

Montageanleitung

DuraRAY / K-LED

Mounting Instructions

DuraRAY / K-LED

Instructions de montage

DuraRAY / K-LED

Monteringsanvisning

DuraRAY / K-LED

Montagehandleiding

DuraRAY / K-LED

Instrucciones de montaje

DuraRAY / K-LED

Istruzioni di montaggio

DuraRAY / K-LED

Asennusohje

DuraRAY / K-LED



Lieferumfang
Kit includes
Fourniture

Leveransomfattning
Inhoud set
Volumen del suministro

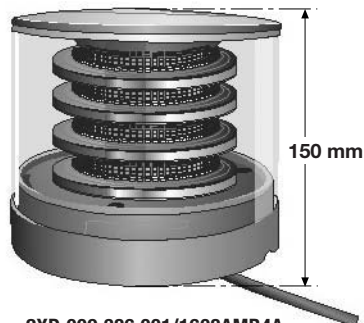
Dotazione di fornitura
Osaluettelo

A K LED



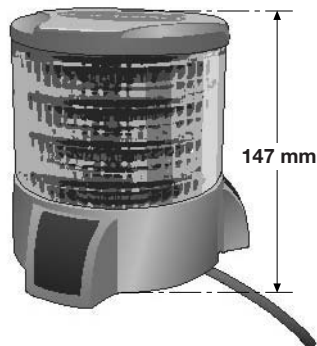
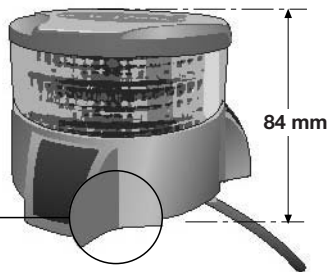
- Orange
- Silver
- Black

2XD 009 386 011/1608AMB2A
2XD 009 386 111/1608SIL2A
2XD 009 386 411/1608BLK2A



2XD 009 386 001/1608AMB4A
2XD 009 386 101/1608SIL4A
2XD 009 386 401/1608BLK4A

B DuraRAY



-  Yellow
-  Orange
-  Black
-  Silver
-  Chrome
-  White

- 2XD 009 386 511 / HM9386YEL2A
- 2XD 009 386 531 / HM9386AMB2A
- 2XD 009 386 551 / HM9386BLK2A
- 2XD 009 386 571 / HM9386SIL2A
- 2XD 009 386 591 / HM9386CHR2A
- 2XD 009 386 611 / HM9386WHT2A

- 2XD 009 386 501 / HM9386YEL4A
- 2XD 009 386 521 / HM9386AMB4A
- 2XD 009 386 541 / HM9386BLK4A
- 2XD 009 386 561 / HM9386SIL4A
- 2XD 009 386 581 / HM9386CHR4A
- 2XD 009 386 601 / HM9386WHT4A

Ersatzteile
Spare Parts
Pièces de rechange

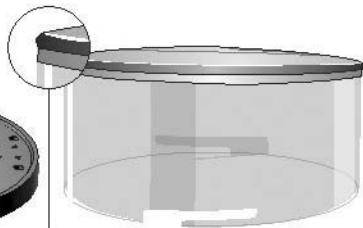
Reservdelar
Reserveonderdelen
Recambios

Ricambi
Varaosat

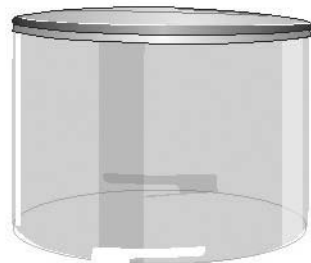
A K LED



9GD 863 939 001
9.1608.02



-  Orange **9EL 863 943 031 /9.1608AMB2.01**
-  Silver **9EL 863 943 021 /9.1608SIL2.01**
-  Black **9EL 863 943 051 /9.1608BLK2.01**



- 9EL 863 943 011 /9.1608AMB4.01**
- 9EL 863 943 001 /9.1608SIL4.01**
- 9EL 863 943 041 /9.1608BLK4.01**

B DuraRAY

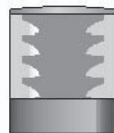


9GD 957 665 001
9.HM9386.02 (Complete Installation Kit)

