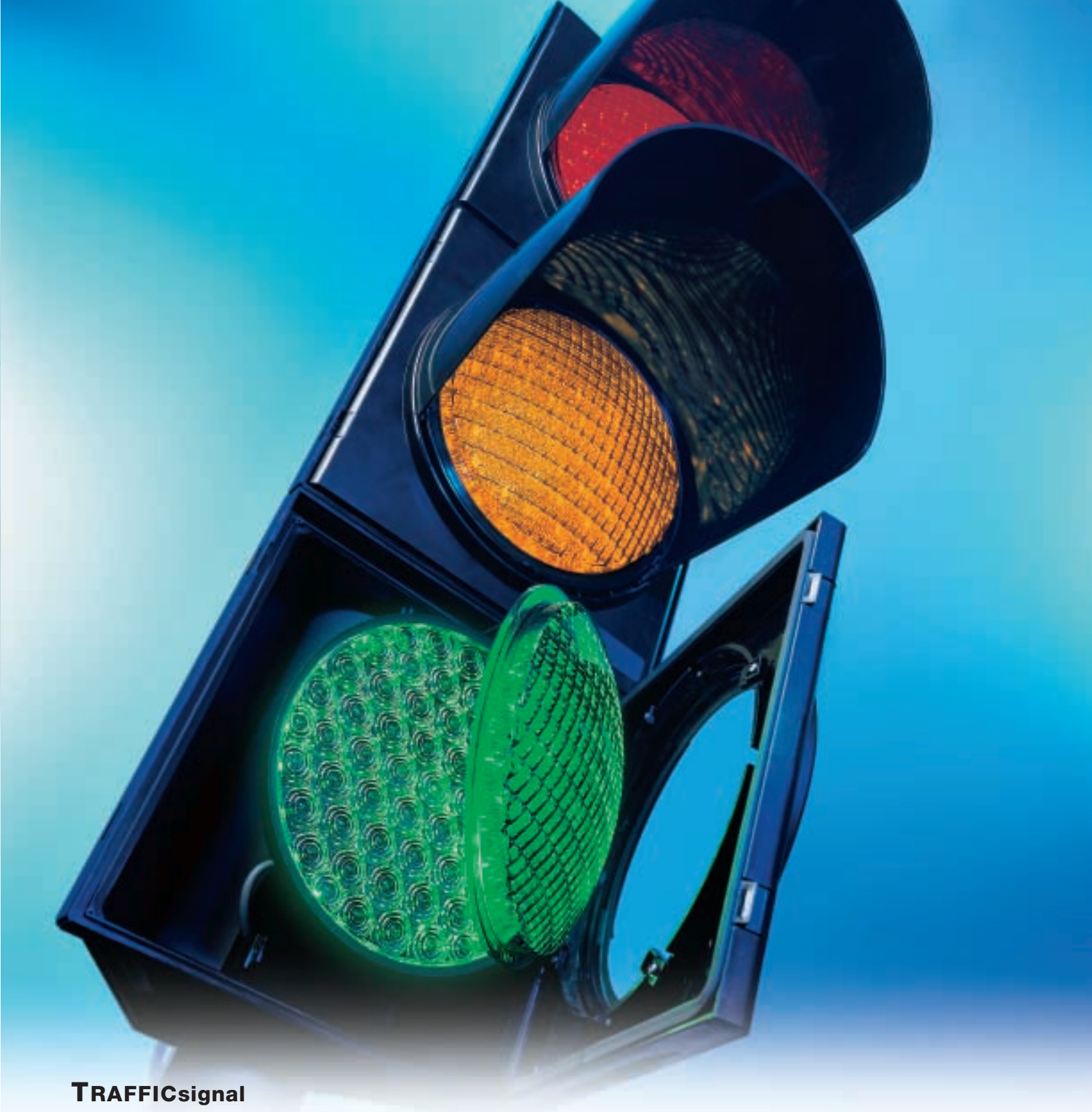


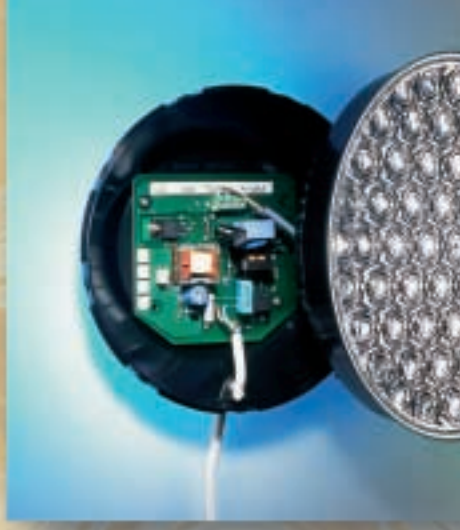
TRAFFICsignal

GREEN LIGHT FOR NEW LED SIGNALS

Opto Semiconductors

OSRAM

SIGN OF THE TIMES – TRAFFICsignal



MATCHING ALL STANDARDS – AND SETTING NEW ONES

- TRAFFICsignal replaces the incandescent lamp, reflector, lamp socket and front disk of conventional traffic lights.
- TRAFFICsignal is modular, consisting of the LED light source, an advanced optical system and the electric driving unit.
- TRAFFICsignal comes with or without the driving unit so that the customer can configure to his special needs.

