

EVS – Enhanced Visibility System

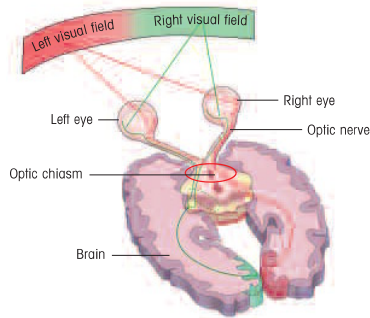


A groundbreaking innovation in LED technology opens up a completely new dimension in optical signalling. Enhanced Visibility System, or the electronic improvement of visibility, for EVS short, is the name WERMA has given to this latest development which promises to bring about a revolution in signal technology.

EVS – ATTENTION-GRABBING LIGHT EFFECT ON NEUROBIOLOGICAL BASIS

Visual Pathways

The way in which the brain processes visual stimuli formed the basis for the development of the new EVS technology



The flickering of neon lamps and comparable lighting effects are highly effective at attracting our attention. The neurobiological basis of this phenomenon is explained by a university scientist as follows: Light signals are processed in the human brain, not directly in the eye. In order to be consciously registered there, incoming stimuli first have to pass through a form of filter. This filter has a "protective function". During sleep it reduces disturbing stimuli to a minimum and assists in "overlooking" regular or continuous signals.

Irregular light impulses can circumvent the brain's filter function. Random light signals fail to generate an acclimatisation effect and the brain is unable to escape the stimulus, even when the flickering continues for an extended period

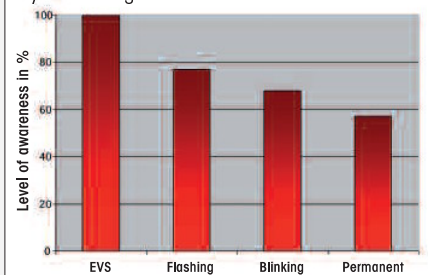
EVS – FLICKERING LIGHT WITHOUT ACCLIMATISATION EFFECT

On the basis of this understanding, WERMA's R+D department set out to find a flickering light with a high degree of effectivity in attracting attention. In a multi-stage laboratory experiment 20 test candidates were asked to judge a series of different light signals and to determine the most eye-catching light. The result of the study was a stochastic flickering light with optimal attention-grabbing characteristics: EVS – Enhanced Visibility System! The light effect of this system is completely new and distinguishes it from all previous systems.

As a result of the extremely powerful signal effect, the EVS light is especially suited to signalling acute or highly important conditions. The EVS element can also be deployed in hazardous situations or in areas where immediate action is required.

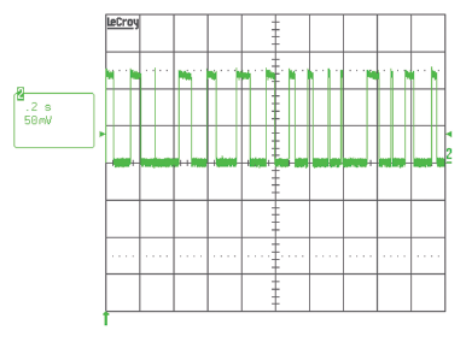
Laboratory Test Results

Level of awareness generated by different light effects



EVS – UNIQUE LIGHT EFFECT VIA LED TECHNOLOGY

Typical 2 second section of an EVS-LED element's illumination sequence



For the EVS system WERMA employs light emitting diodes. A micro-processor generates random light signals. This gives the light a very "agitated" character which proves highly effective in drawing the attention of those in its vicinity – even when seen out of the corner of the eye.

Up to now LED signal devices have confined themselves to imitating the light effects of light bulbs or Xenon flashes, EVS however utilises the strengths of light emitting diodes. LEDs are capable of generating the required high flickering frequency with ease, frequencies which Xenon flashes for example are incapable of generating.

There are a series of additional, classical advantage to LEDs – their resistance to vibration and shocks, their long life duration as well as their low energy consumption.

640/840

EVS* LED Element for KombiSIGN 70 + 71



Integrated into the KombiSIGN Signal Towers, the new EVS LED Element generates a highly attention-grabbing signal

- Attention-grabbing flickering light
- Developed on a neurobiological basis
- Extremely powerful signal effect
- Random sequence of light signals prevents acclimatisation effect
- For signalling extremely hazardous situations and the need for immediate action

| i TECHNICAL SPECIFICATIONS: | |
|------------------------------------|--|
| Dimensions (Ø x Height): | 70 mm x 65 mm |
| Dome: | PC, transparent |
| Number of modules possible: | 5 / 10 elements with 2-sided bracket |
| Starting consumption: | < 500 mA at 24 V |
| Current consumption: | red / yellow: 200 mA green / blue / clear: 150 mA |