Elektrischer Anschluss
Electrical connection
Raccordement électrique

Elektrisk anslutning
Elektrische aansluiting
Conexión eléctrica

Collegamento elettrico
Sähkoliitäntä



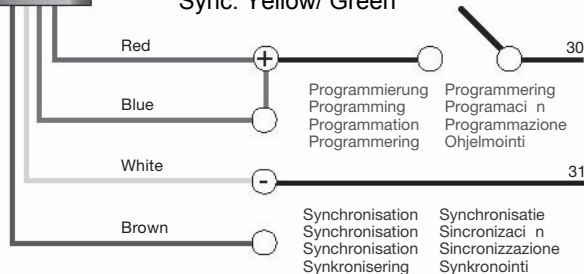
DuraRAY connection:

+ Brown

Prog. Blue

- Black

Sync. Yellow/ Green



Nicht benutzte Synchronisationsleitung muss isoliert werden.
Synchronisation cables not required must be insulated.
Le c ble de synchronisation qui n'est pas utilis doit tre isol .
Synkroniseringsledningar som inte anv nds m ste isoleras.
Niet gebruikt synchronisatiecircuit moet worden ge soleerd.
El cable de sincronizaci n que no se utilize deber aislarse.
Il cavo di sincronizzazione non utilizzato deve essere isolato.
K ytt m t n synkronointijohto on eristett v .

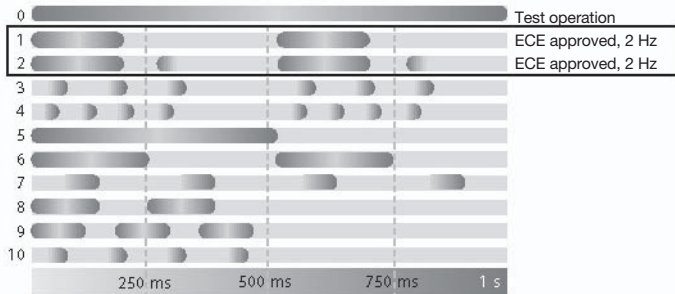
Programming mode



We recommend programming the lamps **BEFORE** installing them on the roof!

The programming mode allows the user to select one of the ten flashing patterns available.

For use of the lamps in the European region, only flashing patterns 1 and 2 are permissible.



Selecting a flashing pattern

1. Connect the red cable to the positive (+) pole of the battery and the white cable (-) to the negative (-) pole of the battery.

2. Connect the blue cable (programming) to the negative pole and the brown cable (synchronisation) to the positive pole. The lamp will flash for approx. 10s and then switch on permanently.

3. The blue cable and the brown cable now have to be separated from the electrical battery connections again. Make sure that the other cable connections (white and red) are not

interrupted. If the current flow is interrupted, programming must be restarted from step 1.

4. The flashing pattern last selected is now switches on. (The standard factory setting is flashing pattern 1.)

5. In order to select the required flashing pattern, the blue cable has to be switched briefly to the negative pole of the battery. With every switching process (keying) the following flashing pattern is selected (see table). Connecting the blue cable to the positive pole changes the flashing pattern delay time. Please read the section "Delaying the flashing pattern" before using this function.

6. All cables have to be separated from the battery for at least ten seconds in order to store the flashing pattern selected.

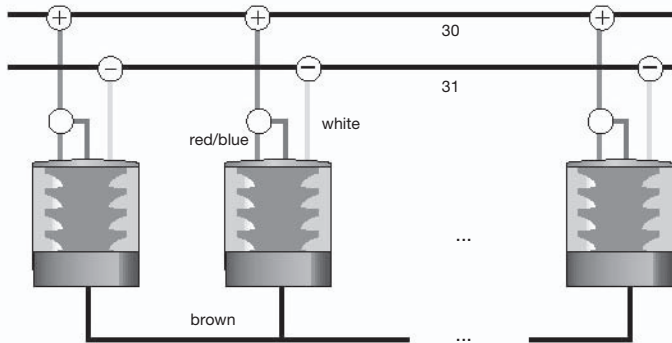
The lamp automatically leaves the programming mode if the blue cable has not been active for approx. 65 seconds.

7. When the lamp is in operation, the blue cable must be connected together with the red cable to the plus pole and the white cable to the minus pole.

Synchronising 2 - 4 lamps

1. Program the flashing pattern of each lamp individually as described in the "Programming mode" section. (We recommend selecting the same flashing pattern for all of the lamps to be synchronised.)

