Handling Instruction
Plastic Logic Display Modules

The intention of this document is to ensure that the handling of the display module does not lead to mechanical or electrical damage and reliability risks, respectively.

- Mechanical damage can result from pulling the electrical contacts, bending the display edges, as well as creating scratches on the front side of the display module.
- Electrical damage can come from electrostatic discharge harming either the display backplane or the electronics of the display module.
- Reliability risk can appear when bending the display module's electrical connectors unnecessarily often. Additionally, improper handling of the display modules can create cracks in the electrical connectors, which can also lead to reliability fails.

General handling requirements

The display module is an electrostatic discharge (ESD) sensitive device. If the display module is to be taken out of the delivered ESD bag please ensure proper ESD precautions are in place to avoid damage to the display module.
Persons should wear ESD bracelet and workplaces must be appropriated grounded for ESD.

Take appropriate care to protect the rear side of the display module from indents and punctures as this may damage the display. To prevent scratches on the front side of the display (EPD media) the handling of sharp objects (e.g. metal tools) directly above the uncovered media is not recommended. When handling of sharp objects above is necessary the display module should be covered with a thick cloth. Take general care not to create scratches on the EPD media or rear side while manually handling the display module.

The display module must be shipped in its unfolded flat state. All loose tails must be constrained during shipping.

For assembly please take appropriate care to ensure the minimum bend radii of the COF and/ or MPWB tails are not violated e.g. if the display will be assembled in a customized cover. For details of COF bend radii and bend positions please refer to the corresponding display module data sheets.

In general bending not permitted at IC location.

Figure 1 do not apply pressure on chip (IC location)

When the display module is handled it is recommended to grip the areas marked with the **green** circles in figure 1-3. Be aware not to touch or bend **red** marked areas. These red areas contain sensitive electronics and conductive pathways that can break or get damaged by electric discharge. This applies for both electrically connected and disconnected displays.

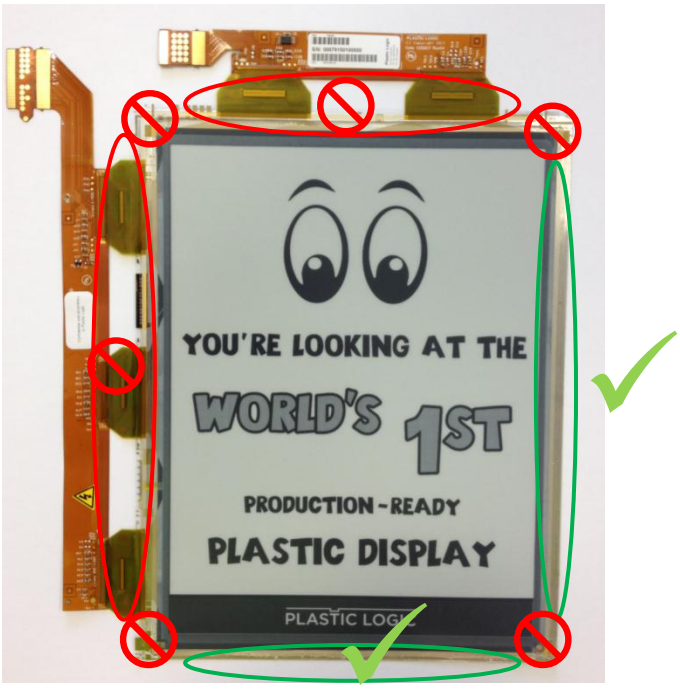

Figure 2 display module type 10.7"

