

# Laser Marker Product Range



# LP-300 Series

## CO<sub>2</sub> LASER TYPE



Entry-level model with a full range of basic functions

## LP-300 SERIES

### Highlights:

**SUNX**'s LP-310-C laser marker system uses a wavelength in the lower infrared range and is hence optimally suited to permanently mark resin, enamel surfaces, glass and organic materials such as paper, wood, rubber and leather.

In comparison to conventional printing processes such as inkjet or tampon printing, the laser marker system is a purely optical tool, i.e. its parts are not subject to wear and tear and it requires no extra materials such as ink, toner or solvents.

Besides being nearly maintenance-free, requiring little effort to implement and generating few follow-up costs, the LP-310-C of course produces writing of the highest quality with sharp contours. Since it requires little space and features a robust construction, the CO<sub>2</sub> laser marker system can easily be integrated into assembly lines or individual work stations.

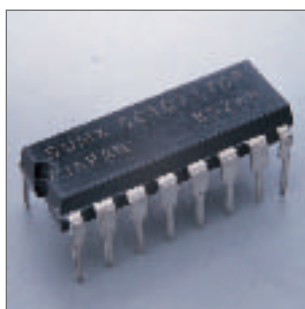


The powerful, user-friendly Windows-based software allows you to enter, change or save texts and functions like counters, date codes and lot numbers; company logos and product specifications can be easily imported as graphics, rendering the LP-310-C suitable for nearly any marking task.

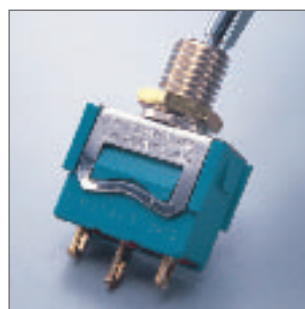
### Applications:



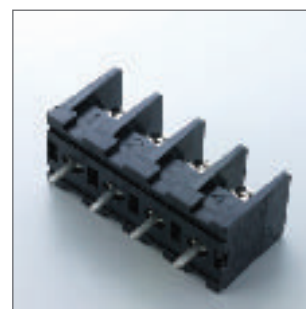
Cable



IC package



Switch (resin part)



Terminal block (resin)



Label



Connector



CDs/DVDs



Printed circuit board

# Specifications LP-300 Series

| Item                                       | Designation  |   | CO <sub>2</sub> laser marker entry-level model  |                            |
|--|--|---|---|----------------------------|
|  | Type   | FDA regulations conforming type   |   | CE marking conforming type |
|  | Model  | LP-310-A  | LP-310-C  |                            |
| Work distance (Note 1)                     | 145mm  |   |   |                            |
| Marking method                             | Galvano-scanning method  |   |   |                            |
| Marking laser                              | CO <sub>2</sub> Laser Class 4 (Laser oscillator output: Average 12W · Max. 40W, Peak emission wavelength: 10.6μm)  |   |   |                            |
| Marking range                              | 50x50mm  |   |   |                            |
| Character setting (height & width)(Note 2) | 0.2 to 50mm, Interval / position of marked characters: settable at 0.01mm interval   |   |   |                            |
| Scanning speed                             | 2,000mm/sec. max.  |   |   |                            |
| Array of characters                        | Straight line, fan-like, tilted straight-line, mirror-reflection   |   |   |                            |
| Marking condition                          | Stationary   |   |   |                            |
| Type of characters                         | English capital and small characters, Symbols, Katakana, Hiragana, Kanji (JIS first level) Characters, User-defined characters (up to 50 types)  |   | English capital and small characters, Symbols, user-defined characters (up to 50 types) |                            |
| Marking setting                            | Number of files  | 120 files max.  |   |                            |
|  | Setting condition  | 30 types  |   |                            |
| I/O terminal                               | Input  | Laser radiation stop, file No., trigger, counter reset, external interlock (Power supply box) |   |                            |
|  | Output   | Alarm, marking ready, counter end   |   |                            |
| External communication port                | RS-232C  | For external devices only   |   |                            |
|  | USB Ver.1.1  | For setup software only   |   |                            |
| Setting software                           | Windows® XP / 2000, Screen resolution: 800 x 600 or more   |   |   |                            |
| Cable length                               | 5m (between head and power supply box)   |   |   |                            |
| Installation direction                     | Omnidirectional  |   |   |                            |
| Cooling method                             | Forced-air cooling (Head and power supply box)   |   |   |                            |
| Supply voltage                             | 90 to 132VAC or 180 to 264VAC (auto-changing) 50 / 60Hz  |   |   |                            |
| Power consumption                          | 700VA or less  |   |   |                            |
| Functions                                  | <ul style="list-style-type: none"> <li>• Lot marking    • Current date / time marking    • Expiration date / time marking    • Counter marking    • CAD marking</li> <li>• Guide laser    • Bold character marking    • Marking image display    • Saved file list    • Test marking</li> <li>• File transfer / File reading    • Error history display    • Correction of intersection</li> </ul> |   |   |                            |
| Ambient temperature                        | 0 to + 40°C (No condensation or frost), Storage: -10 to + 50°C   |   |   |                            |
| Ambient humidity                           | 35 to 85% RH, Storage: 35 to 85% RH  |   |   |                            |
| Weight                                     | Head: 13kg approx., Power supply box: 5kg approx.  |   |   |                            |

