

# SunTronic Materials for Electroluminescent Lighting

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Color & Comfort



## Electroluminescent Applications

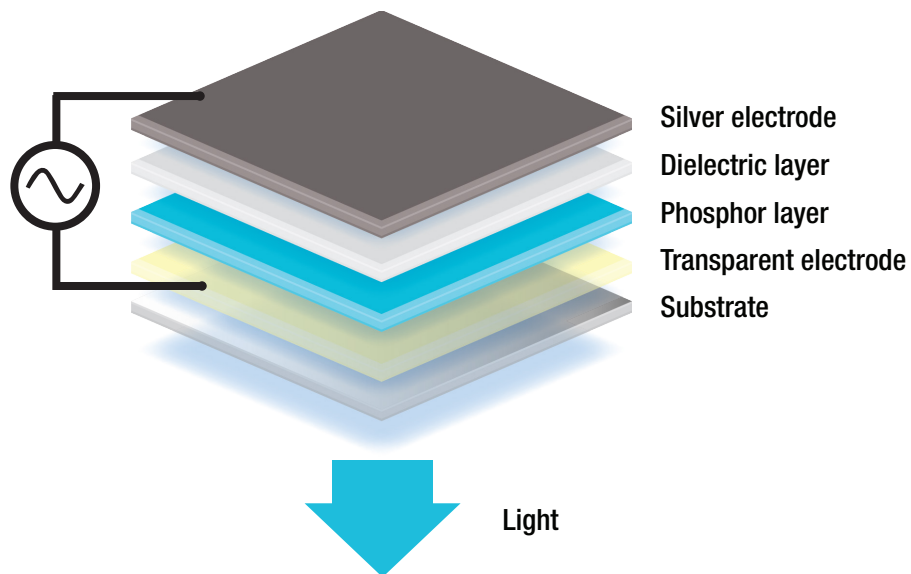
Electroluminescent lighting is popular in multiple applications and markets. SunTronic EL materials for screen printing enable production of thin, lightweight, and flexible lighting, which allows them to be mounted in numerous locations, even curved surfaces. Printed EL lamps feature low heat generation, low power consumption, long operating life and high resistance to impact and vibration, which makes them suitable for even the most demanding applications.

- Static or dynamic advertisement signs
- Interior accent lighting and decoration
- Control panel backlighting for Human Machine Interface (HMI) applications
- Emergency path lighting in aircrafts
- Wristwatches, remote controllers, toys, nightlights
- Illuminated clothing or accessories



## Typical Construction of an EL lamp

The EL lamp is a parallel-plate 'lossy capacitor'. The EL phosphor is embedded in the construction comprising dielectric and two parallel electrode plates. Application of AC power to the conductive plates induces electric field and excitation of the phosphor layer. This causes the phosphor layer to emit light. The EL lamp is constructed from various layers of screen-printed Polymer Thick Film ink compositions as shown below.



Contact your local Sun Chemical representative for EL Application guidelines to learn more about EL principles, lamp construction options and design and processing conditions.

## SunTronic EL Product Selector

Products are designed as thermally curable pastes for screen printing, providing excellent flexibility, reliability and adhesion to ITO or other transparent electrodes used in EL lighting. Alternative options for either dielectrics or silver pastes can be found in the SunTronic Printed Electronics materials brochure.

Paste Type	Product Code	Color	Features
Phosphor Pastes	C2180627D3	Green	Contains thermoplastic high dielectric constant polymer binder system, which offers excellent luminescent performance and environmental reliability. Blue/green phosphor is the brightest among our offerings.
	C2180711D1	Blue	
	C2180704D2	Blue/Green	
	C2070126P4	Orange	Thermally cross-linking thermoset paste, high brightness orange phosphor.
	C2101125P4	White	Thermally cross-linking thermoset paste, brightest white offering in 'ON' state, pale orange appearance in 'OFF' state.
	C2180612D1	White	Neutral white appearance when 'OFF', suitable for backlighting applications that are also intended for viewing under ambient light.
Phosphor Binder	R2181106D1	Clear	Thermally cross-linking blending base for custom phosphors.
Dielectrics	D2070209P6	White	High dielectric constant robust cross-linking dielectric designed for higher voltage applications.
	D2090130P5	Pink	Used in combination with blue-green phosphor to produce a white 'ON' light luminescence.
	D2180423D3	White	Flexible thermoplastic dielectric, designed for up to 120V application designs.
Conductive Silver	C2180423D2	Silver	Used for back contact electrode and bus bars.
Conductive Polymer	C2100629D1	Transparent	Conductive polymer paste for transparent electrode layer. (Not available in the USA)



# Experience. *Transformation.*

## A partner who transforms with you.

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