

ORMECON[®] EL Inorganic Electroluminescence

ORMECON® Electroluminescence (EL)

The next pages will give you a general overview about Inorganic Electroluminescence and provide an overview ORMECON EL processes.

Preliminary Information:

Electroluminescence (EL) is not to be confused with OLED: In EL , doped ZnS is phosphorescing due to high frequency of alternating bias,

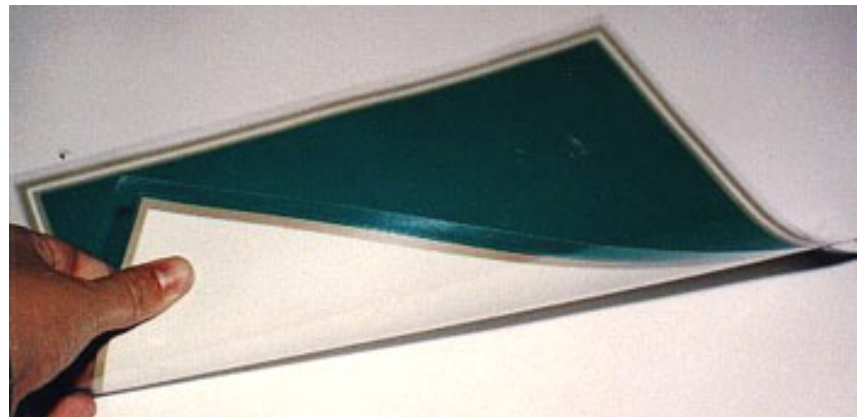
In OLED organic semiconductors are emitting light due to DC current; EL is based on AC bias; almost no current consumption; OLED is based on DC current.

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Definition of Inorganic Electroluminescence (EL):
Conversion of electrical potential fluctuation into light
without heating

EL - displays are:

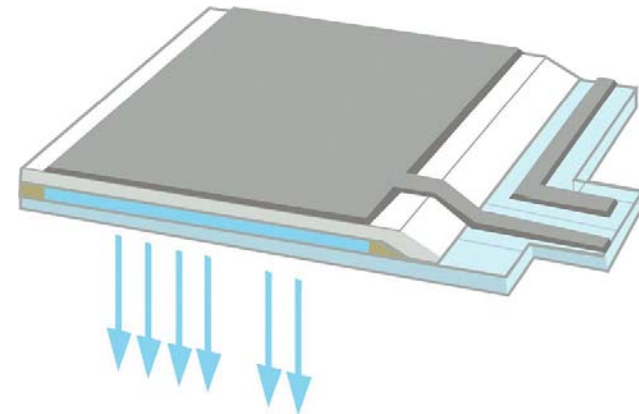
- thin
- flexible
- bright
- effective
- maintenance-free
- shock-proof
- vibration-resistant



Such basic features make an EL - display to an appealing Marketing Communication tool!

ORMECON[®] Electroluminescence (EL)

Interior lightings, backlights and advertising displays have to meet modern requirements. They should be flexible, easily exchangeable, flat, cost efficient and energy saving. Novel, screen printed displays are now able to meet all these demands. Special encapsulated zinc sulfide pigments are excited with AC voltage and therefore emit light. The electric power consumption is minimal, because no energy is wasted in generating heat – electroluminescence is a “cold” light.



