

Lamination Introduction Package / TASEL Introduction Package Installation Guide

Table of contents:

1	Introduction	3
2	Prerequisites.....	3
3	Installation	4
3.1	Step 1	4
3.2	Step 2	4
3.3	Step 3	5
3.4	Step 4	6
3.5	Step 5	6
3.6	Changing the Script Governing the Display	7

1 Introduction

This short guide walks you through the steps of

- installing a LIP (Lamination Introduction Package) or TIP (TASEL Introduction Package) package display panel and flex cable (FPC, flexible printed circuit) to the driving electronics,
- connecting the driving electronics to the power source and USB port of a computer, and
- changing a driving script of the driving electronics.

This guide does not cover the LIP lamination process or the TIP attachment processes. These processes are covered elsewhere in LUMINEQ® documentation.

2 Prerequisites

You should have the following parts at hand (all are included in the LIP or TIP package)

- the driving electronics box, part A in the picture below
- power supply and low voltage cable (integrated into the supply), part B
- power chord, part C
- USB cable, part D
- and of course the display glass panel with FPC attached (not shown)



3 Installation

3.1 Step 1

It is a good idea to start the installation from the FPC. First, open the two Philips screws that hold plug of the FPC opening (plug is pointed by an arrow in the picture) and place the plug and the two screws away.

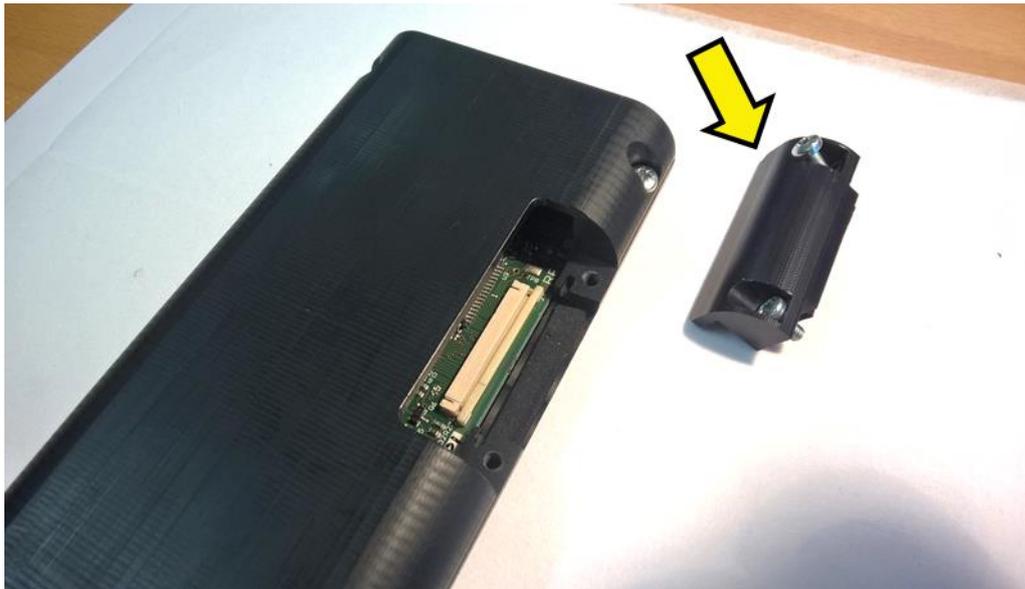


Fig.1

3.2 Step 2

Place the display glass with the metallic contact pads as show in Figure 2, pointed with the yellow arrow (pads facing upwards when the FPC is bent back

NOTE: for LIP packages with unencapsulated glass, try to keep the glass panel at absolute rest, with no rubbing action of display glass, even when the desk you work at is cushioned



Fig.2

3.3 Step 3

To insert the FPC into the connector, the actuator must be opened. The actuator is open when there is some 2.3mm gap between the chassis of the connector and the actuator. Do not pull the actuator too far as it might come loose. Figure 3 shows an open connector.



Fig. 3

3.4 Step 4

Next, slide the end of the FPC into the slit of the connector. It will penetrate the slit some 3-4mm. Then press the actuator close, towards the connector, in the direction of the arrow below. The FPC likely still lies flat on the desk like in Figure 3, Figure 4 shows a bent FPC (in anticipation of the next step).



Fig. 4

3.5 Step 5

When the connector and its actuator are closed, it is good practice to also screw the bolts and the plug of Figure 1 back. Now you can plug the power supply (not show) into the mains outlet, and then, when making sure you do not touch the display or the FPC in any way, connect the low voltage plug to the driver electronics box to the round connector at the end face of the box.

NOTE: the display drive signals are high voltage signals. Under no circumstances touch the glass panel when the display is running as you can touch parts of the display having a high voltage exposed. It is good practice not to move or touch the panel at all when it is running.

The system will lie dormant for 2-3 seconds, and then the display panel should lit up and lit the segments in some sensible order, showing sensible information.

