

# X-Cite®

Fluorescence Illumination • In Control

## Why Switch from Lamp to LED?



### Stability

- No flicker
- No warm up time / delay
- Slower intensity degradation over time
- Better than 1% stability without active feedback control
- Better repeatability than arc lamps

### Power

- LED (X-Cite® XYLIS) now matches the optical output of a lamp!

### Lifetime

- >10,000 hours

### Phototoxicity

- Preliminary studies have shown that cells proliferate better and show less phototoxicity after imaging with a LED system vs. mercury lamp

### Electrical Consumption

- 69% less than mercury lamp
- LEDs do not run continuously and can be turned ON and OFF instantaneously

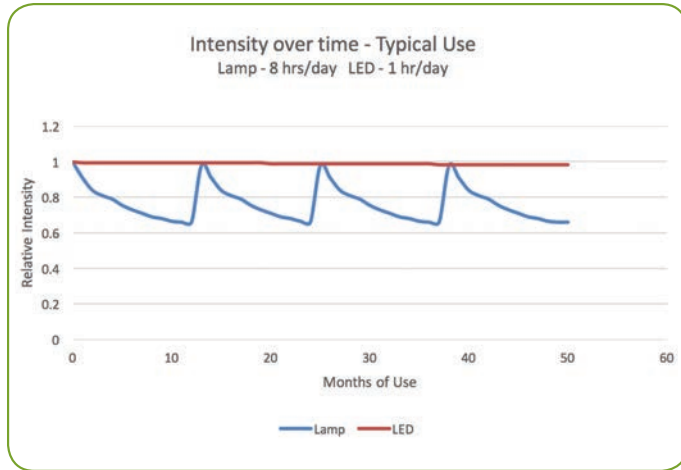
### Cost of Ownership

- Reduce operating costs by \$1700/year!
- Savings on replacement lamps, light guides, electricity

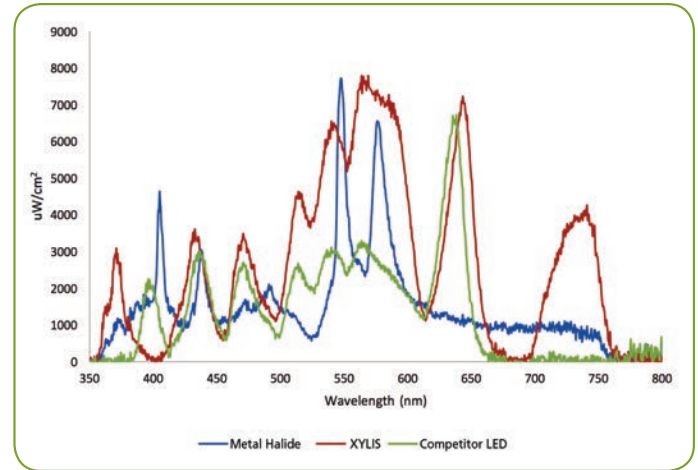
### Green

- Zero mercury
- Reduce energy consumption by 84%

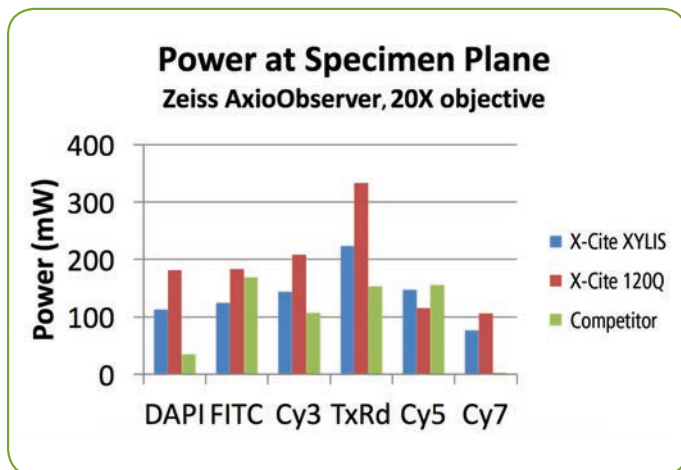
### Intensity Over Time - Typical Use



### Lamp, X-Cite XYLIS & Competitive LED Spectra Chart



### X-Cite XYLIS Compared with X-Cite 120Q and Competitor



### Cost of Ownership (per 20,000 hours of "ON time")

	HBO	X-Cite 120Q	X-Cite 120LEDmini	X-Cite XYLIS
Replacement Lamps	100	10	-	-
Mercury Content	1100 mg	200 mg	-	-
Lamp Costs	\$15,000	\$6,250	-	-
Replacement Light Guides	-	5	-	2
Light Guide Costs	-	\$1,975	-	\$790
Bulb Disposal (\$5/bulb) <sup>1</sup>	\$500	\$50	-	-
Maintenance Costs (bulb, \$20/hr) <sup>2</sup>	\$1,000	\$17	-	-
<b>TOTAL</b>	<b>\$16,500</b>	<b>\$8,292</b>	<b>\$0</b>	<b>\$790</b>
<b>Hourly Cost<sup>3</sup></b>	<b>\$0.82</b>	<b>\$0.41</b>	<b>\$0</b>	<b>\$0.04</b>
<b>Annual Cost<sup>4</sup></b>	<b>\$1,650</b>	<b>\$829</b>	<b>\$0</b>	<b>\$10</b>

**Notes:**

1. Mercury-Free Microscopy white paper [www.mygreenlab.org](http://www.mygreenlab.org).
2. Assumes 30 min to change/align HBO lamp, 5 min for X-Cite 120Q.
3. Assumes 8 hour day, 4x15 min. imaging sessions. Arc lamps left on for the day and LEDs on continuously during each session.
4. Assumes a 5 day week x 50 weeks.