

# Display Evaluations Get Support From Seric's Solar-Like Lamps

Ikuo Sato  
Seric Ltd.

*Gauging the characteristics of displays poses some interesting challenges for manufacturers. Besides the fact that many operating conditions affect display quality, manufacturers also have to figure out how to approximate the many different settings in which their displays eventually will serve.*

Digital consumer electronics are undergoing remarkable advances in technology and performance, form, features and functions. Their progress has attracted strong notice in recent years. With the start of digital terrestrial broadcasts, new trends have taken hold, and sales have expanded rapidly for LCD and plasma display panel (PDP) TVs, as well as other flat-panel systems. Although Japan holds the lead in the production of fine-quality display panels, manufacturers in Korea and Taiwan are giving their Japanese counterparts some pretty stiff competition.

Now the factories in China show every sign of gearing up to become noteworthy contenders, too. As a result, price competition has become increasingly fierce. The entry of new display technologies including organic light-emitting diode (OLED) panels and field-emission displays (FEDs) is likely to provoke additional turbulence in this already competitive market.

Amid these trends, manufacturers consider it essential to achieve additional drops in the cost and power consumption of their panels, while also raising the image quality. Success in these areas will require careful evaluation of panel characteristics and performance.

Seric Ltd. manufactures and sells the Solax line of lamps. The company calls these "artificial solar illumination lamps," because they emit light that is extremely close to natural sunlight. The Solax lamps play an important role in the evaluation of flat-panel displays.

## Light and Its Uses

Solax lamps emit light that is almost the same as direct sunlight in midsummer. They achieve an average color-rendering index of 98. The light source has a color temperature of about 5,500K. Light direct-current light, the light from Solax lamps is flicker-free. The light exhibits nominal changes in characteristics over time. Additionally, the spectral distribution does not contain a strong brightline spectrum.

To make the most of these characteristics, Seric has put Solax lamps to work in diverse fields involving color, including color inspection of automobile paint, color inspection of color printing output, and color inspection of cosmetics. Recently many manufacturers of digital cameras have begun to use Solax lamps as standard light sources in studio lighting during the development of digital cameras.

Meanwhile, there has been growing demand for special, artificial solar equipment to serve as an alternative source of solar light energy. Areas requiring this kind of equipment include performance evaluation of solar batteries, and testing equipment for light resistance.

Seric offers two kinds of Solax lamps, the 100W series and the 500W series. By varying the optical filter and the reflection mirror, the company can adapt the lamps to specific purposes. For instance, users can select an optical filter that includes or excludes ultraviolet rays, or infrared rays. In this way, it is possible to obtain a light source whose wavelength characteristics correspond to different test purposes.

## Outdoor Displays

Different kinds, and especially different sizes of flat-panel displays generally operate in different settings and environments. Small and medium-sized displays generally serve in portable displays, which often must work out of doors. Flat-panel displays larger than about 30



A model from the 100W series of Solax lamps



A model in the 500W series of Solax lamps

