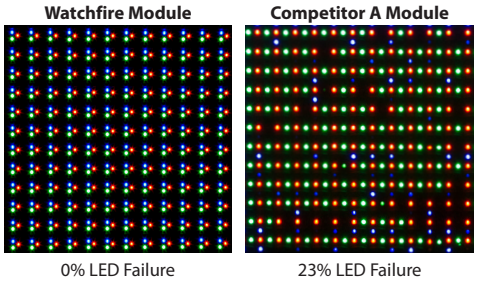
Testing the Value of Quality LED Signs

National Technical Services (NTS) in Palatine, Illinois, an independent laboratory facility, recently tested LED sign modules from 3 different manufacturers (Watchfire, Competitor A and Competitor B). With 3 new functional modules (samples 1, 2 & 3) from each manufacturer as test specimens, the lab used a luminance device to measure reliability of the LED components and power supplies. Samples 2 and 3 were then run in a temperature and humidity chamber set at 85°C and 85% relative humidity for 1,000 hours, followed by a second functional test. Samples 2 and 3 were placed back into the temperature and humidity chamber for an additional 1,000 hours. A third and final functional test was conducted after a combined total of 2,000 hours in the temperature and humidity chamber.

COMPETITOR A - Widespread LED Failures

	LED Failure %			
	Red	Green	Blue	2,000 Hours Overall Brightness
Watchfire	0%	0%	0%	83%
Competitor A	0%	**7%**	**61%**	85%

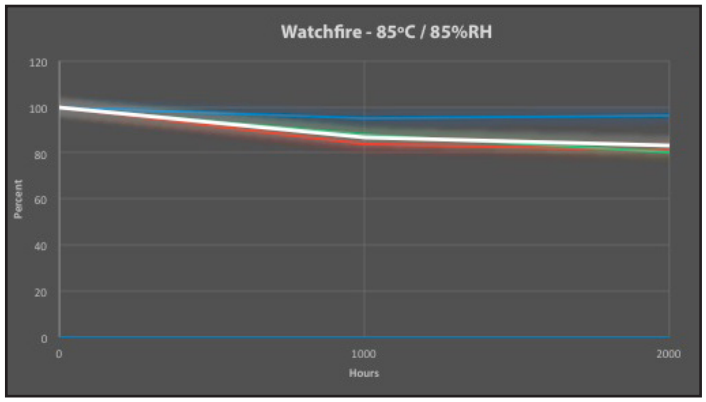


COMPETITOR A ANALYSIS: Significant color distortion occurred as a result of widespread blue LED failures and, to a lesser extent, green LED failures. Failure of these colors also leads to an overall pinkish hue on all non-red colors in a display.

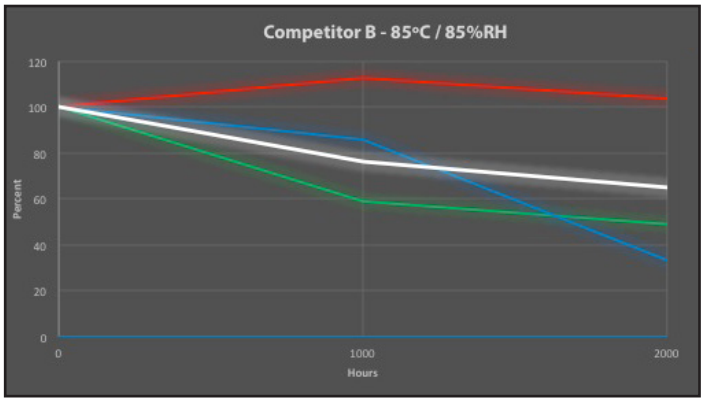
COMPETITOR B - Loss of Brightness and Image Color Shift

	LED Failure %			
	Red	Green	Blue	2,000 Hours Overall Brightness
Watchfire	0%	0%	0%	**83%**
Competitor B	0%	0%	0%	**65%**

Watchfire



Competitor B



COMPETITOR B ANALYSIS: Color accuracy is dramatically impacted by the inconsistent dimming of overall brightness (white), and individual red, green, and blue LEDs on Competitor B's modules. After 2,000 hours in the temperature and humidity chamber, overall brightness diminished by 35%, double that of Watchfire's modules.