NOTE: if the display seems to fire the segments at random, the script that governs the sequence of segment driving is wrong for some reason. See next chapter for more information.

In Figure 5, a "sensible" information of 1200mV is shown, pointed by the arrow.

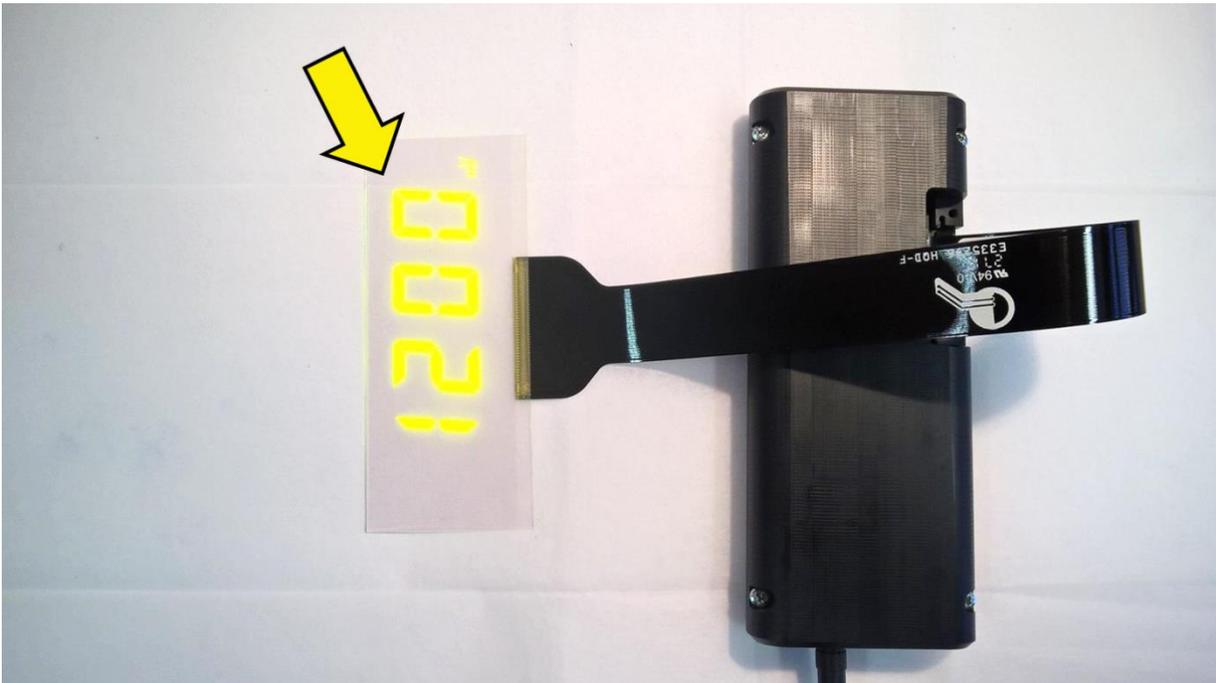


Fig. 5

3.6 Changing the Script Governing the Display

To change the script of the display, you need to first install the device drivers.

To do that, plug in the USB stick of the package and run the installer in the "USB Board Drivers" folder. This installation is self-explanatory.

To feed in another script into the electronic driving box, next hook it up with your laptop with the MicroUSB cable (connector is next to the low power connector).

Enter a command prompt in your computer (e.g. write "cmd" in "Search programs and files" box of the Windows main menu (lower left hand corner of the desktop) and change the directory to the USB stick folder "el40s_demo_software_20160212". (use the cd command at the command prompt to do this).

In this folder, there is an executable (uploader) called `el40s_demo.exe`

run this executable with the script you want to upload to the electronics driving unit, e.g.

```
el40s_demo elt40s.txt
```

The uploader will work with other types of displays just fine, even though it is named el40_demo(.exe). It is the .txt file, the script that contains the necessary information. For the syntax of the script, see ELT40S Demo Kit ED001034 document (PDF format).

When the uploading is done, the display is shut off for 2-3, and then a new script starts to run the display. The uploading status information and panel temperature is shown during the uploading.

This document is compiled and kept up-to-date as conscientiously as possible. Beneq cannot, however, guarantee that the data are free of errors, accurate or complete and, therefore, assumes no liability for loss or damage of any kind incurred directly or indirectly through the use of this document. The information in this document is subject to change without notice. All texts, pictures, graphics and any other contents of this document and their layout are protected by copyright and other protective laws. The aforementioned contents may not be duplicated, modified or used in other electronic or printed publications without the prior consent of Beneq. Unless otherwise stated, all trademarks are protected under trademark laws, especially the Beneq trademarks, logos, emblems and nameplates. The patents and trademarks presented in this document are the intellectual property of Beneq Oy. Beneq and Lumineq are registered trademarks of Beneq Oy. TASEL® is a registered trademark of Beneq Oy.