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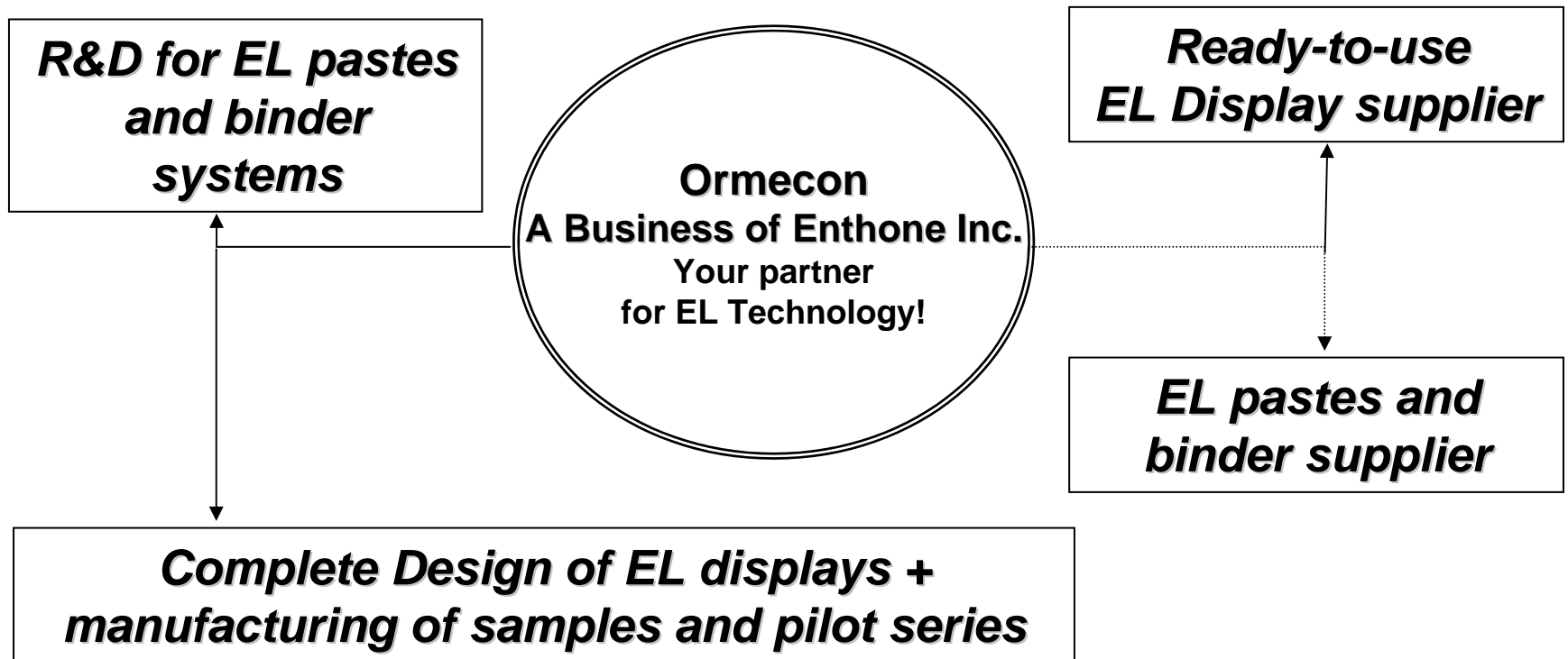
Introduction

The field of Electroluminescence has been invented in the 1930's, but has not achieved any commercial relevance until the mid 1990's. Today EL lamps are widely used for backlight applications



ORMECON® Electroluminescence (EL)

What is Our Role?



ORMECON[®] Electroluminescence (EL)

ORMECON screen printing equipment

Our screen printing equipment is especially aligned to EL applications, which enables us to offer the whole range of EL products in pilot scale and small series



ORMECON® Electroluminescence (EL)

Ready-to-use EL Display supplier

We offer ready-to-use EL Display systems (display and electronic equipment, inverter) with any required animation



ORMECON® Electroluminescence (EL)

EL pastes and binder system supplier

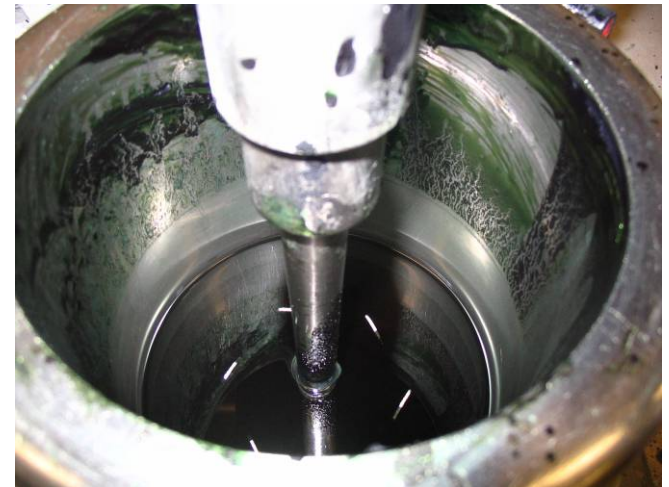
We supply a full range of screen printing pastes, as well as an optimal binder system for manufacturing EL displays



ORMECON® Electroluminescence (EL)

R&D for EL paste systems

We offer professional development support for optimizing the individual pastes and development service for paste combinations. Furthermore we offer our know-how in screen printing technology, the finishing of EL displays and electronic equipments



ORMECON® Electroluminescence (EL)

Why should we be your partner?

Key Advantages of our ORMECON EL paste system:

- 1) all pastes are based upon the same binder system which ensures a compatible, compact, self contained setup – water free → optimal wetting and drying
- 2) the Organic Nanometal in the Ag back electrode stops the silver migration. This leads to a longer life time and to higher brightness

Customer specific requirements of the individual pastes can be adjusted at the customer's location. Our challenge is to keep you free from customizing paste composition!