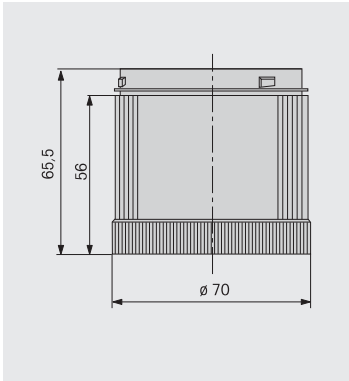
Life duration up to 50,000 hrs

| ORDER SPECIFICATIONS: | |
|-----------------------|-------------------|
| KombiSIGN 70 | 24 V= |
| red | 843 140 55 |
| green | 843 240 55 |
| yellow | 843 340 55 |
| clear | 843 440 55 |
| blue | 843 540 55 |
| KombiSIGN 71 | 24 V= |
| red | 644 140 55 |
| green | 644 240 55 |
| yellow | 644 340 55 |
| clear | 644 440 55 |
| blue | 644 540 55 |

Available from 3rd Quarter 2008.

Further optical and audible elements, as well as terminal elements and a comprehensive range of accessories for the KombiSIGN 70 and 71 signal towers can be found in the WERMA Catalogue and under www.werma.com.

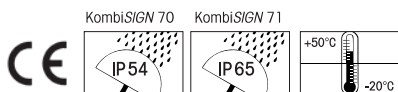
* EVS = Enhanced Visibility System



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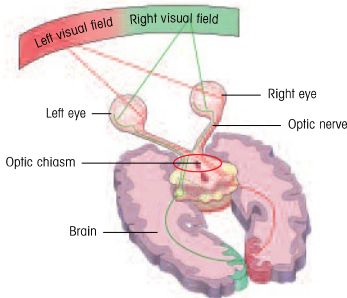


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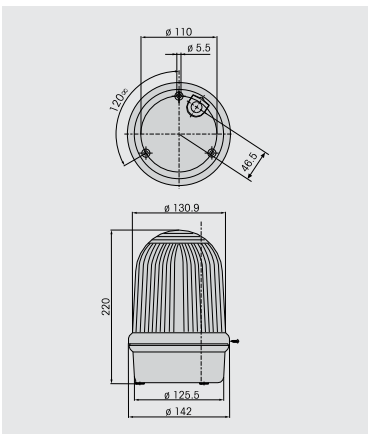




Plastic bracket (accessory)



The way in which the brain processes visual stimuli formed the basis for the development of the EVS technology



- Attention-grabbing flickering light
- Developed on a neurobiological basis
- Extremely powerful signal effect
- Random sequence of light signals prevents acclimatisation effect
- For signalling extremely hazardous situations and the need for immediate action

i TECHNICAL SPECIFICATIONS:

Life duration up to 50,000 hrs

| | |
|---------------------------------|--|
| Dimensions (Diameter x Height): | 142 mm x 220 mm |
| Housing: | PC/ABS-Blend |
| Dome: | PC, transparent |
| Fixing: | Base Mounting, Bracket Mounting (accessory), Tube Mounting (accessory) |
| Connection: | Screwable conn. with wire protection max. 2.5 mm ² Contact protection according to VDE |
| Cable entry: | Cable diameter 5 - 7 mm |
| Life duration: | up to 50,000 hrs |
| Duty cycle: | 100 % ED |

ORDER SPECIFICATIONS:

| | | |
|---------------------|-------------------|-------------------|
| Voltage | 24 V= | 115-230 V~ |
| Current consumption | < 500 mA | < 150 mA |
| red | 280 160 55 | 280 160 60 |
| yellow | 280 360 55 | 280 360 60 |
| clear | 280 460 55 | 280 460 60 |

Available: 3rd quarter 2009.

ACCESSORIES:

| | |
|---------------------------------------|-------------------|
| Plastic bracket for Wall Mounting | 975 883 06 |
| Flange for Tube Mounting max. 25.3 mm | 975 883 02 |
| Wire guard | 975 883 08 |

(See page 8)

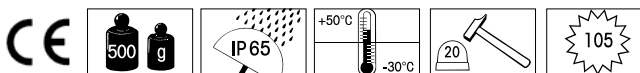
! ADDITIONAL INFORMATION:

EVS – Attention-grabbing light effect on neurobiological basis

WERMA has developed a stochastic, random flickering light on a neurobiological basis: EVS, Enhanced Visibility System. This generates an optimal attention level never reached by previous signal devices.

For the EVS system WERMA employs light emitting diodes. A microprocessor generates random light signals. This gives the light a very "agitated" character which proves highly effective in drawing the attention of those in its vicinity – even when seen out of the corner of the eye. LEDs are capable of generating the required high flickering frequency with ease, frequencies which Xenon flashes for example are incapable of generating.

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