Panasonic
ideas for life

Product manager Christian Lignell
christian.lignell@flinkenberg.fi
tel. +358 9 8599 1369
www.flinkenberg.fi

3D-Control
FAYb Laser Marker
LP-Z SERIES

FDA Compliant Models Available
CE Marked Models Available

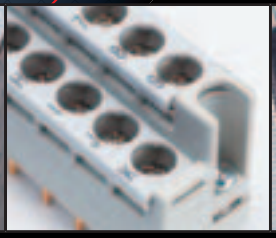
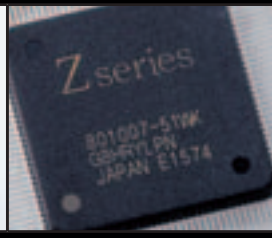
LP-Z series
FAYb LASER MARKER

3D-Control
50 mm variable focal length

Wide Marking Field
(X)330 mm × (Y)330 mm × (Z)50 mm

High-Performance Fiber Laser
25 W / Selectable pulse widths / Small head



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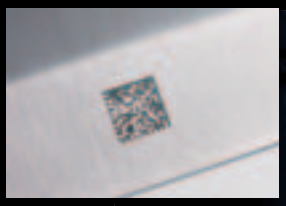
3D-Control

Z-axis structure in the head utilizes 3D control within a **50 mm 1.96 in** ; ±25 mm ±0.98 in range. It enables stable and high quality marking on stepped, curved, sloped, and even spherical surfaces etc. This can lead to a dramatic reduction in setup, installation and designing costs.





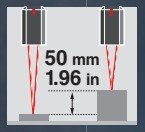
Z-axis structure in this small head

■ 3D-Marking

Z-axis structure adjusts focal point, enabling various kinds of 3D marking.

■ Variable focal length with Z-axis structure

From an original focal point ±25 mm ±0.98 in.

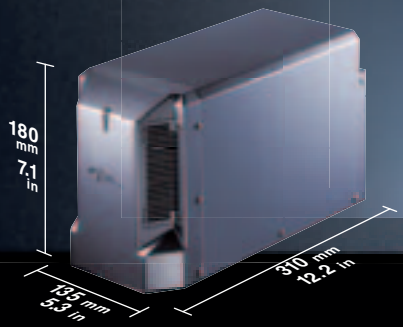


Wide Marking Field

Marking field (X)330 mm × (Y)330 mm × (Z)50 mm* (X)13.0 in × (Y)13.0 in × (Z)1.96 in

The wide marking field satisfies large target marking, and contributes to improved productivity.
Moreover, the Z-axis structure provides a **uniform spot size** and stable marking quality across the entire field of view, regardless of the wide marking field.

*Applicable model: LP-Z256

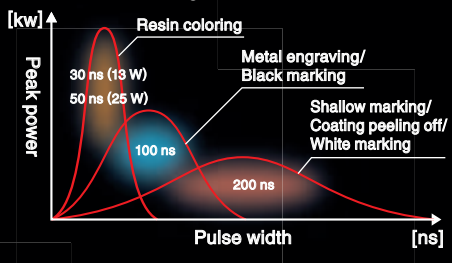


High-Performance Fiber Laser

■ 25 W Fiber Laser / Air cooling

Lineups:**25 W** (LP-Z250/Z256) / 13 W (LP-Z130)
Applications requiring high energy such as deep engraving and black marking on metal are easily achieved. Its high output also contributes to shortening the marking time, thus improving production efficiency.
FAYb technology takes advantage of heat dissipation and requires no water-cooling system regardless of its high power performance.

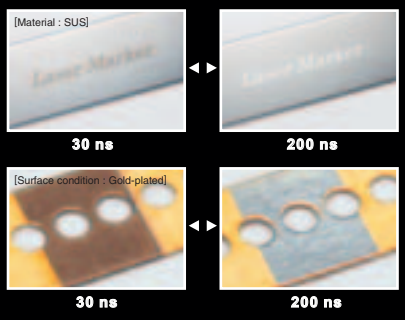
■ Pulse width image



■ Selectable pulse width

Pulse width selections are added to existing pulse cycle setting.
Three patterns of selectable pulse width expand the possibilities of finding the suitable marking conditions for the application.