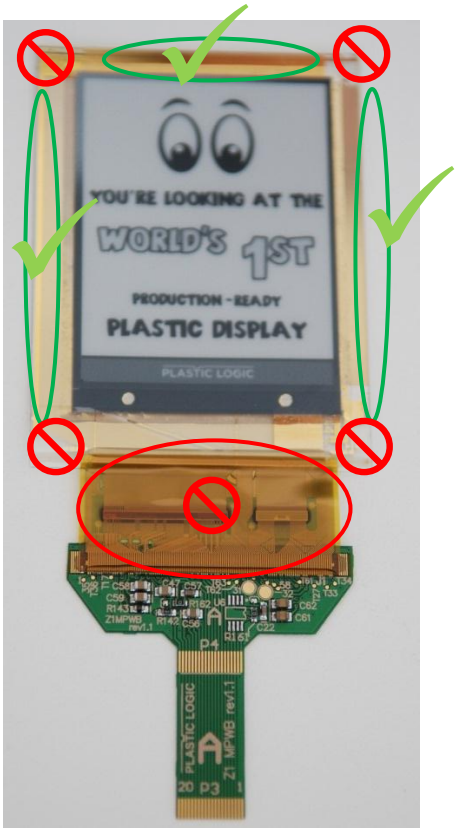

Figure 3 display module type Small

Figure 4 display Module type Tiny

It is not recommended to hold, grab or pick up the display module by its electrical connectors (MPWB or COF), to exert pressure on the active area or over-bend displays.
The pictures below illustrate handling of different display modules.

Figure 5 do not hold display on COF/MPWB

Figure 6 do not hold or bend display at corners

Figure 7 possible position to grip / lift display

Figure 8 optimum handling (always hold from below)

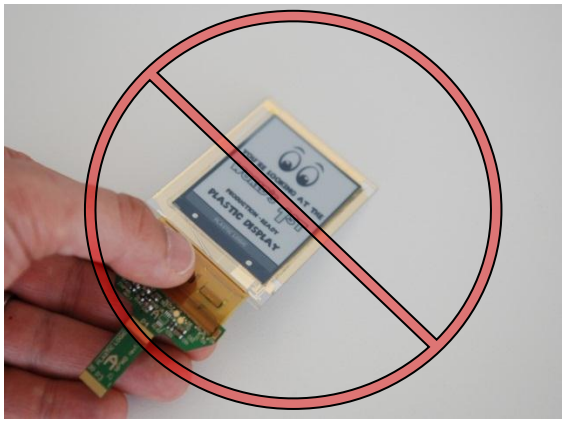

Figure 9 do not hold Small display on COF location

Figure 10 do not hold Tiny display on COF / COP location

Bending of display module

Plastic Logic display modules are flexible and bend radii depend on customized display construction and chip location. Please refer to individual display module data sheets or contact Plastic Logic.

Attention for 15.4” display modules:

The 15.4” display module is manufactured by joining two 10.7” displays in one common encapsulation. Due to the joint the display module has a mechanical weak point where both displays attach. Do not bend the 15.4” display module to avoid breaking or delamination of the encapsulation layers.

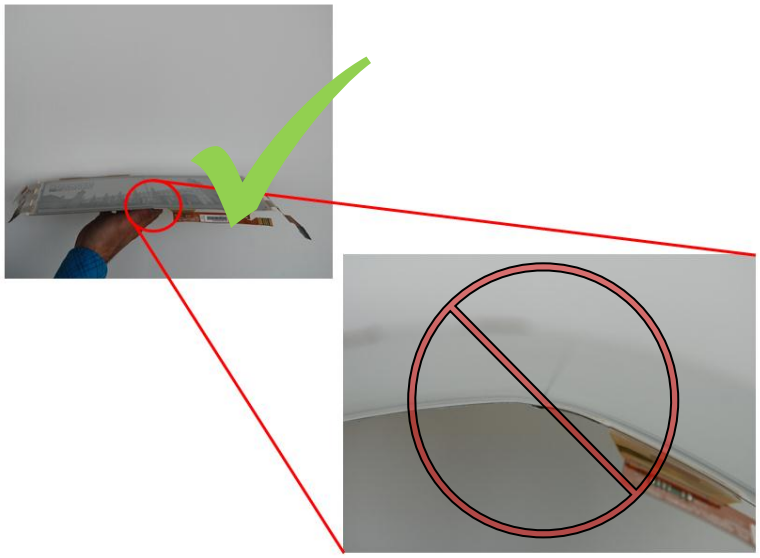

Figure 11 do not bend 15.4" display module

(However a certain flexibility and conformal bending is possible but details need to be agreed with Plastic Logic).

Attention for 4.9” bracelet display modules:

Do not bend the 4.9” bracelet display module in the area of driver chips to avoid breaking or delamination.

Figure 122 do not bend 4.9" bracelet display module in the area of driver chips