

Elliptic Infinity Lamp

K. Stacey, E. Bliss, D. Morgan

keywords: elliptic infinity pattern, flat pack lamp, product design

Abstract

The pattern for this lamp is based on Robert Lang's "Elliptic Infinity" (<https://origamiusa.org/thefold/article/one-ellipse-rule-them-all>) which is an example of a developable surface with its ruling lines made explicit. One feature of a developable surface is that it can be unfolded to a flat sheet, which is a significant advantage as a design feature. The "Elliptic Infinity Lamp" is folded from a single sheet of electroluminescent panel (EL panel) that can be shipped flat and folded into form by the customer. Once secured along the seam, the sheet becomes a rigid form which can be lit up to provide light for the end user.

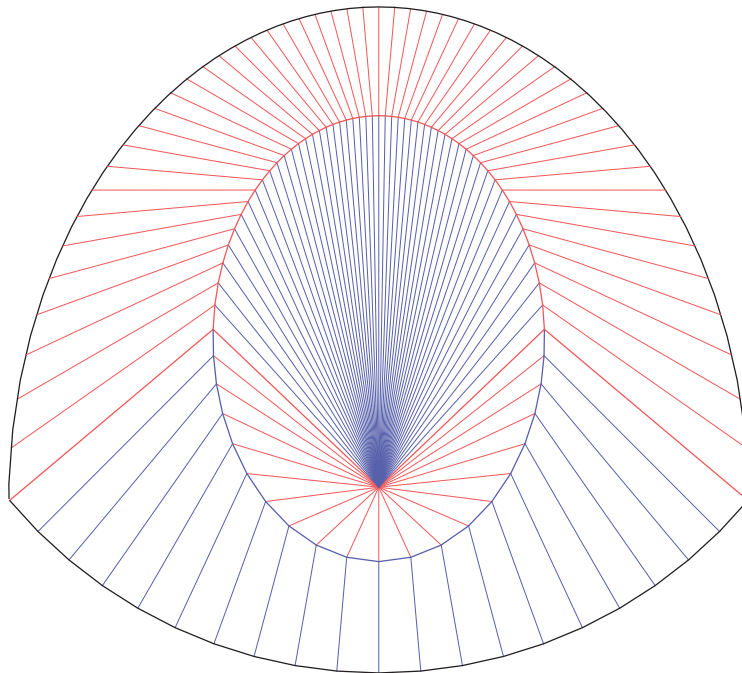


Figure 1: Elliptic Infinity crease pattern (Robert Lang).

We chose EL panel has for its ability to fold similarly to paper while emitting light from the entire surface. This technology is a break from traditional lighting, which usually emits light from a single source. An advantage of using an EL panel is converting folded forms into a product of utility without having to alter its form to accommodate traditional light hardware. Other flexible light sources (such as OLED) could be adapted to our design.

Our latest iteration is the culmination of considerable design exploration. Exploration that is continuing. In this version, the base of the lamp lights up, but some other surfaces lost conductivity across the sharpest folds. Our next versions will address this issue until we have an appropriately illuminated surface.

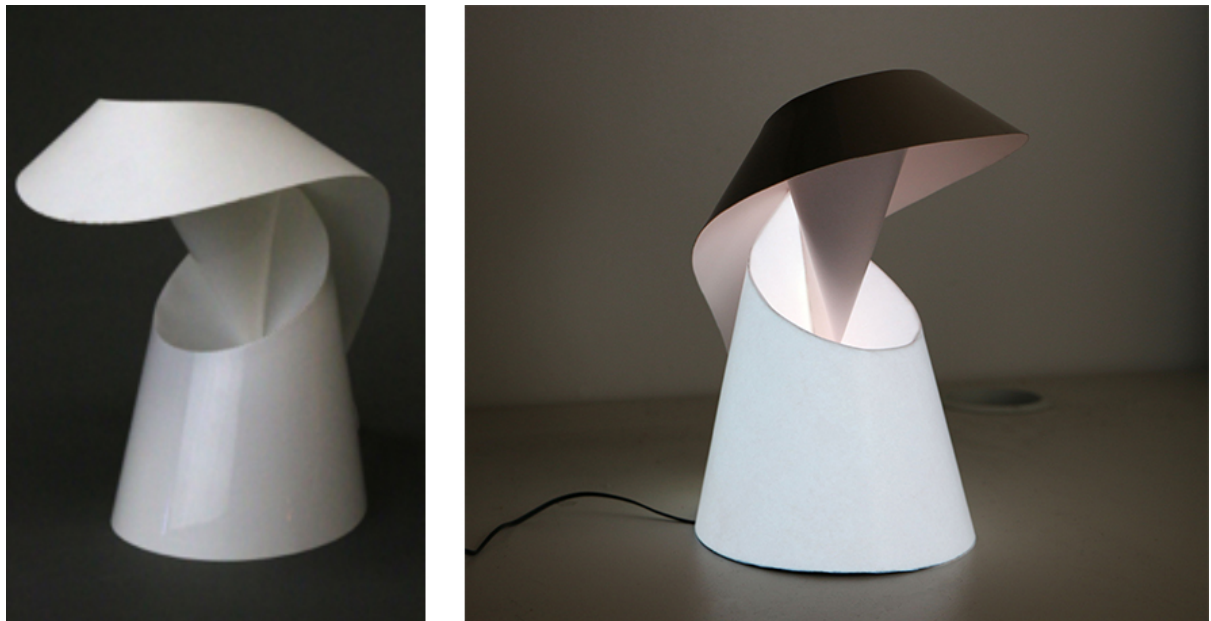


Figure 2: Elliptic Infinity lamp prototype