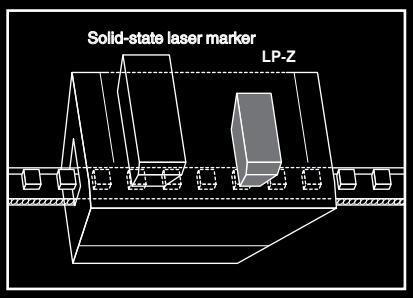
■ Pulse width comparison



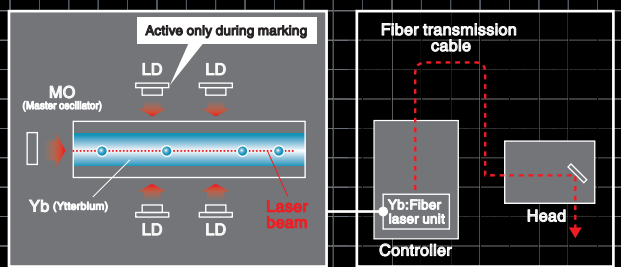
■ Small head

Small head for 3D laser markers (W:135 mm 5.3 in H:180 mm 7.1 in D:310 mm 12.2 in).
The compact size of the laser head simplifies installation into existing production lines, and also minimizes redesigning cost.

■ Comparison of line installation

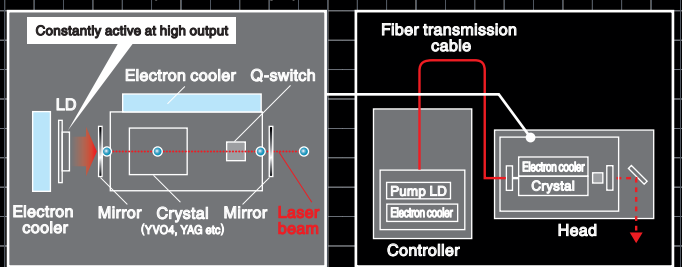


■ FAYb laser

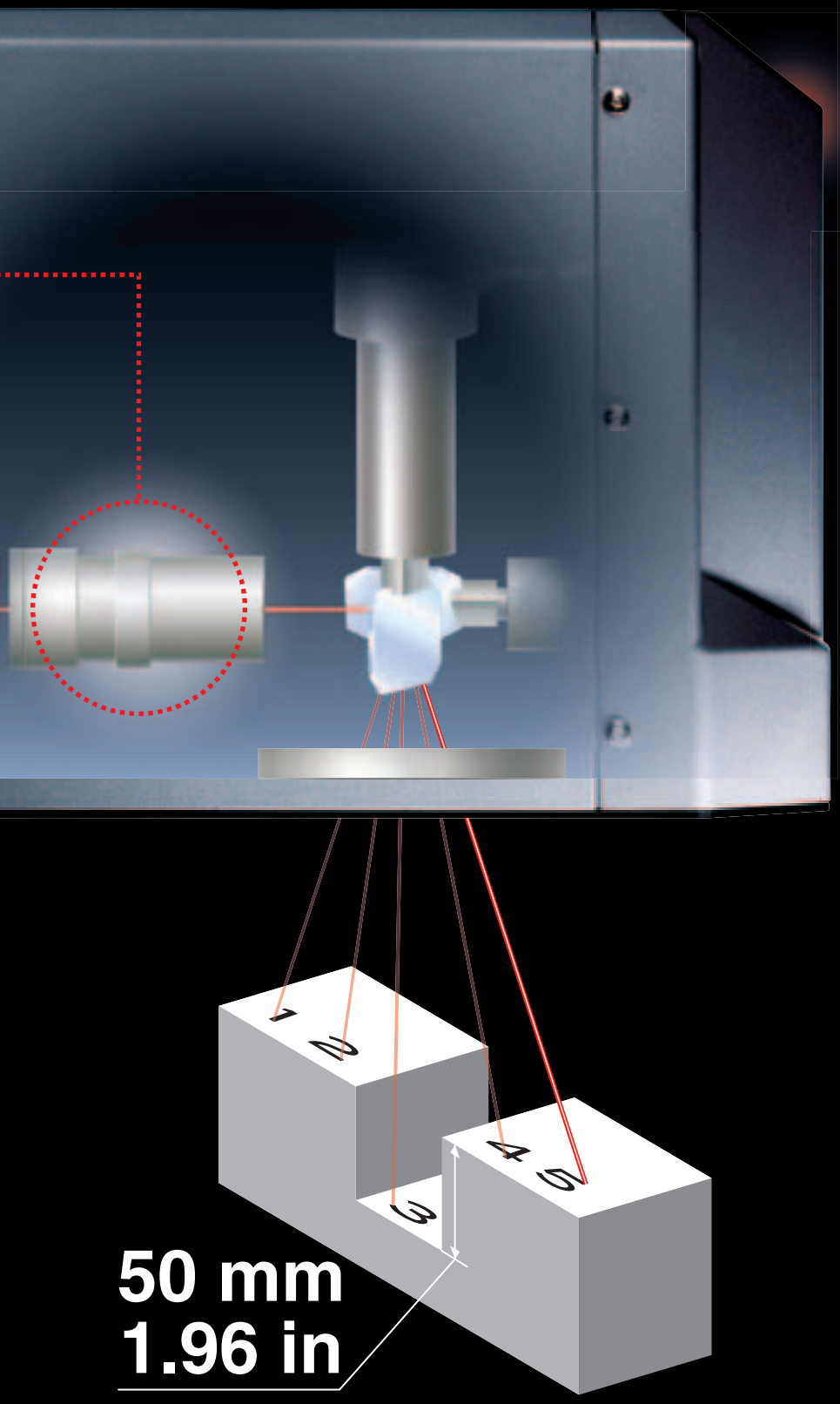


Laser beam is gradually amplified in the process of passing through fiber.

