



**PRODUCT NAME**

TM87 series

**TITLE**

The application of large-sized LCD panel

**APPLICATION NOTE**

In large-sized LCD panel application, we suggest:

1. Only TM8705, TM8706 and TM8713 are suitable for such application.
2. Change the capacitance of VDD1, VDD2, VDD3, CUP1, CUP2 on the application circuit to 1uF.
3. Select "typical" on the option menu as the option of LCD frame frequency.
4. It is recommended to use 1/3 bias only for LCD driver.

Because of the output voltages (VDD1~3) of the LCD driver are generated by the charge-pump circuit, and sustained the output voltage by the capacitor (original capacitance is 0.1uF) connected on VDD1~3 pins. As a result, when the pattern size of LCD panel becomes bigger, the loading of LCD driver will become bigger comparatively. Therefore, when TM87 is used to drive a large-sized LCD panel, VDD1~3 voltage will be shared by the capacitance of LCD panel (charge sharing). The charge-sharing effect will cause the LCD pattern blinking on the LCD panel or a problem of unevenness.

Therefore, when TM87 is used to drive a large-sized LCD panel, change the capacitance of VDD1, VDD2, VDD3, CUP1, CUP2 to 1uF to reduce the effects of "charge sharing."