LP130e Laser Marking System
DF-30e Smoke and Fume Filter
Frequently Asked Questions

Printer

1. What does the printer cost?

- Due to the industrial nature of the printer, Primera has elected to not set an MSRP. However, depending upon configuration, software and initial supplies, complete systems will typically cost between 17,000 to 23,000 EUR

2. Does the printer use ink?

- The printer does not use ink. Instead of having a print head like a typical inkjet or thermal label printer it incorporates a high-powered laser and specially-designed optics. The laser either marks directly onto the material by ablating the surface or by chemically changing the appearance with precisely focused heat which burns the image onto or into the label.

3. What's so special about LP130e versus other laser marking systems? And why does it look so much like your LX900e printer which costs so much less?

- LP130e is the one of the only laser marking systems available that can handle die-cut labels on rolls. The few other roll-fed systems cost more than twice what LP130e costs.

- Primera elected to use the LX900e case on LP130e since it is a proven design. It works perfectly for housing the more expensive laser marking components, too.

4. What is the cost per label and how does that compare to other means of obtaining this type of label?

- Most commonly used label sizes cost between 25-50 cents EUR each to produce on the LP130e.
- Outsourced labels can cost up to 70% or more than producing durable labels in-house.

5. What approvals does the system have?

- FCC Part 15, Class A, UL, UL-C, CE, CDRH, IEC 60825-1

6. Who is Coherent and why is their name on the front of Primera's printer?

- Coherent, Inc. is a world leader in providing photonics based solutions to the commercial and scientific research markets. Primera is proud to have partnered and worked closely with Coherent to develop the LP130e.

7. Besides buying a LP130e, what other options are available for producing durable labels?

- Outsourcing laser-marked labels to a service bureau who owns a LP130e or similar equipment
- Purchase a far more expensive laser marking system that starts at about 35,000 EUR

8. Do I need training to operate LP130e?

- Primera has designed the machine to operate similarly to most desktop inkjet or laser printers. It is a Windows-based printer that you simply install and print from any typical label creation software.

9. Is the printer dangerous in any way?

- Although there is a powerful 10-watt laser inside, Primera has designed the printer to comply with all the requirements of UL and the FDA's CDRH laser safety requirements. Among other things, this includes the use of dual electrical interlocks on the printer's cover.

10. Since the laser is burning the substrates, do I need to vent the printer?

- No outside venting or filtering is needed if using only "smokeless" labels. The DF-30e Smoke and Fume Filter is required for all "smoke" labels. The printer automatically detects label types that generate smoke. If "smoke" labels are installed the printer will not run unless a DF-30e is properly connected and powered on.

11. Can I also print regular labels with LP130e?

- No, only laser markable or phase-changing materials can be run through the LP130e.

12. Is software to run the printer included? If so, what?

- Yes, included is BarTender® Primera SE UltraLite for Windows.
    - The first 30 days of use include all features of BarTender Automation Edition, post-30 days BarTender will revert to UltraLite version.
    - BarTender upgrades are available.

- In EMEA there will be also a NIcelabel version available soon.

13. How does the laser work?

- The 10-watt laser is beamed to a mirror moving on a carriage that is hyper-focused onto the marking substrate to ablate or phase change materials.

14. What kind of maintenance is required?

- Some periodic maintenance is required, please reference Section 6 of the LP130e User's Manual

15. What is the warranty on the printer?

- LP130e and DF-30e come with a standard 1 year parts and service warranty.
- Extended warranties are available for purchase.

16. How long will the laser last before it needs replacing?

- The Coherent-supplied laser is designed to perform in rigorous industrial applications. It is not uncommon for these types of lasers to never need replacement.

17. Can I use LP130e in an office environment or does it need to be out in a warehouse or factory?

- It can be used in an office environment, but due to the sound of the print mechanism and optional DF-30e Smoke and Fume Filter it is recommended to be run in a closed-door room. During operation the printer generates about 68 dB at 3.3 feet (1 meter). With DF-30e attached the decibel rating is around 71 dB at 3.3 feet (1 meter). As the filters get filled with waste material the sound can increase to about 72 dB.

18. Can a rewinder be used with the printer?

- Yes, external label rewinders can be used with the LP130e

19. I see lots of stickers inside the printer telling me to not to touch certain surfaces. Why is that?

- LP130e is built with precision to produce the highest quality durable labels using a laser being reflected through a specially treated glass window. The optics is so precise that even a fingerprint will degrade print quality. To maintain the best possible print quality and consistency of printed output, several parts of the printer have “Do not touch” labels on them.

20. How fast is the printer?

- The printer marks at up to 60 inches (152cm) per second side to side, so depending on size and material timing will vary slightly. A standard 2” x 1” (50.8mm x 25.4mm) label with 50% coverage takes approximately 20 seconds to mark.

21. I see it only has a USB port. Is Ethernet available?

- Yes, we do have a recommended add-on wired/wireless Ethernet port adapter. Please contact your local Primera office for details.

22. What is the printer’s resolution?

- Marking resolution is 303 dpi.

Substrates

1. What size labels are available and how do I get a custom size?

- A few stock sizes such as 3” x 1” and 2” x 2” are available and more will be added during the next few months. Quotes on custom are available through your local reseller or the Primera office in your region.

