

# LUMEN: A Free Browser Studio for Perfect-Looping Animated Backgrounds

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**LUMEN: Generative Shader Art That Loops Forever**

A free browser studio for seamless animated backgrounds

- 9** WebGL2 art styles
- 4K** image, video, GIF export
- 0** dependencies, runs offline

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ToKnow.ai

Leon Lin built [LUMEN](#), a free generative shader studio that runs entirely in a browser tab, with no neural network involved: the visuals come from math, drawn in real time with [WebGL2](#), the browser’s hardware-accelerated graphics engine. There are 9 built-in styles, including liquid chrome, silk, halftone, data glyphs, and reeded glass, plus a synthesizer that mixes 12 “genes” to invent looks beyond that base set. Every animation is a mathematically perfect

loop, sampled around a closed circle so the last frame flows exactly into the first. You can export a still up to 4K, a WebM video, or a GIF, all rendered in the page.

You want a slick animated background for a site header, a video intro, or an album cover, and your options are paying for stock loops or wrestling with heavy desktop software. LUMEN makes one free, with no sign-up. Designs are deterministic, so the same seed always rebuilds the same image, and a [share code](#) starting with LMN1 recreates any design exactly. Its gradient-set button spits out 4 to 12 matching variations as a ZIP, enough for a whole website in one click.

What used to need desktop motion software and render time now lives in one static HTML file, and unlike AI image generators such as [Ideogram 4.0](#), it draws seamless motion from math rather than one-shot stills from a prompt. Browser-native tools, WebGL2 for drawing and [WebCodecs](#) for encoding video offline, do the whole job locally, with zero dependencies under an MIT license.

Sources:

- [LUMEN on GitHub](#)
- [LUMEN live studio](#)
- [LUMEN documentation](#)
- [LUMEN MIT license](#)
- [MDN: WebCodecs VideoEncoder](#)

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