head fixing screw hole (6 locations): M6 screws, depth 7 0.276
⑧	Rear-side head positioning pin hole: ø8 ø0.315 $^{+0.01}_{0}$, depth 4 0.157
⑨	Rear-side head positioning pin hole: Elongated hole ø8 ø0.315 $^{+0.01}_{0}$ × 12, depth 4 0.157
⑩	Rear-side head fixing screw hole (6 locations): M6 screws, depth 15 0.591
⑪	Screw for frame ground: M4 screw, depth 5 0.197

DIMENSIONS (Unit: mm in)

CAD data can be downloaded from our websit

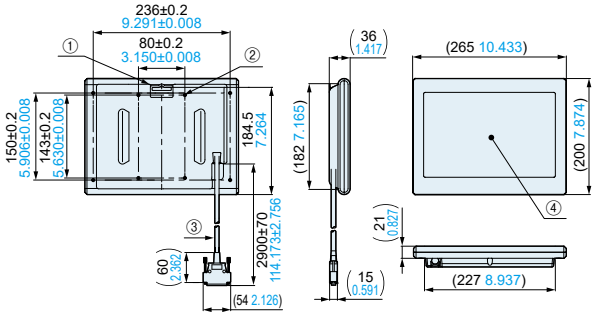
Controller



No.	Description
①	Controller fixing screw hole (4 locations each on bottom surface and left side as viewed from front side): M5 screws, depth 6 0.236
②	Screw for protective conductor terminal: M4 screw, threaded section length 5 0.197

LP-ADP50

Touch panel console (Optional)



No.	Description
①	Wall hanging hook hole: Hole size 33 mm × 5 mm 1.299 in × 0.197 in, hook section radius 3 mm 0.118 in
②	Fixing nut (8 locations): M4 screw, depth 5 mm 0.197 in, tightening torque 0.7±0.1 N·m Fixing locations: 4 locations on inside surface or 4 locations on outside surface
③	Connection cable: Minimum bending radius 65 mm 2.559 in, cable diameter ø8.6 mm ø0.339 in
④	Touch panel: Display area 216 mm × 135 mm 8.504 in × 5.315 in

FAYb laser marker series

3D FAYb Laser Marker

LP-ZV SERIES

17w* 42w* 125 220 330 IP64 3D AEC Removable

* Average output for marking

The built-in camera helps achieve higher productivity.
Thanks to the 1-ns short-pulse laser's superb marking expressivity combined with the 3D control, this series is suitable for high-output metal marking as well as for high contrast marking and extra small character marking on resins.

FAYb Laser Marker Short Pulse

LP-RV SERIES

17w 90 IP64 SMART AEC Removable

Equipped with a short-pulse laser, this series achieves excellent high contrast marking on resins and enables engraving of very small characters.

FAYb Laser Marker

LP-RF SERIES

17w 90 IP64 SMART Removable

The head is durable with an IP64 ingress protection rating.
This entry laser marker series features excellent basic functions.

Disclaimer

The applications described in the catalog are all intended for examples only. The purchase of our products described in the catalog shall not be regarded as granting of a license to use our products in the described applications. We do NOT warrant that we have obtained some intellectual properties, such as patent rights, with respect to such applications, or that the described applications may not infringe any intellectual property rights, such as patent rights, of a third party.

Panasonic INDUSTRY

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