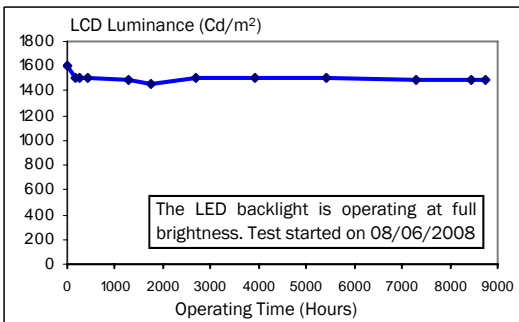


## Newsletter 3<sup>rd</sup> Quarter 2009

### VHB LCD MODULES WITH LED BACKLIGHT

As of today, Landmark Technology has accumulated 8760 hours (1 full year) of operating Life Test on our first prototype, a 12.1" LCD module with LED backlight. At full brightness setting, the backlight can deliver a screen brightness of 1,600 nits with a power consumption of 13 Watts.

The LED backlight has been operated 24 hours a day and measured on its performance periodically since August 2008. After 8760 hours of operation, the LCD screen brightness decreased to 1490 nits from its initial value of 1593 nits. As a result, the backlight brightness is down to 93.5% representing merely a 6.5% decrease after one year of continuous operation.



The curve on the left shows the LCD brightness versus the operating hours.

The test data has shown that our LED backlights are fully reliable and we are confident that Landmark's family of VHB LCDs with LED backlights will continue to have state of the art performance.

### What's New:

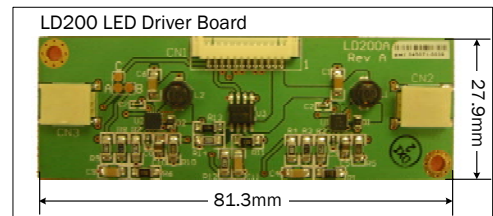
- Complete 1 year of LED backlight Life Test
- Release LD200 and introduce LD208 LED Driver Board

### LD200 LED DRIVER BOARD

Landmark has recently released the LD200 LED driver board which operates the LED backlights in Landmark's 8.4" to 12.1" VHB LCD modules. The LD200 requires a 12 Volts DC input. It can drive up to two LED strips with a maximum power of 6 Watts per strip.

The LCD screen brightness with the LD200 can be controlled with a DC voltage, the same as the dimming voltage ( $V_d$ ) used in the Landmark Inverters. The typical dimming ratio for the Landmark 12.1" LMG207-121X1-L01 LCD module is about 20: 1 with a stable brightness adjustment characteristics.

The LD200 LED driver board is designed to have a near identical user interface so that the existing control circuits for Landmark inverters work well with the LD200 board. For example, Landmark's ambient light sensor, PS200, works seamlessly with LD200 for automatic brightness control. The screen luminance can also be controlled with the OSD brightness setting of Landmark LCD controllers, MG21 and MG22. With the OSD's brightness control, the 12.1" LMG207 LCD brightness can be adjusted from 1600 to 130 nits.



### COMING SOON- LD208 LED DRIVER BOARD

LD 208 is a high end LED driver board with a wide dimming range for operations in various demanding environments. Stay tuned for more updates!