Note 1) The work distance has an individual error of ±2mm from product to product.

Note 2) The actual character size varies depending on the work.

Windows® is a registered trademark of Microsoft Corporation in the United States and other countries.

## Legend:



Marking of moving objects



High speed marking



Guide light



Color marking of resin



Focus adjustment

# LP-400 Series



## CO<sub>2</sub> LASER TYPE



High functionality, high-grade model

LP-400 SERIES 

### Highlights:

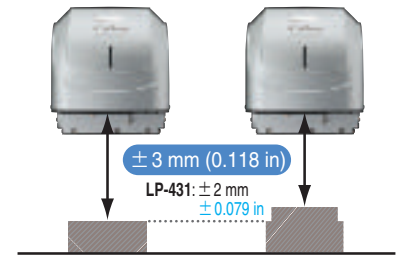
**SUNX** designed the LP-400 series laser marker to cope with the especially demanding industrial requirements of speed and functionality.

These are CO<sub>2</sub> laser marker systems with an output of 30W, whose galvanometer scanning method (max. 12,000 mm/s) can mark objects "on the fly" as they move on an assembly line at speeds of up to 240m/min. Moreover, an encoder interface allows you to synchronise marking and line speeds.

The LP-431-C's laser beam diameter of just 110µm makes it particularly well suited for marking glass and ceramics or cutting PTFE, for example. In addition, LP-400 series laser markers can process more than 10 different codes, e.g. bar code, data matrix, etc.

Two useful Windows programmes are included. The "FONT Maker" allows you to create your own fonts. The "LOGO CONVERTER" converts logos and pictures in JPG, BMP, HPGL or DXF format to the laser marker's VEC format.

### Focus adjustment function



### Head rotation mechanism



### Applications:

#### Marking Applications



Rice cracker



Stainless steel



Oil filter



Connector



Aluminium plate (ALUMA Mark)



