

# DBS 4000

Winner of the *reddot design award*, the DBS 4000 warning system combines modern design, a versatile range of functions and powerful LED lighting technology. A highly effective warning effect attracts the attention of road users and ensures additional safety when in operation. Thanks to the wide range of functions to choose from, the DBS 4000 can be adapted to suit any application.



**reddot** design award  
winner 2013

## Customisable:

- fitted using a modular system
- easily adaptable to individual needs

## Aerodynamic housing

- low wind resistance and reduced noise levels

## Variety of mounting options

- fast and easy mounting options for flat or curved vehicle roofs
- vehicle-specific carrier systems offer additional mounting options

## Maximum warning effect

- state-of-the-art lighting technology
- automatic day/night switching

## Easy operation

- analogue or digital control using the CANBus protocol, based on the CAN open Standard 447 or FireCAN

## Variety of lengths

- lengths: 1100, 1200, 1400, 1600, 1800 or 2000 mm
- divided version: 2x 430 mm (24V)

# DBS 4000



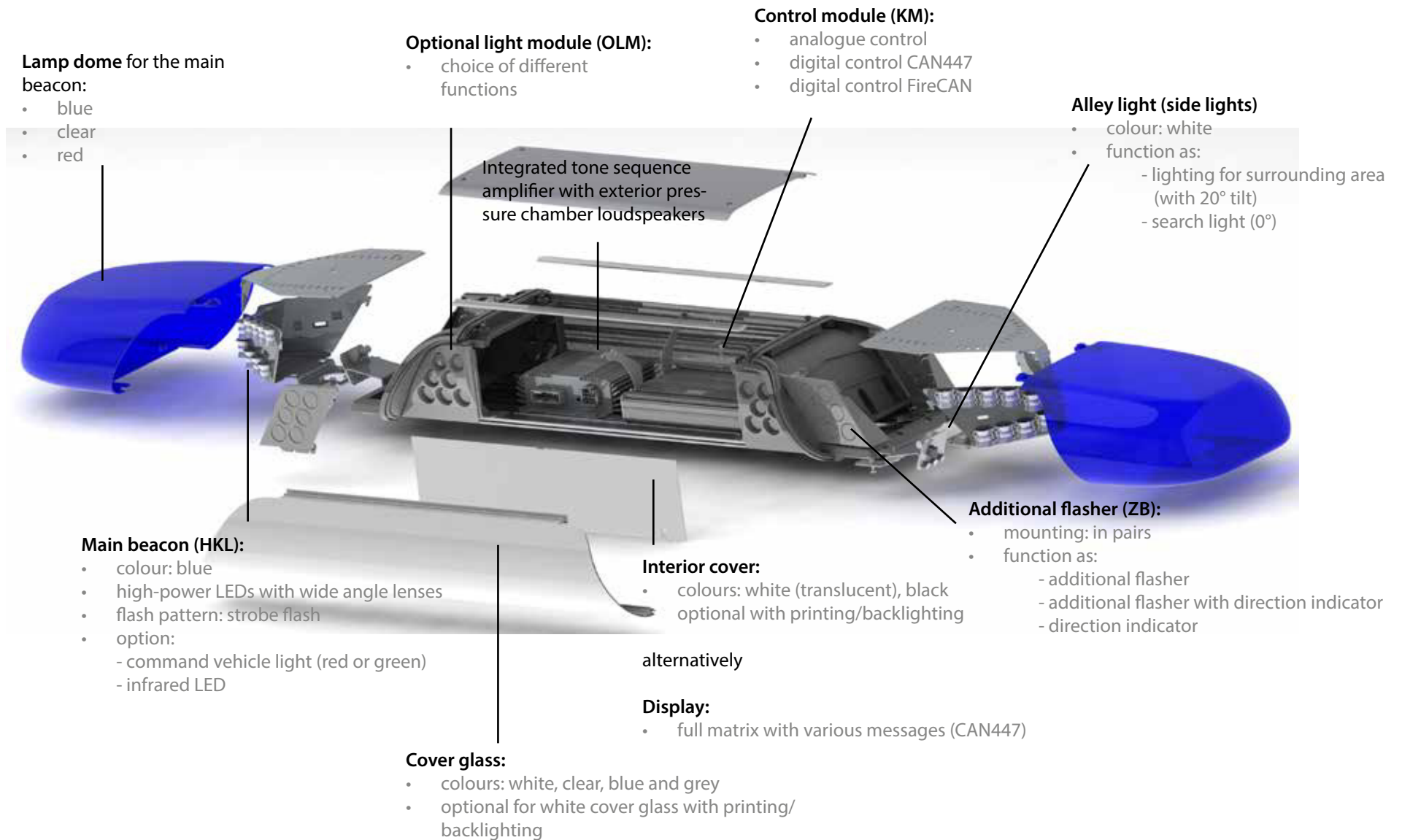
## RANGE OF FUNCTIONS AVAILABLE

- infrared LED (helicopter recognition)
- traffic advisor (special approval required)
- convoy function (control required)
- command vehicle light (red or green)
- integrated compressor system
- direction indicator (turning light)
- working light
- alley lights: 0° or 20° tilt
- additional flashers
- rear warning system
- power flash
- take down flash
- undercarriage loudspeaker to support public address
- tone sequence system (TFA 614/624)
- cover glass printing
- full matrix display
- day/night switching (automatic)
- tube adapter in the top possible
- also available with clear lamp dome

Also available with examination in accordance with ICAO type C.  
Further information can be found on page 94.

### Technical data:

Designation:	DBS 4000