■ Solid-state laser (common example)



Irradiate LD (high power) light into crystal, and amplifies laser beam through round-trip reflections inside.



Easy configuration and operation

■ Configuration via PC

＊Simulated screen image.

Flexible operation

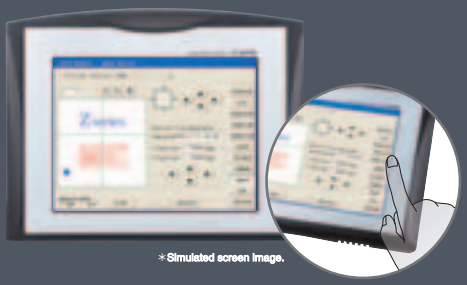
Useful application software for PC setting is a standard feature.* Create the marking image with off-line PC, enabling smooth data creation and setting flexibility. Your PC can be an operating screen or even an I/O monitor.

＊3D setting on PC requires optional software.

■ USB flash memory available (standard)

Removable USB storage allows you to quickly backup and transfer data to other LP-Z laser markers.

■ Configuration via touch panel (optional)



＊Simulated screen image.

Easy operation / Space-saving installation

The color touch panel provides intuitive and easy-to-use operation even for inexperienced users. The easily programmable and flexible software provides you with stress-free and user-friendly operation.

Fiber Amplified Ytterbium

■ Features of FAYb method

Fundamental characteristics of FAYb laser are distinguished from the viewpoint of its **long-lasting and energy-saving** structures. In comparison to solid-state lasers, LDs of FAYb laser are active only when laser is irradiated. This contributes to lower heat load to LDs, and dramatically lengthens the lifetime. Furthermore, due to the high heat release characteristic and superior conversion efficiency, FAYb laser is completely air-cooled and consumes less than 390 VA (100 V AC)*of power.

＊420 VA (200 V AC)