PET bottle

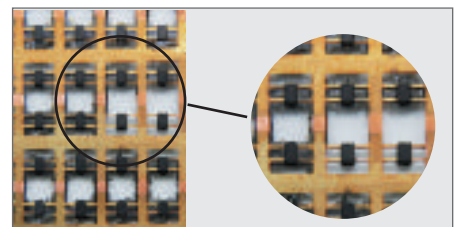
#### Processing Applications



Insulation removal



Keypad cutting



IC burring

# Specifications LP-400 Series

| Product name                       |               | General-purpose type  | Micro-marking  |
|------------------------------------|---------------|---|--|
| Items                              | Model         | LP-430  | LP-431   |
| Work distance                      |               | 185mm (Note 1)  | 111mm (Note 1)   |
| Marking method                     |               | Galvanometer scanning method  |  |
| Marking laser                      |               | CO <sub>2</sub> laser λ=10.6μm Class 4 laser product  |  |
|                                    | Spot diameter | 180μm   | 110μm  |
|                                    | Ave. output   | 30W   |  |
|                                    | Output        | +/-3% (Note 2)  |  |
| Guide laser, pointer               |               | Semiconductor laser λ=650nm Class 2 laser product   |  |
| Marking range                      |               | 110mm x 110mm   | 55mm x 55mm  |
| Scanning speed                     |               | Max. 12,000mm/s   | Max. 6,000mm/s   |
| Line speed                         |               | max. 240m/min (Note 3)  | max. 120m/min (Note 3)   |
| Character setting (height & width) |               | 0.2 to 110mm (adjustable in increments of 0.001mm)  | 0.2 to 55mm (adjustable in increments of 0.001mm)  |
| Marking spacing (spacing & pitch)  |               | 0 to 110mm (adjustable in increments of 0.001mm)<br>+/-180° on fan-like (adjustable in increments of 0.01°)   | 0 to 55mm (adjustable in increments of 0.001mm)<br>+/-180° on fan-like (adjustable in increments of 0.01°) |
| Array of character                 |               | Straight line, proportional, typewriter fonts, fan-like   |  |
| Installation direction             |               | All directions  |  |
| Types of character                 |               | English capital & small characters, Figures, Katakana, Hiragana, Kanji (JIS level-1 & level-2),<br>Symbols, User defined characters (up to 50 types)  |  |
| Logo/shape                         |               | BMP / DXF / HPGL / JPEG   |  |
| Cooling method                     |               | Forced-aired cooling  |  |
| Supply voltage                     |               | 90V to 132VAC, 180V to 264VAC, 50/60Hz  |  |
| Power consumption                  |               | 800VA or less   |  |
| Input                              |               | Remote, Trigger, Encoder (A), Encoder (B), Shutter control, Laser pumping, Alarm reset, Emergency stop,<br>Laser stop, Confirmation end, Number, Timehold   |  |
| Output                             |               | Power supply (+12V), Remote, Marking ready, Marking, Marking finish, Laser pumping, Warning, Alarm,<br>Confirmation end, Counter finish   |  |
| Marking condition                  |               | Stationary, moving  |  |
| Functions                          |               | <ul style="list-style-type: none"> <li>•Intersection offset</li> <li>•Counter marking</li> <li>•Current date marking</li> <li>•Expiry date marking</li> <li>•Lot marking</li> <li>•Logo data marking</li> <li>•Font creation/edition</li> <li>•Fixed spacing location</li> <li>•System offset</li> <li>•Common setting</li> <li>•Guide laser</li> <li>•Dual pointer</li> <li>•Focus adjustment</li> <li>•Multi-layer marking</li> <li>•Backup</li> <li>•Font select</li> <li>•Bold marking</li> <li>•Proportional marking</li> <li>•Offset marking</li> <li>•Rank marking</li> <li>•Marking image display</li> <li>•I/O check monitor</li> <li>•Work image display</li> <li>•Step &amp; Repeat</li> <li>•Time delay</li> <li>•Operator adjustment</li> <li>•Error history display</li> <li>•Marking time measurement</li> <li>•Power speed setting per line/ logo file</li> <li>•Marking of moving objects</li> <li>•Code function: CODE39, CODE128, ITF, NW-7, JAN, EAN, UPC, QR, Micro QR, Data matrix (ECC 200)</li> </ul> |  |
| Emergency stop switch              |               | Provided on the controller  |  |
| Ambient temperature                |               | 0 to + 40°C (-10 to +60°C at storage) (No condensation or frost)  |  |
| Ambient humidity                   |               | 35 to 85% (No condensation or frost)  |  |
| Weight                             |               | Head: Approx. 20kg Controller: Approx. 11kg   |  |

(Note 1): Work distance has an individual error of approx. +/-2mm per product.

(Note 2): Value of product 20% or larger, and at 10 min. passed after starting-up.

(Note 3): The line speed varies depending on the workpiece to be marked.



