

40,000 LEDS LIGHT UP THE GLASS FAÇADE

State-of-the-artlighting technology illuminates the Ars Electronica Center's 5,100-m² glass shell. The special-effects lighting featuring 40,000 light-emitting diodes (LEDs) will use significantly less electricity and have a longer useful life than the background lighting with fluorescent bulbs that had originally been planned. The energy required to power it in normal nightly operation is a mere three to five kilowatts. In contrast to fluorescent bulbs, the LEDs operate at full output even at very low temperatures. The reduced energy costs as well as lower expenses for repairs and maintenance yield an estimated annual savings of €38,000.

The LED strips built into one side of 1,100 of the glass façade's panels are 20-120 centimeters long. A strip's cross-section is 30×45 millimeters; each is studded with 20-48 high-output LEDs. Of the 40,000 diodes, a quarter each are red, green, blue and white. Soldered onto printed circuit boards, the individual LEDs are a mere 2.4 x 4.5 millimeters at their base and 2 millimeters high. Mounted on each diode is a special 22 x 22-millimeter lens that casts the light onto the glass panels. Each of the 1,100 LED strips can be individually controlled by an electronic unit that makes it possible to fine-tune brightness and the color mix.

Saved to memory on the lighting system's master computer is a repertoire of patterns that can be applied to the Museum of the Future's façade at night. Special artistic effects and new patterns can be created from scratch on the computer. A unique feature of the technology being utilized in Linz is the possibility of producing a pure white. With it, the AEC can be transformed at the push of a button into a "white crystal."

This innovative façade illumination was planned and installed by Multivision, a Marchtrenk-based firm founded in 2002. Multivision also designed the façade lighting for Energie AG's Power Tower.