Voltage:	12 V / 24 V
Flash frequency:	> 2 Hz (beacon)
Average power consumption:	from 4 A (at 12 V)
Lengths:	1100, 1200, 1400, 1600, 1800, 2000 mm divided: 2x 430 mm (24V)
Depth:	300 mm
Height:	135 mm
Weight:	from 9 kg
Material:	lamp dome: PC / cover glass: PMMA / housing: aluminium
Type of protection:	IP5K4K / IPX9K
<b>Homologation: (Germany and international)</b>	
Light according to ECE-R 65:	TB2 (E1) 00 3111
EMC according to ECE-R 10:	(E1) 10R-05 6209
Take down flash: light according to TA 13b:	~ K 1020
Direction indicator: light according to ECE-R 6	01 2a (E1) 3800 (rear) / 1 01 (E1) 3822 (front)
Power flash: light according to TA 13a:	~ K 809
RWS: light according to TA 20:	~ K 810



# DBS 4000

## Basic lightbar

### Possible lengths

1100, 1200, 1400, 1600, 1800 and 2000 mm/divided: 2x 430 mm (24V)

### Main beacon (HKL)

#### Function

Main beacon (blue)	<ul style="list-style-type: none"> <li>high-power LEDs with wide angle lenses</li> <li>class 2 homologation with automatic and manual day/night switching</li> <li>integrated function monitoring</li> <li>flash pattern: strobe flash</li> <li>optional: signal light: command vehicle light red or green, fourfold, on the main beacons (flashing)</li> <li>optional: helicopter recognition, fourfold, infrared rotating, for night vision devices</li> <li>also available with clear lamp dome</li> </ul>
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### Control module (KM)

#### Function

Analogue control	<ul style="list-style-type: none"> <li>for alarm pull-twist switch, individual switch and various common analogue control units (e.g. BE 200 or BE 600)</li> </ul>
Digital control	<ul style="list-style-type: none"> <li>serial control by 2-wire cable for CAN447 control units (e.g. BE 300, HBE 300)</li> <li>compatibility of other control units on request</li> </ul>
FireCAN	<ul style="list-style-type: none"> <li>serial control for FireCAN control units</li> </ul>