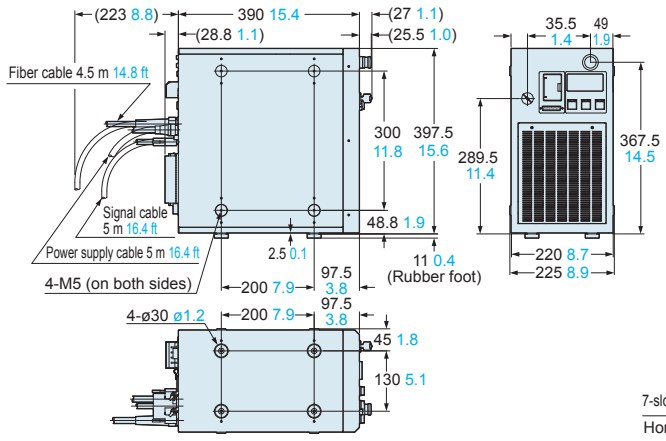
Specifications

Standard model	LP-Z130	LP-Z250	LP-Z256
FDA compliant model	LP-Z130-A	LP-Z250-A	LP-Z256-A
CE marked model*1	LP-Z130-C	LP-Z250-C	LP-Z256-C
Focal point (focal variable range)	190 mm (±25 mm) 7.5 in (±0.98 in)		330 mm (±25 mm) 13.0 in (±0.98 in)
Marking laser	Yb : Fiber laser λ=1060 nm 0.042 mil Class 4 laser product		
Pulse width	30 ns, 100 ns, 200 ns	50 ns, 100 ns, 200 ns	
Average output*2	13 W (pulse oscillation)	25 W (pulse oscillation)	
Guide laser / pointer	Semiconductor laser λ=655 nm 0.026 mil Class 2 laser product		
Marking field	120 mm × 120 mm 4.7 in × 4.7 in		330 mm × 330 mm 13.0 in × 13.0 in
Scanning method	Galvano scanning method		
Scanning speed	Max 12,000 mm/s 472 in/s		Max 8,000 mm/s 315 in/s
Marking status	Static, On the fly		
Character height / width	0.1 ~ 120 mm 0.004 ~ 4.7 in*3		0.1 ~ 330 mm 0.004 ~ 13.0 in*3
Logos / Graphics	BMP / DXF / HPGL / JPEG / AI*4 / EPS*4		
Character types	English uppercase letters, English lowercase letters, numerals, katakana, hiragana, kanji (JIS No.1 and No.2 standards), symbols, user-registered characters (up to 50)		
Barcodes	CODE39, CODE128, ITF, NW-7, EAN / UPC / JAN, RSS-14 (GS1 DataBar), RSS (GS1 DataBar) Limited, RSS (GS1 DataBar) Expanded		
2D codes	QR Code, Micro QR Code, Data Matrix, GS1 Data Matrix		
Composite codes	RSS-14 (GS1 DataBar) CC-A, RSS-14 (GS1 DataBar) Stacked CC-A, RSS (GS1 DataBar) Limited CC-A, etc.		
Cooling method	Forced air cooling (Controller / Head)		
Power voltage	90 to 132 V AC, or 180 to 264 V AC (automatic switching), 50/60 Hz		
Power consumption	390 VA or less (100 V AC), 420 VA or less (200 V AC)		
Ambient temperature*5	0 ~ +40 ˚C 32 ~ 104 ˚F	0 ~ +35 ˚C 32 ~ 95 ˚F	
Ambient temperature for storage*5	-10 ~ +60 ˚C 14 ~ 140 ˚F		
Ambient humidity*5	35 ~ 85 %RH (Controller / Head)		
Weight	Head : 9.5 kg / Controller : 24 kg		

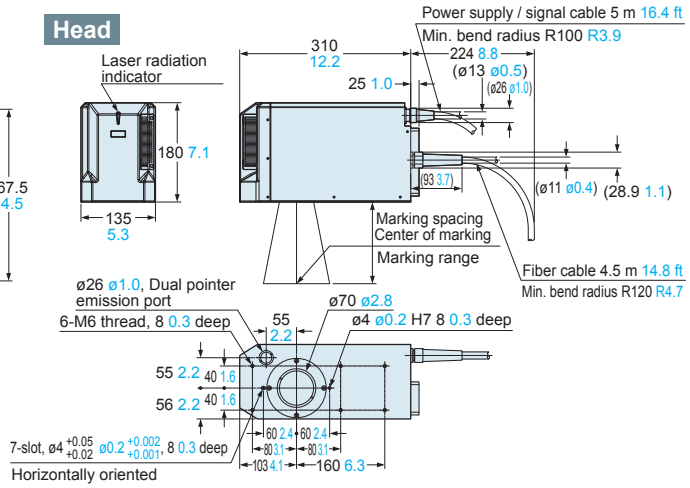
∗1: Conforming to Low Voltage and EMC Directive. ∗2: Independent output of oscillator. ∗3: Variable in 0.001 mm (0.00004 in) steps. ∗4: AI and EPS formats are convertible with Export VEC software. ∗5: No dew condensation or icing allowed.

Dimensions (Unit: mm in)

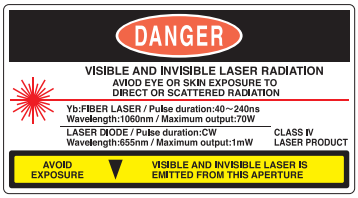
Controller



Head



Use this product in accordance with all instructions and safety information.



Laser safety

- This product corresponds to a Class 4 laser under FDA (21CFR 1040.10 and 1040.11) / IEC 60825-1 / JIS C6802 standards. Use caution not to look at or touch direct or reflected laser light, and implement safety measures appropriate to the information provided on the product's warning label.
- A label such as the one shown to the left is affixed to the product. (Warning labels are not shown in the product photographs in this brochure.) The pictured label is intended for **LP-Z250-A**. The label design or its information may vary between models.
- The laser used by this product generates infrared light that is invisible to the human eye. Use particular caution when the laser is operating.

Recommended use of a dust collector

- Depending on the marking object, harmful gasses or smoke that have a detrimental effect on the human body or the laser marker may be generating during marking. If your application falls under this description, use a dust collector.

■ Disclaimer
- All information is subject to change without prior notice.
- Pictures on this brochure are for reference and might differ from the actual products.
- The applications described in the brochure are all intended for examples only. The purchase of our products described in the brochure 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 application may not infringe any intellectual property rights, such as patent rights, of a third party.

FLINKENBERG electronics

Product manager Christian Lignell
christian.lignell@flinkenberg.fi
tel. +358 9 8599 1369
www.flinkenberg.fi

Panasonic Electric Works Europe AG

Rudolf-Diesel-Ring 2 • 83607 Holzkirchen
Tel.: +49 (0) 8024 648-0 • Fax: +49 (0) 8024 648-111
e-mail: info-eu@eu.pewg.panasonic.com
www.panasonic-electric-works.com

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