# LP-V10 Series



FAYb LASER TYPE



New FAYb laser marker

LP-V10 SERIES 

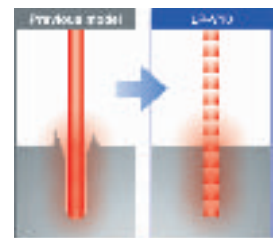
## Highlights:

**SUNX**'s latest generation of laser markers represents a further development in YAG technology known as FAYb (Fiber Amplified Ytterbium).

This laser marker system offers several advantages over conventional Nd:YAG systems: a better marking quality (laser beam diameter 60µm), smaller housing dimensions, a much longer marking time (over 30,000 hours) and fewer fixed costs as FAYb systems use significantly less power (390VA) and simple air cooling suffices.

**SUNX**'s LP-V10-C with an average output of 12W (comparable to 50W YAG lasers) can mark nearly all metals using laser processes of "black marking" (colour alteration due to micro changes in the surface) or "deep marking" (engraving). Resin can be marked via the laser processes colour change (carbonisation), bleaching, or internal foaming, causing the resin to rise slightly where the laser beam impacts it.

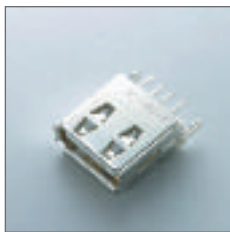
The LP-V10-C comes equipped with a guide laser and an encoder interface so that it can mark moving objects, e.g. objects on automated production assembly lines. The LP-V10-C's other features naturally include a code function (data matrix, various bar codes, etc.) and standard functions such as counters, expiry date and lot number generation.



## Applications:



Terminal block (resin)



USB connector



Tweezers



Blister package



Button cell



Battery pack



Bearing



IC package



Cylinder head



Golf club

# Specifications LP-V10 Series

| Product name                       | FAYb laser marker   |              |  |  |  |
|------------------------------------|---|--------------|--|--|--|
| Item                               | Model   | LP-V10       |  |  |  |
| Work distance                      | 190mm (Note 1)  |              |  |  |  |
| Marking method                     | Galvanometer scanning method  |              |  |  |  |
| Marking laser                      | Fiber laser $\lambda=1.06\mu\text{m}$ Class 4 laser product   |              |  |  |  |
|                                    | Ave. output   | 12W          |  |  |  |
|                                    | Max. output   | 15W (Note 2) |  |  |  |
| Guide laser, pointer               | Laser diode $\lambda=655\text{nm}$ Class 2 laser product  |              |  |  |  |
|                                    | Max. output   | 1mW          |  |  |  |
| Marking range                      | 90mm x 90mm   |              |  |  |  |
| Scanning speed                     | Max. 12,000mm/s   |              |  |  |  |
| Line speed                         | 240m/min. or less (Note 3)  |              |  |  |  |
| Character setting (height & width) | 0.2 to 90mm (adjustable in increments of 0.001mm)   |              |  |  |  |
| Marking spacing (spacing & pitch)  | 0 to 90mm (adjustable in increments of 0.001mm) arc: $\pm 180^\circ$ (adjustable in increments of 0.01°)  |              |  |  |  |
| Array of character                 | Straight line, fan-like, proportional and typewriter fonts  |              |  |  |  |
| Type of character                  | English capital & small characters, Figures, Katakana, Hiragana, Kanji (JIS level-1 & level-2), Symbols, User defined characters (up to 50 types)   |              |  |  |  |
| Logo/shape                         | BMP / DXF / HPGL / JPEG   |              |  |  |  |
| Cooling method                     | Forced-aired cooling  |              |  |  |  |
| Supply voltage                     | 90 to 132VAC or 180 to 264VAC (automatic switching), 50/60Hz  |              |  |  |  |
| Power consumption                  | 390VA or less (at 100VAC)   |              |  |  |  |
| Input                              | Remote, Trigger, Encoder (A), Encoder (B), Shutter control, Laser pumping, Alarm reset, Emergency stop, Laser stop, Confirmation end, Number, Timehold  |              |  |  |  |
| Output                             | Power supply (+12V), Remote, Marking ready, Marking, Marking finish, Laser pumping, Warning, Alarm, Confirmation end, Counter finish  |              |  |  |  |
| Marking condition                  | Stationary, moving  |              |  |  |  |
| Functions                          | <ul style="list-style-type: none"> <li>•Marking order optimizing</li> <li>•Lot marking</li> <li>•Step &amp; Repeat</li> <li>•Dual pointer</li> <li>•Font selection</li> <li>•Error history</li> <li>•Power speed setting per line/logo file</li> <li>•Power check correction</li> <li>•Code function: CODE39, CODE128, ITF, NW-7, JAN, EAN, UPC, RSS14, RSS Limited, RSS Expanded, QR, Micro QR, Data matrix (ECC200)</li> <li>•Intersection offset</li> <li>•Logo data marking</li> <li>•System offset</li> <li>•Focus adjustment</li> <li>•Bold marking</li> <li>•I/O check monitor</li> <li>•Counter making</li> <li>•Font creation/edition</li> <li>•Common setting</li> <li>•Overwriting marking</li> <li>•Proportional marking</li> <li>•Serial data marking</li> <li>•Marking time measurement</li> <li>•Operation screen updating display</li> <li>•Current date marking</li> <li>•Fixed spacing location</li> <li>•Guide laser</li> <li>•Backup</li> <li>•Work image display</li> <li>•Operator adjustment</li> <li>•Logo data USB transfer</li> <li>•Marking image display</li> <li>•Expiry date marking</li> <li>•Rank marking</li> <li>•I/O simulate</li> <li>•Offset marking</li> <li>•Time delay</li> </ul> |              |  |  |  |
| Emergency stop switch              | Provided on the controller  |              |  |  |  |
| Ambient temperature                | 0 to +40°C (-10 to 60°C at storage) (No condensation or frost)  |              |  |  |  |
| Ambient humidity                   | 35 to 85%RH (No condensation or frost)  |              |  |  |  |
| Weight                             | Head section: Approx. 9kg Controller section: Approx. 22kg  |              |  |  |  |