### Function

Rubber mouldings	<ul style="list-style-type: none"> <li>for flat or curved vehicle roofs</li> </ul>
Mounting brackets	<ul style="list-style-type: none"> <li>universal and various vehicle-specific models available</li> </ul>
Flat sealing	<ul style="list-style-type: none"> <li>for flat vehicle roofs</li> </ul>



### Electrical connection

#### Function

Cable outlet	<ul style="list-style-type: none"> <li>cable outlet, passenger side: standard</li> <li>cable outlet, driver side</li> <li>separate cable outlet (power supply and signal line are laid separately)</li> </ul>
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## Options

Acoustics	
Function	
TFA 614	<ul style="list-style-type: none"> <li>integrated tone sequence amplifier with one external pressure chamber loudspeaker DKL 604 or DKL 804</li> </ul>
TFA 624	<ul style="list-style-type: none"> <li>integrated tone sequence amplifier with two external pressure chamber loudspeakers DKL 604 or DKL 804</li> </ul>
Undercarriage loudspeaker (UKL)	<ul style="list-style-type: none"> <li>undercarriage loudspeaker to the rear and/or to the front for the support of public address</li> <li>with integrated or exterior amplifier (combination with TFA 624 only in CAN447)</li> </ul>
Martin compressor system	<ul style="list-style-type: none"> <li>integrated or external Martin compressor with 4 diaphragm acoustic horn, mounted on the lightbar. Additional information on page 56.</li> </ul>

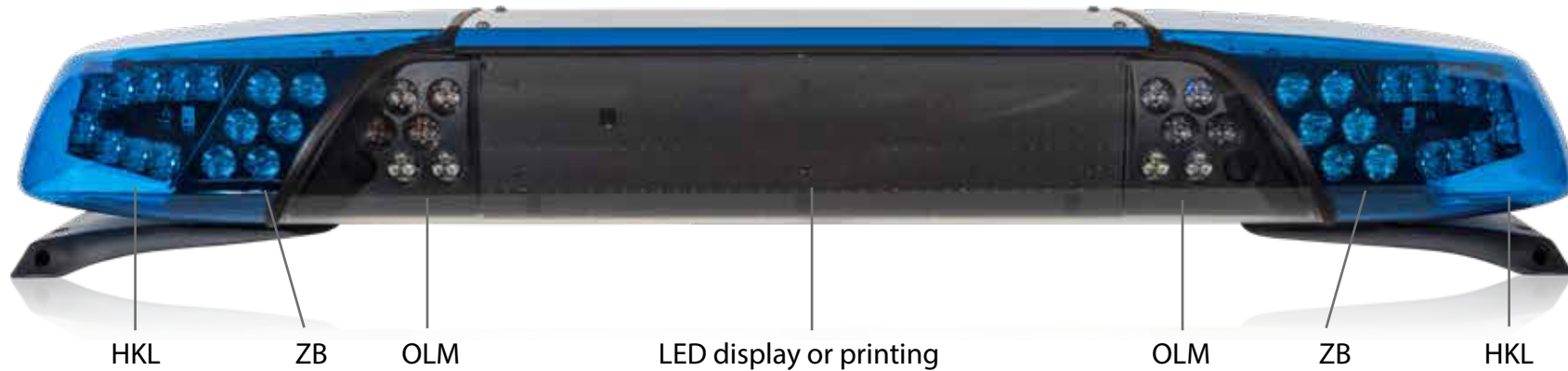
Alley lights (side lights)		
Function		
	Lighting for surrounding area	<ul style="list-style-type: none"> <li>colour: white</li> <li>tilt angle: 20°</li> <li>mounted in pairs (left and right)</li> </ul>
	Search lights	<ul style="list-style-type: none"> <li>colour: white</li> <li>without tilt angle</li> <li>mounted in pairs (left and right)</li> </ul>

