

# Lighting Options

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## Light Source Comparison

Fiber LEDs	Optics
Light Smooth and (well diffused) Spaced  (spots typically visible)	Presentation continuous
White Cool or warm  (can vary with illuminator Cool white	Light white  lamp)
Color Yes, with Yes, choice	Options color wheels of LED color
Color Yes, with No	Changes color wheels
Installation Numerous fiber Numerous wire	cables run to light source pairs run to power source
Maintenance Illuminator None	lamp replacements
Heat None in fiber  significant from illuminators Minimal (within	Output (within letters)  letters)
Intensity Slow and typically  Corrects with lamp replacement Sooner and  Correction requires refurbishing	Drop imperceptible;  perceptible;

Component  
5 to 10 years  
2 to 3 years

Life\*

Initial  
Higher  
Lower

Cost

- In LEDs, this factor depends on the amount of use. Though LEDs are often marketed as having life spans of up to 100,000 hours, in reality this is overly optimistic, especially from generic imports. LEDs come in various qualities and configurations, and the systems that feed them impact their useful life as well. Whether they emit light for a long time is not really the issue. The real issue is their useful brightness as they age.

We are estimating figures for relative comparison only, excluding fiber illuminator lamps.