



POLICE

Self-illuminating safety wear - no external light source required!

For many years now the Emergency Services industry has relied on traditional fluorescent materials to provide safety clothing which can be clearly seen at night when illuminated by car headlights or other external light sources BUT which is totally ineffective in non-light environments - e.g. at night, in fog, in tunnels, or at fire sites.

ELumiSafe is different. Using ElectroLuminescent (EL) material which can be illuminated from within, ELumiSafe badging means that you never have to rely on external light sources to ensure the safety of your personnel.



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What is ElectroLuminescent material?

ELumiSafe products are designed incorporating ElectroLuminescent (EL) material which is used in many different environments, most predominantly in the automobile and mobile phone industries. ElectroLuminescent light is known as a cool light and is generated by exciting electrons in a phosphor (in a similar way to how a television works) which will then emit light. The main benefits of ElectroLuminescent material are its low emissions, its ability to penetrate most conditions and its low power requirement.

Why use ELumiSafe badging?

Personnel safety is paramount, especially when working in hazardous areas such as by the roadside in adverse weather conditions. By incorporating EL material into safety wear, ELumiSafe badging provides a massive advantage over traditional fluorescent materials as they enable the wearer to be seen at all times wherever they are. EL light can penetrate fog more easily than a traditional incandescent light source and will light an area with a soft glow. It is a low power, low intensity but very penetrating light source which can be seen over great distances, making it ideal for use in dark and dangerous environments.

ELumiSafe

How do they work?

These patented ElectroLuminescent badges are integrated into standard safety wear items. They use a light dependent resistor (LDR) which switches the panel on as the ambient light level falls and a unique method of printing phosphor material onto flexible plastics. The panel contains a flexible battery which is rechargeable and biodegradable plus a control circuit, all encapsulated into a thin flexible envelope.

The ELumiSafe badging is completely self contained and can be recharged using a mains adapter in the same way as a mobile phone is charged, whereas other designs of EL panel contain primary cells. These are non-rechargeable and usually located away from the lit area in a bulky pack, which is then hard wired and can be very uncomfortable for the wearer.

ELumiSafe batteries have up to 70 hours of life in total from one charge, but by using the LDR unit, they will only be switched on for limited amounts of time where the environment is not lit. Therefore the battery could be operational for up to 30 days before recharge is necessary, based on an average requirement of two hours usage per day. These rechargeable batteries are of a relatively new design, but the base chemical technology which is used has been in existence for some 30 years. This gives them the advantage of having a tried and tested design along with new and improved techniques of production, using modern materials.



A unique product

ELumiSafe designers have developed a product that is set to become a market leader because it incorporates all of the characteristics of today's products and then adds the flexibility of powered ElectroLuminescence. Other types of EL panel light the whole area of the badge and then mask designs over the top - wasting light, draining power sources faster and subsequently needing external power supplies. The phosphor on the ELumiSafe badging is only laid where the lit characters or designs are required, saving overall power and enabling a much longer operating life. The unlit area of the badge can also be printed with any designs and any colour requirements, including the use of standard reflective material.

For further information or to place an order please contact us using the following details:

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KEY PRODUCT BENEFITS

- **Patented ElectroLuminescent badging system**
- **Uses Light Dependent Resistor (LDR) technology**
- **Unique phosphor printing**
- **Lower power consumption**
- **Up to 30 days battery life***
- **Rechargeable battery source**
- **Ideal for dark environments and foggy conditions**
- **Conforms to EN471 Standard**

* based on 2 hours EL requirement per day

PRODUCT OPTIONS

- **Standard Badging - for breast pocket, back, headgear etc.**
- **EL Bands - for wrist, arm etc.**
- **EL Braiding**
- **Shoulder Badging - for rank identification**
- **Safety Equipment - for signage, traffic cones etc.**



ELumiSafe is patented worldwide for applications in Health and Safety.
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Worldwide Patent Number: PCT. WO 02/101698