Display and printing	
Function	
Cover glass (colours: white, clear, blue and grey)	<ul style="list-style-type: none"> <li>standard: white without printing</li> <li>optional: white with printing (backlighting possible)</li> <li>optional: clear without printing (interior cover or display required), a clear cover glass is mandatory when OLMs are used</li> </ul>
Interior cover (colours: white and black)	<ul style="list-style-type: none"> <li>standard: white without printing</li> <li>optional: white with printing</li> <li>optional: black without printing</li> </ul>
Display	<ul style="list-style-type: none"> <li>various messages possible with digital control module</li> </ul>

# DBS 4000

## Options - front mounting

Configuration example



Additional flashers			
Function			Possible for
ZB	Additional flashers (pair)	<ul style="list-style-type: none"> <li>consist of 12 blue LEDs</li> <li>directional</li> <li>synchronisation with respective main flasher</li> <li>deactivated in night mode</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> <li>24 V</li> </ul>
ZB	Additional flashers with direction indicator (pair)	<ul style="list-style-type: none"> <li>consist of 6 blue and 8 amber LEDs</li> <li>directional</li> <li>additional flasher: deactivated in night mode; synchronisation with respective main flasher</li> <li>direction indicator: function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required)</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> </ul>
ZB	Direction indicators (pair)*	<ul style="list-style-type: none"> <li>consist of 8 amber LEDs</li> <li>directional</li> <li>function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required)</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> </ul>

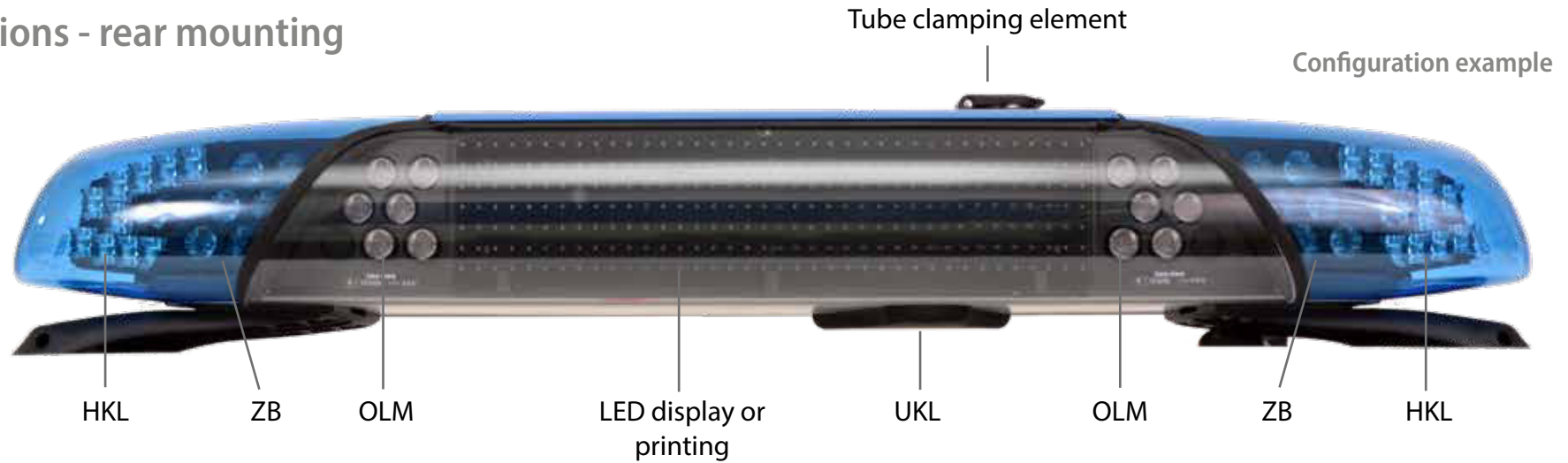
\*CAN447 requires an I/O-Box to feed in the signals