HIGHLIGHTS OF TRAFFICsignal

The light source

- This is based on the proven OSRAM Power TOPLED® in reliable surface-mount technology plus high-brightness semiconductor technology.

→ **User benefit:**
high luminous efficiency

The optical system

- The innovative optical design consists of the LED, the primary and secondary optics plus a colored front lens.

→ **User benefit:**
the single LED are not discernible, and the front lens illuminates uniformly

- The advanced optical system was designed for maximum suppression of phantom light.

→ **User benefit:**
enhanced traffic safety

- The front lens ensures that light is properly distributed.

→ **User benefit:**
no light is lost or scattered in an unspecified direction

NO PHANTOM LIGHT FROM OSRAM Opto

Phantom light is produced in LED-based traffic signals by the reflection of incident light, e.g. on the inner and outer surface of the front disk and secondary optics, on each LED and the circuit board.
The innovative optical system of TRAFFICsignal offers maximum suppression of phantom light. A colored front lens matched to the LED's wavelength also

The overall concept

- TRAFFICsignal is designed to generate minimum heat. The LED light source and the driving unit are spatially and thermally separated.

→ **User benefit:**
greater light output through optimized thermal features

- TRAFFICsignal LED modules are easily fitted into all standard signal housings. The colored front lens can be installed separately from the LED retrofit. In most cases, existing symbol masks can be kept. Installation support is available on request for all types of signal housing.

→ **User benefit:**
compatible with nearly all standard signal housings and symbol masks

WITH TRAFFICsignal Semiconductors

keeps signal colors within the required region in every situation, making sure they cannot drift through an admixture of white phantom light. In this way TRAFFICsignal boasts the highest phantom light suppression (class 5 of EN 12 368).

→ **User benefit:**
reduced accident risk

Economical, reliable, safe – LED for traffic signaling

Technology advantages

Modern light-emitting diodes are based on semiconductor compounds that convert electric current straight into light. LED are already in use for traffic signals. They show major benefits compared to conventional light sources:

LED come in all colors
There is no need for extras like filters and prisms to generate light with the required color properties.

High color efficiency
The typical color efficiency of a red or yellow high-brightness LED is between 25 and 30 lm/W.

Exceptional service life
The typical lifetime of a colored LED is up to 100,000 hours, depending on operating current and ambient temperature.

Miniaturized dimensions
Modern LED are just a few millimeters in size. The smallest are even less than a millimeter, in length, width and height.

High resistance to shock and vibration
LED have no sensitive, fragile filament.

Extremely low early failure rate

User benefits

Configuring traffic signals with innovative LED technology offers substantial benefits:

Impressive economic efficiency
- **through lower energy needs**
  The typical power consumption of LED-based traffic signals is only 10 to 15 W.
- **through reduced maintenance costs and high availability**
  The extremely low early failure rate and the exceptionally long service life of LED mean there is seldom need to replace the light source.

Enhanced safety
- through rare early failures
- through a light source based on a large number of single LED
- through long LED lifetime

Technical data

Type red / yellow / green	OS-TR20E-A OS-TR20E-Y OS-TR20E-V	OS-TR23E-A OS-TR23E-Y OS-TR23E-V
Configuration	signal with driving unit	signal without driving unit
Diameter	210 mm	210 mm
Optical data	acc. to EN 12 368; type W, class A2/1	
Luminous intensity in reference axis	>200 cd	>200 cd
Phantom light	acc. to EN 12 368, class 5	acc. to EN 12 368, class 5
Operating voltage	230 V AC @50 Hz	type 13 V DC (red, yellow) type 15 V DC (green)
Power consumption (typical)	12 W (red, yellow) 16 W (green)	7 W (red, yellow) 12 W (green)
EMC and electrical requirements	acc. to EN 12 368	
Teperature range	–40°C to +74°C	–40°C to +74°C
IP class	IP65	IP65
Impact resistance	acc. to EN 12 368, class IR3	acc. to EN 12 368, class IR3

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