

### PL VS LED – COMPARITIVE ANALYSIS

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Recently, during a meeting, an excellent question was raised, asking for a definitive comparison on the visibility between an LED and a PL Sign. In over 15 years of introducing the PL technology to North America, this was a first, so here is what we learned. Everyone has been aware that our signs are brighter (bigger sign face, etc.) but I began to ask experts, and finally, have some accurate answers.

- **BEGHELLI** - “The illuminance on our sign face is just greater than  $2\text{mcd}/\text{m}^2$ ”. The signs are 90 minutes maximum. Ours’ (please see attached) ranges from  $138\text{mcd}/\text{m}^2$  at 10 minutes to  $25\text{mcd}/\text{m}^2$  at 90 minutes. All figures are CSA/ULCS-572 Standards.
- **LED DEGRADATION** – Michael S. Shulman – Principal Engineer UL  
LED Degradation is a gradual process where an EXIT Sign passes from a compliant level, to a noncompliant level. Higher current and the heat generated by that current accelerates LED Degradation. The batteries and associated charge and control electronics are probably much more vulnerable subsystems that will cause LED EXIT SIGN failure, and hence require monitoring and maintenance, while PL Signs require very minimal maintenance.  
LED Signs require ongoing, mandatory Testing. Once a year, the LED’s require testing to ensure the backup battery can illuminate for 30, 60, 90, to 120 minutes before the Batteries are completely drained. The sign then requires 24-168 hours to fully recharge. PL Signs do not require this Testing, and will fully recharge in 5-10 minutes.
- **ISO-15370 /DIRECTIVE – LOW LOCATION LIGHTING (L.L.L.)**  
4.2 - “PL materials shall provide a Luminance of at least  $14\text{mcd}/\text{m}^2$  measured 10 minutes after the removal of all external illuminating sources.”  
4.2.7. – “PL materials shall be flame retardant in accordance with IEC-60092-101  
Electrical Systems cannot be used as performance cannot be guaranteed.

- **OSHA/ANSI Z535 – SOURCED FROM CLARION**

**SYMBOLS** – Graphical symbols are used to bridge Language barriers, and draw attention to the message. Specific shape, colours, and design principles are used to meet Global compliance objectives. These signs are aimed at helping achieve fewer workplace accidents and injuries, and reduce Liability issues.

**PURPOSE** – EGRESS PATHMARKING Signs guide people in buildings to Safety and assist Rescue intervention forces to assist Handicapped people in Emergency situations. Many of the new “BEST PRACTISE” Safety Signs are made with High Tech Photoluminescent Materials that can GLOW IN THE DARK for long periods of time. Photoluminescent Markings and symbol based Safety Signs were added to NFPA and ISO Standards between 2006-2013.

- **AMERICAN FOUNDATION FOR THE BLIND**

15% of the North American population **admit** they “have trouble seeing.” Most do not admit to it.

RED Lettering is almost invisible to people with “colour blindness.” GREEN is much preferred.

The ADA (American Disability Act) recommends Photoluminescent Safety Signage (ADA – 2010)

The Marketplace is changing. Energy Conservation, Environmental Initiatives, Economics and Liability issues are all now huge priorities, and our PL Technology, according to the E.P.A. is “the Best Available Option.” With all that, however, our PL Products are a Life Safety Technology, and we Save Lives.

We hope we never have to prove it though.

Sincerely

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