## Options - front mounting

Optional light module (OLM)			
Function			Possible for
OLM	Power flash (PB)	<ul style="list-style-type: none"> <li>consists of 3 blue triple lenses (9 LEDs)</li> <li>standard: mounted left (driver side)</li> <li>optional: additional PB on the right (passenger side)</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> <li>24 V</li> </ul>
OLM	Take down flash (AHB)	<ul style="list-style-type: none"> <li>allowed only in conjunction with display</li> <li>consists of one red triple-lens (3 LEDs)</li> <li>standard: mounted left (driver side)</li> <li>optional: additional AHB on the right (passenger side)</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> </ul>
OLM	Working light (ASW)	<ul style="list-style-type: none"> <li>consists of 3 white LEDs per module</li> <li>standard: mounted right (passenger side)</li> <li>an additional unit can be mounted on the left side (driver side) as an option</li> <li>light value:                             <ul style="list-style-type: none"> <li>- 600 lumens</li> <li>- 1000 lumens</li> <li>- 1500 lumens</li> </ul>                             (each with a 15° tilt angle)                         </li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> <li>24 V</li> <li>12 V</li> </ul>
OLM	Power flash (PB) and take down flash (AHB)	<ul style="list-style-type: none"> <li>see description of "power flash" and "take down flash"</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> </ul>
OLM	Power flash (PB) and working light (ASW)	<ul style="list-style-type: none"> <li>see description of "power flash" and "working light"</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> <li>24 V</li> </ul>
OLM	Power flash (PB), take down flash (AHB) and working light (ASW)	<ul style="list-style-type: none"> <li>see description of "power flash", "take down flash" and "working light"</li> <li>light intensity: 600 or 1500 lumens</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> </ul>
OLM	Take down flash (AHB) and working light (ASW)	<ul style="list-style-type: none"> <li>see description of "take down flash" and "working light"</li> <li>light intensity: 600 or 1500 lumens</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> </ul>

# DBS 4000

## Options - rear mounting



Additional flashers			Possible for
Function			
ZB	Additional flashers (pair)	<ul style="list-style-type: none"> <li>• consist of 12 blue LEDs</li> <li>• directional</li> <li>• synchronisation with respective main flasher</li> <li>• deactivated in night mode</li> </ul>	<ul style="list-style-type: none"> <li>• 12 V</li> <li>• 24 V</li> </ul>
ZB	Additional flasher with direction indicator* (pair)	<ul style="list-style-type: none"> <li>• consists of 6 blue and 8 amber LEDs</li> <li>• directional</li> <li>• additional flasher: deactivated in night mode; synchronisation with respective main flasher</li> <li>• direction indicator: function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required)</li> </ul>	<ul style="list-style-type: none"> <li>• 12 V</li> </ul>
ZB	Direction indicators (pair)*	<ul style="list-style-type: none"> <li>• consist of 8 amber LEDs</li> <li>• directional</li> <li>• function as direction indicator or hazard warning light (synchronisation with vehicle direction indicator required)</li> </ul>	<ul style="list-style-type: none"> <li>• 12 V</li> </ul>

\*CAN447 requires an I/O-Box to feed in the signals



## Options - rear mounting

Optional light module (OLM)			
Function			Possible for
OLM	Working light (ASW)	<ul style="list-style-type: none"> <li>consists of 3 white LEDs per module</li> <li>standard: mounted right (passenger side)</li> <li>an additional unit can be mounted on the left side (driver side) as an option</li> <li>light value:                             <ul style="list-style-type: none"> <li>- 600 lumens</li> <li>- 1000 lumens</li> <li>- 1500 lumens</li> </ul>                             ( each with a 15° tilt angle )                         </li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> <li>24 V</li> <li>12 V</li> </ul>
OLM	Rear warning system (RWS)	<ul style="list-style-type: none"> <li>consists of 12 amber LEDs</li> <li>available only in pairs (mounted left and right)</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> <li>24 V</li> </ul>

A combination of both OLM options is not possible. The working lights can only be combined with the LED rear warning system type 40 pico LED.

