

# DLP™ Technology Shows True Colors

**T**he reliability and durability of the DLP™ light engine has long been recognized. Because DLP™ system components are robust in their ability to withstand long term light exposure, there is a marked difference in picture reliability over time between LCD and DLP™-enabled projectors. To corroborate this, Texas Instruments recently commissioned a series of independent picture reliability tests comparing LCD and DLP™ projectors.

The Picture Reliability Tests were conducted by an independent third party, Munsell Color Science Laboratory (MCSL) at the Rochester Institute of Technology. Began in May 2002, the goal of the tests was to evaluate picture reliability of DLP™ technology

vs. LCD technology over time. A sample of five LCD and two projectors enabled by DLP™ technology were set up for the tests. Measurement included:

- Luminance/brightness
- Full On/Full Off (FOFO) contrast
- ANSI contrast
- FOFO and ANSI contrast for red, green, and blue colors
- Color chromaticity for white, red, green, and blue

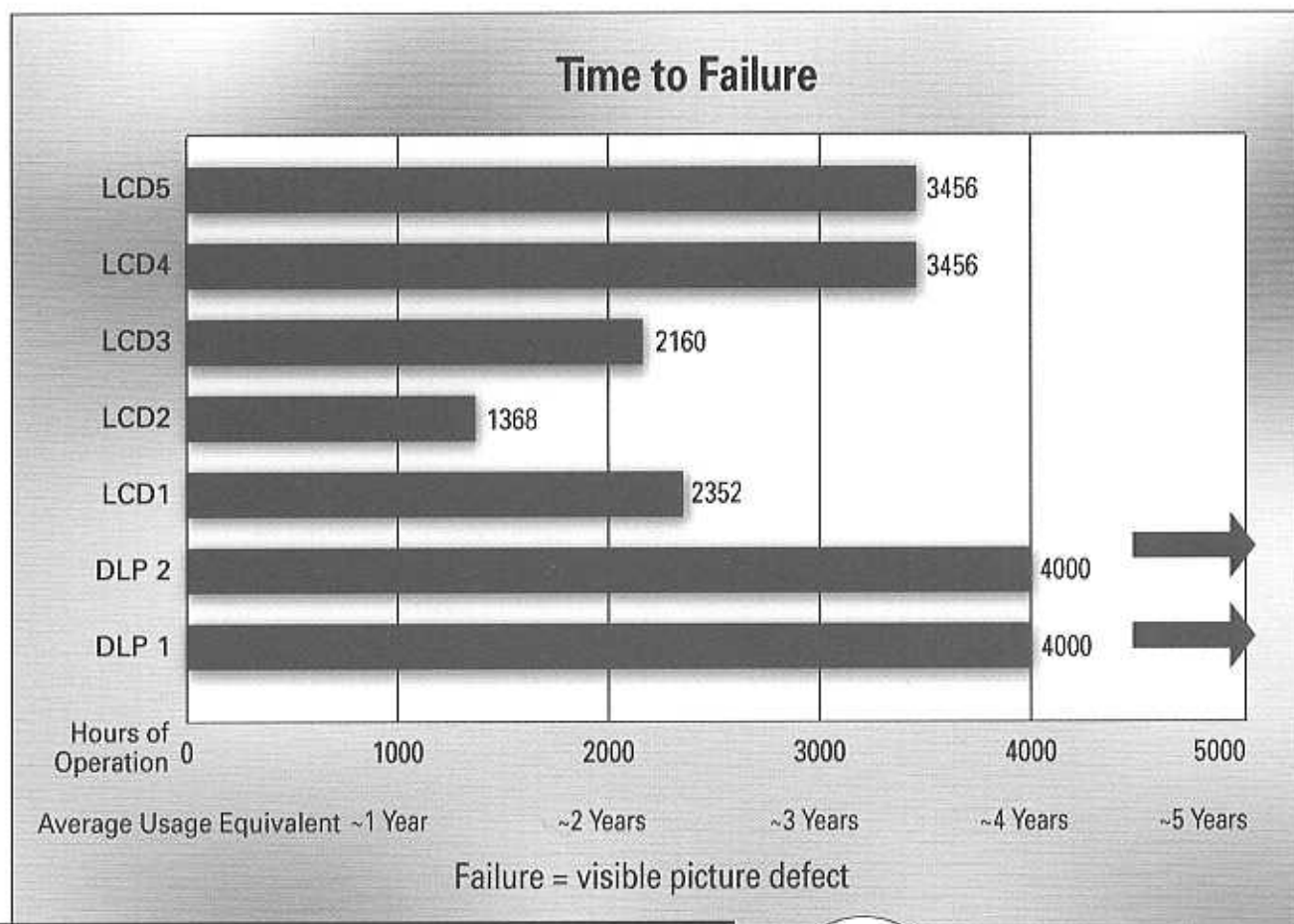
The results demonstrated that LCD projectors experience a degradation pattern over time, and that DLP™ system components are robust to long term light exposure. Specifically, the tests found that:

- There is a marked difference in picture reliability over time between LCD- and

DLP™ technology-enabled projectors

- DLP™ technology demonstrated picture reliability over the test period
- Image quality defects caused by optical degradation were highly visible for LCD
- Downward trends in optical performance were apparent for LCD on most of the parametric data
- Image degradation for LCD was permanent: not recoverable by lamp replacement

The bottom line: Projectors that degrade quickly must be replaced far sooner, and impair perceived quality of presentations. Projector lifetime cost of ownership is far lower for DLP™ technology-based projectors, providing customers a much better return on investment.



In the MCSL tests, DLP™-based projectors performed for over 4000 hours with no degradation, greatly out-performing LCD-based projectors