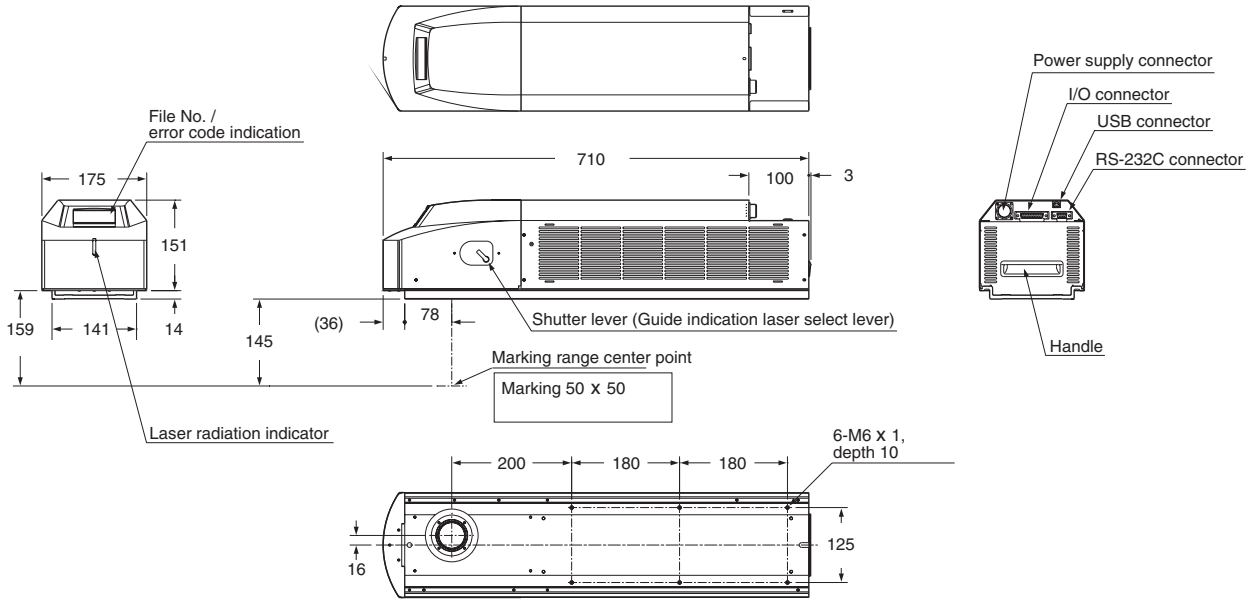
(Note 1): Work distance has an individual error of approx.  $\pm 2\text{mm}$  per product.