RWS type 40 pico LED			
Function			
RWS 40 pico LED*		<ul style="list-style-type: none"> <li>one lamp body consists of 8 LEDs</li> <li>lamp body:                             <ul style="list-style-type: none"> <li>- 1100 mm: 2 lamp bodies</li> <li>- 1200 mm: 2 lamp bodies</li> <li>- 1400 mm: 3 lamp bodies</li> <li>- 1600 mm: 4 lamp bodies</li> <li>- 1800 mm: 5 lamp bodies</li> <li>- 2000 mm: 5 lamp bodies:</li> </ul> </li> <li>rear-facing lights can also be integrated as OLMs</li> </ul>	<ul style="list-style-type: none"> <li>12 V</li> <li>24 V</li> </ul>

\* not combinable with OLM RWS

# DBS 4000

## Options

Special functions	
Helicopter recognition	<ul style="list-style-type: none"> <li>• 4 integrated infrared LEDs</li> <li>• allows recognition by night vision devices</li> <li>• rotating flash pattern</li> </ul>
Traffic advisor (VLE)*	<ul style="list-style-type: none"> <li>• consists of 6 amber LED modules with 3 LEDs each</li> <li>• for rear mounting</li> <li>• choice of different flash patterns (warning function, RWS function) or traffic advisor function (arrow stick function)</li> </ul>
Convoy function	<ul style="list-style-type: none"> <li>• "convoy front" switches the rear part of the main beacon (HKL) and the rear additional flasher (ZB) off, in order to not blind the following traffic</li> <li>• "convoy rear" switches the front part of the main beacon (HKL) and the front additional flasher (ZB) off, in order to not blind the traffic travelling ahead</li> <li>• requires the appropriate control unit</li> </ul>
Option with tube clamping element	<ul style="list-style-type: none"> <li>• a clamping element can also be attached to mount a beacon on a tube</li> </ul>
Signal light	<ul style="list-style-type: none"> <li>• red or green, quadruple on the main beacons</li> <li>• flashing</li> </ul>
Integrated compressor system	<ul style="list-style-type: none"> <li>• diaphragm acoustic horns mounted on the DBS 4000</li> <li>• additional functions (e.g. RWS type 40 pico LED, VLE, etc.) possible only from a lightbar length of 1600 mm</li> <li>• no backlighting available in any of the lengths</li> </ul>
* no homologation as RWS, special approval required for traffic advisor	

# DBS 4000

can switch between blue and amber

The bicoloured lightbar system DBS 4000 LED can switch between blue and amber.

The blue warning signal is used to clear a path on the way to the destination.

The beacon can be switched to amber at the destination in order to act as a warning signal to secure the area.



## PRODUCT FEATURES:

- can switch between blue and amber
- both colours are homologated according to ECE-R 65
- blue: can be used to indicate the right-of-way while driving
- amber: can be used as a warning signal at the destination
- optional: integration of additional flashers to reinforce the respective warning effect
- blue additional flasher to the front and/or the rear possible
- amber additional flasher to the front and/or the rear possible

Also available with examination in accordance with ICAO type C.  
Further information can be found on page 94.

<b>Technical data:</b>	
Designation:	DBS 4000
Voltage:	12 V / 24 V
Flash frequency:	> 2 Hz (beacon)
Average power consumption:	from 4 A (at 12 V)
Lengths:	1100, 1200, 1400, 1600, 1800, 2000 mm
Depth:	300 mm
Height:	135 mm
Weight:	from 9 kg
Material:	lamp dome: PC / cover glass: PMMA / housing: aluminium
Type of protection:	IP5K4K / IPX9K
<b>Homologation: (Germany and international)</b>	
Light according to ECE-R 65:	TB2 (E1) 00 3111 / TA2 (E1) 00 3111
EMC according to ECE-R 10:	(E1) 10R - 05 6209