2. Can I use anyone's laser marking materials?

- No. Primera offers a variety of standard substrates that have been tested and approved for use in the printer. If a substrate not offered by Primera is required, please contact Technical Support for substrate testing and laser characterization. The very specific characteristics for each material are stored in a chip on the core of the label rolls. This tells the printer the heat, speed, dwell time, pulse time and other important factors so that the labels are properly marked and will produce crisp text and scannable, in-spec bar codes.

3. Why do I have to buy the labels from Primera?

- Converting durable labels is a more complex and expensive process than converting standard thermal transfer or inkjet labels. To ensure the highest quality of labels and to avoid any issues that can result from poorly converted durable labels, Primera converts and distributes all label media for the DL500.

4. What adhesives are available and are they highly durable too?

- All of the adhesives are designed for the types of applications for which they are recommended. Most are modified acrylic adhesives. Primera can provide specification sheets with full details. As an example of the durable nature of these labels, the rated service temperature of 3M's laser materials, including adhesive, is up to 530F (276C).

5. Are different colors available?

- 3M's laser materials have two options:
  - 7847 – White Marking on Black
  - 7848 – Black Marking on Silver
- Schreiner Pro-Tech CLF has two options:
  - White Marking on Black
  - Several other CLF colors available by request, please allow 4-6 weeks for delivery.

6. How durable are the labels? Are some more durable than others?

- Both 3M and Schreiner CLF products are extremely durable with heat and UV resistance.
- For the most extreme durability, 3M's 7847 and 7848 products are recommended.

7. Why do you call some substrates "smoke" and others "smokeless?"

- Materials such as 3M's 7847 and 7847 are "smoke" labels that require use of Primera's DF-30e Smoke and Fume Filter. These materials have a top coating that is blasted off ("ablated") by LP130e's high-power laser. This process requires air filtration to remove the residual waste material.

- Schreiner Pro-Tech's CLF material is "smokeless" which does not require use of an air filtration

system. During the marking process on these materials there is a chemical reaction below a clear over-laminate film when the laser is focused on that area. It's in this area that readable text and bar codes appear.

8. I would like to try a non-Primera supplied laser marking material. How can I do that?

- Contact Primera's Technical Support for substrate testing.

9. Can the laser also cut out the shape of the labels?

- LP130e does not laser-die cut. It is designed to feed and print onto pre-die cut labels only.

Smoke and Fume Filter

1. Why do I need a smoke and fume filter? That sounds very strange for a printer.

- Due to the marking process of "smoke" materials, an air filtration system is required to remove excess blasted material.

2. What is the function of each of the five internal filter elements? Why are there so many?

- Each filter in the DF-30e provides a unique function for removing particular elements and pollutants out of the air and combine to provide a safe air environment for running the LP130e with "smoke" materials.

3. How often do I need to replace the filters?

- Baffle, Bag and Deep-Pleated Filters need to be replaced every filter change notification on the DF-30e. With a 3" x 1" 3M 7848 laser-markable label imaged at approximately 30% coverage, these filters will need to be replaced in about 30 to 40 rolls.

- HEPA and Charcoal Filters need to be changed every other filter notification change on the DF-30e. This is estimated to be about once per year for a user who produces up to 120,000 labels per year with the above label size, coverage and material type.

4. Do I need to take any steps to properly dispose of the filters?

- Primera recommends that you wear a disposable face mask for removal and disposal of air filters. After removing filters from DF-30e, place them in a plastic garbage bag, tie it and place in suitable disposal bin. No special handling is required.

5. Is the filter noisy?

- The filter has a moderate volume; it is recommended to run the LP130e and DF-30e in a production or closed-door room environment.

Applications

1. What applications require such durable labels?

LP130e produces durable labels for a wide range of applications, including:

- UID Labels – for the U.S. Department of Defense's MIL-STD-130
- UDI ("Unique Device Identification") Labels – for asset tracking of medical devices according to FDA specifications
- Asset tags and labels – to protect and identify valuable equipment and devices
- Automobile labels – for VIN and rating plates and under-hood use
- Medical laboratory labels – with both low- and high-temperature and chemical resistance, labels can be used virtually anywhere from the freezer to the autoclave
- Solar panel labels – able to withstand outdoor stresses from wind, rain and sunlight
- Security labels – prevents the label from being removed and if attempted shows tamper-evidence
- Harsh environment labels – any other labels such as safety warning labels that are used in rough outdoor weather conditions.

2. What is UID?

- UID or IUID (Unique Identification Marking, UID marking or Item Unique Identification), is a process mandated by the United States Department of Defense as a marking method used to give government and military equipment a unique ID. Marking is required for all equipment with an acquisition cost of $5,000 USD and above, equipment which is mission essential, controlled inventory, serially-controlled, or consumable.

- More information is available from the DoD at http://www.acq.osd.mil/dpap/pdi/uid/data_submission_information.html

3. What is UDI?

- Being mandated by the FDA over the next few years, Unique Device Identification (UDI) is a unique numeric or alphanumeric code that includes a device identifier, which is specific to a device model, and a production identifier, which includes the current production information for that specific device, such as the lot or batch number, the serial number and/or expiration date used on medical devices in the USA.

- More information is available from the FDA at http://www.fda.gov/medicaldevices/deviceregulationandguidance/uniquedeviceidentification/default.htm.

4. Can LP130e produce UL/CSA rating plate and serial tag identification labels?

- Yes, Primera offers two different types of laser markable substrates from 3M that are approved for use in UL/CSA-listed applications.