(Note 2): Max. output represents the maximum value that laser transmitter outputs laser beam.

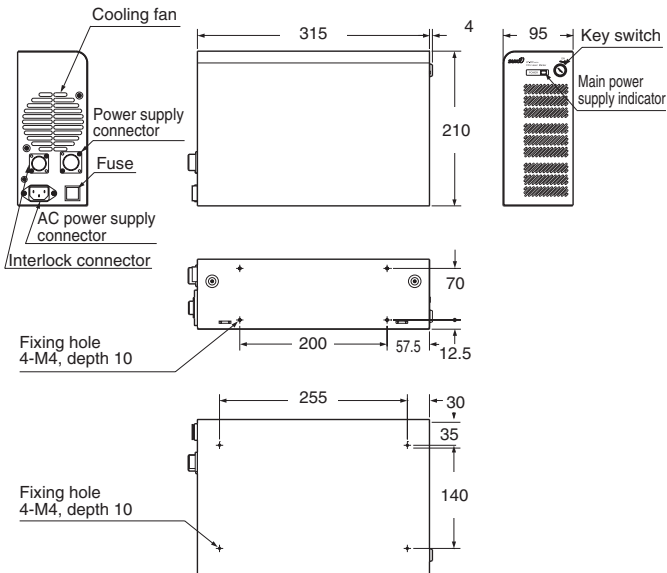
(Note 3): The line speed varies depending on the workpiece to be marked.

# Dimensions LP-300 Series

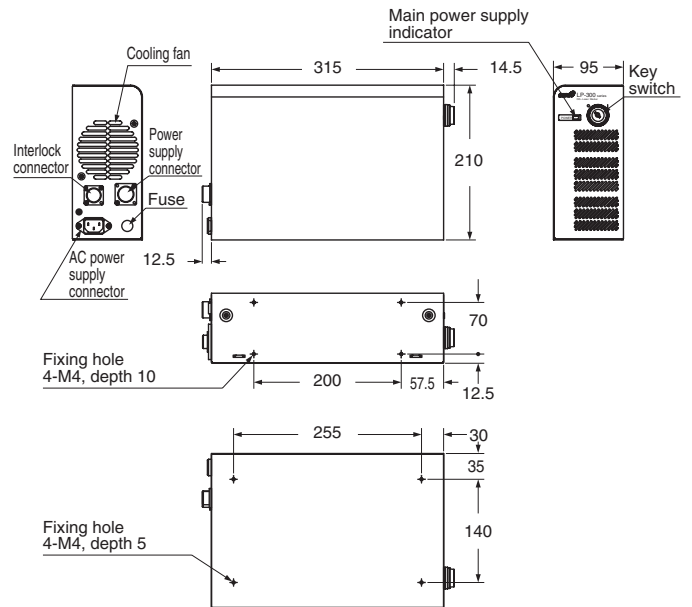
## LP-310-A LP-310-C Head



## LP-310-A Power supply box



## LP-310-C Power supply box

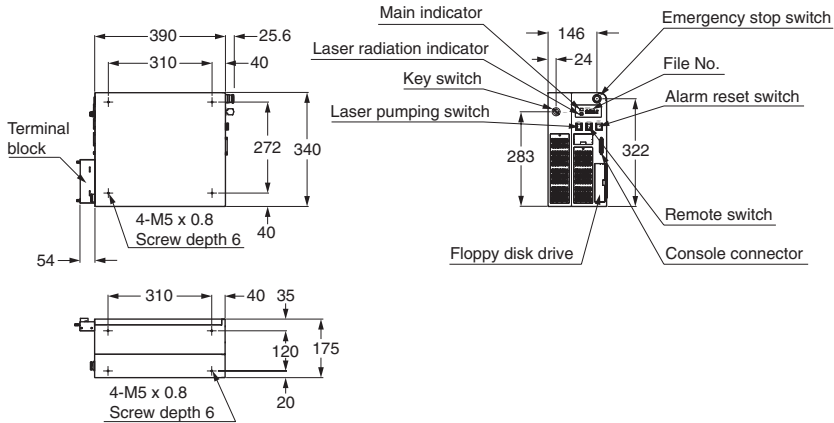


All dimensions are in mm.

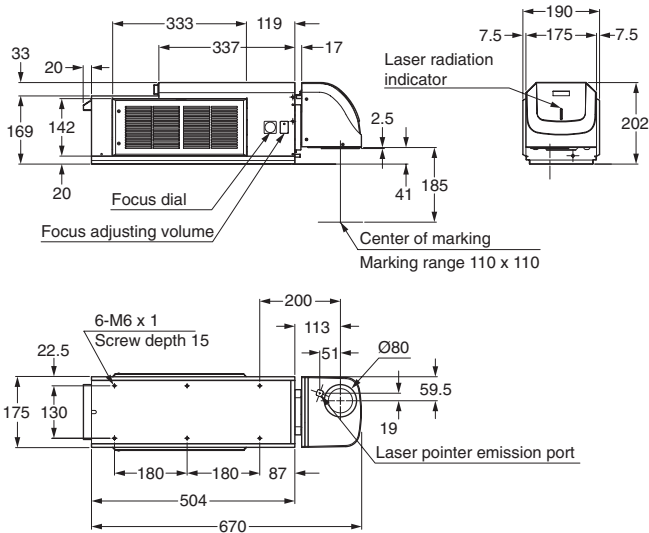
# Dimensions LP-400 Series

## LP-430

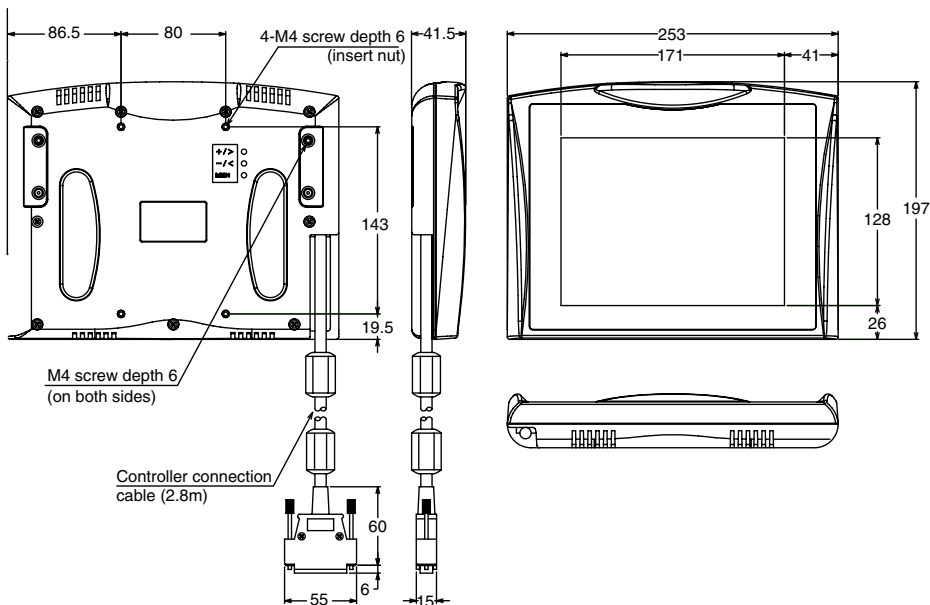
### Controller



### Head



### Console LP-ADP 40 (optional)



All dimensions are in mm.





# Fill out. Copy. Fax.

## +49 8024 648-111

Yes, I am interested in the Laser Marker

LP-300

LP-400

LP-V10

Please call me back to discuss further details.

\_\_\_\_\_  
Company/Industry

\_\_\_\_\_  
Contact Person

\_\_\_\_\_  
Street/No.

\_\_\_\_\_  
Post code/City

\_\_\_\_\_  
Tel./Fax

\_\_\_\_\_  
Email

.....  
**Application/Use:**

**Material:**

**Pieces:**

**Project planned for (date):**

.....  
**Panasonic Electric Works Europe AG**

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## Global Network

North America

Europe

Asia Pacific

China

Japan

Contact person: Marcus Brinkheinrich, [m.brinkheinrich@eu.pewg.panasonic.com](mailto:m.brinkheinrich@eu.pewg.panasonic.com), Tel. +49 8024 648 283, Fax +49 8024 648 111  
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|                           | <b>Sales Western Europe B.V.</b>                    |  |
|                           | <b>PEW Electronic Materials France S.A.R.L.</b>     | French Branch Office, B.P. 44, 91371 Verrières le Buisson CEDEX, Tél. 01 60135757, Fax 01 60135758, <a href="http://www.panasonic-electric-works.fr">www.panasonic-electric-works.fr</a>         |
| ▶ <b>Germany</b>          | <b>Panasonic Electric Works Deutschland GmbH</b>    | 26 Allée du Clos des Charmes, 77090 Collegien, Tél. 01 64622919, Fax 01 64622809, <a href="http://www.panasonic-electronic-materials.com">www.panasonic-electronic-materials.com</a>             |
| ▶ <b>Ireland</b>          | <b>Panasonic Electric Works UK Ltd.</b>             | Rudolf-Diesel-Ring 2, 83607 Holzkirchen, Tel. (08024) 648-0, Fax (08024) 648-555, <a href="http://www.panasonic-electric-works.de">www.panasonic-electric-works.de</a>                           |
| ▶ <b>Italy</b>            | <b>Panasonic Electric Works Italia s.r.l.</b>       | Dublin, Tel. (01) 4600969, Fax (01) 4601131, <a href="http://www.panasonic-electric-works.co.uk">www.panasonic-electric-works.co.uk</a>  |
|                           | <b>PEW Building Materials Europe s.r.l.</b>         | Via del Commercio 3-5 (Z.I. Ferlina), 37012 Bussolengo (VR), Tel. (045) 6752711, Fax (045) 6700444, <a href="http://www.panasonic-electric-works.it">www.panasonic-electric-works.it</a>         |
| ▶ <b>Nordic Countries</b> | <b>Panasonic Electric Works Nordic AB</b>           | Viale Elvezia 18, 20154 Milano (MI), Tel. (02) 33604525, Fax (02) 33605053, <a href="http://www.panasonic-building-materials.com">www.panasonic-building-materials.com</a>                       |
|                           | <b>PEW Fire &amp; Security Technology Europe AB</b> | Sjöbängsvägen 10, 19272 Sollentuna, Sweden, Tel. (08) 59476680, Fax (08) 59476690, <a href="http://www.panasonic-electric-works.se">www.panasonic-electric-works.se</a>                          |
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| ▶ <b>Switzerland</b>      | <b>Panasonic Electric Works Schweiz AG</b>          | Barajas Park, San Severo 20, 28042 Madrid, Tel. (91) 3293875, Fax (91) 3292976, <a href="http://www.panasonic-electric-works.es">www.panasonic-electric-works.es</a>                             |
| ▶ <b>United Kingdom</b>   | <b>Panasonic Electric Works UK Ltd.</b>             | Grundstrasse 8, 6343 Rotkreuz, Tel. (041) 7997050, Fax (041) 7997055, <a href="http://www.panasonic-electric-works.ch">www.panasonic-electric-works.ch</a>                                       |
|                           |   | Sunrise Parkway, Linford Wood, Milton Keynes, MK14 6LF, Tel. (01908) 231555, Fax (01908) 231599, <a href="http://www.panasonic-electric-works.co.uk">www.panasonic-electric-works.co.uk</a>      |

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