2. Connect the lamps according to the circuit diagram. All the brown cables are wired together.



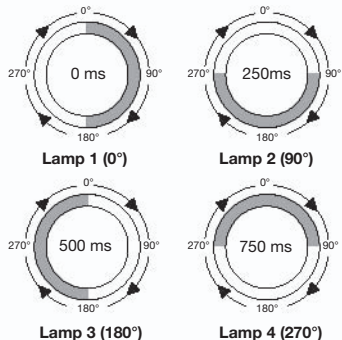
Delaying the flashing pattern

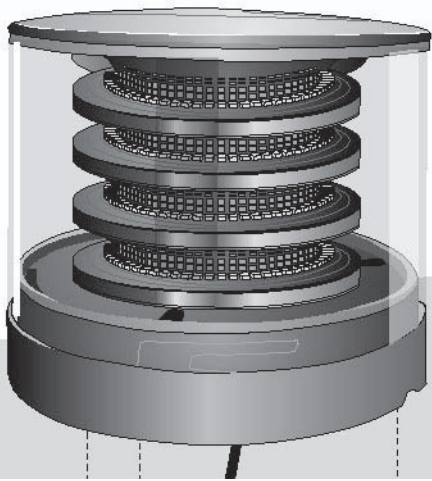
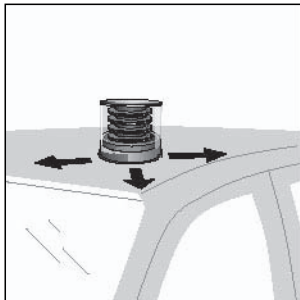
In step 5 of the programming instructions, the flashing pattern timing can be delayed by a multiple of 250 ms by connecting the blue wire briefly to the positive pole. Every keying delays the start time in comparison with a reference time by 250 ms (equally in the case of synchronised lamps).

After the fourth keying, the start time is back to the reference start time. This feature can be used to create a "pursuit function/running light", where

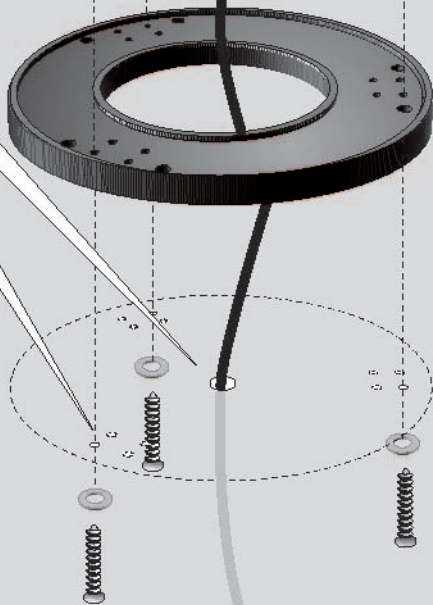
the four lamps are programmed in such a way that they flash in succession.

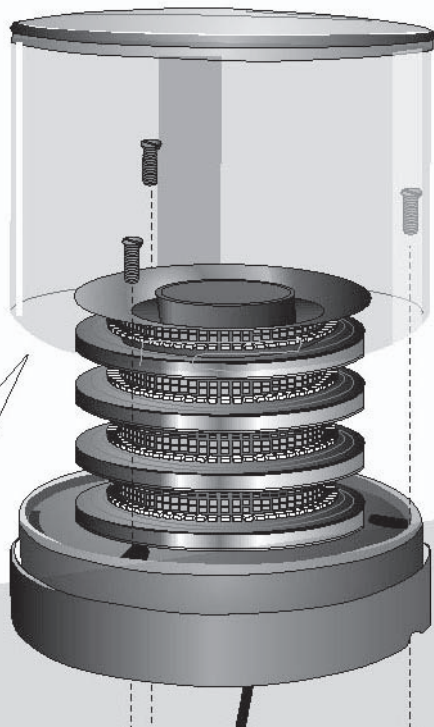
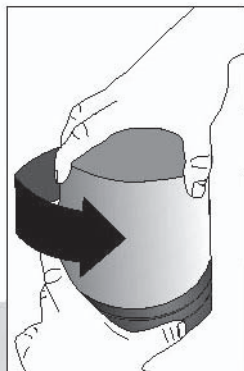
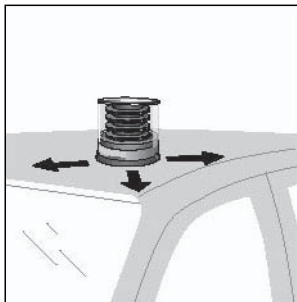
Adjacent illustration ▶
**Lamps with flashing pattern 5
Delay by 250 ms each (90°)**



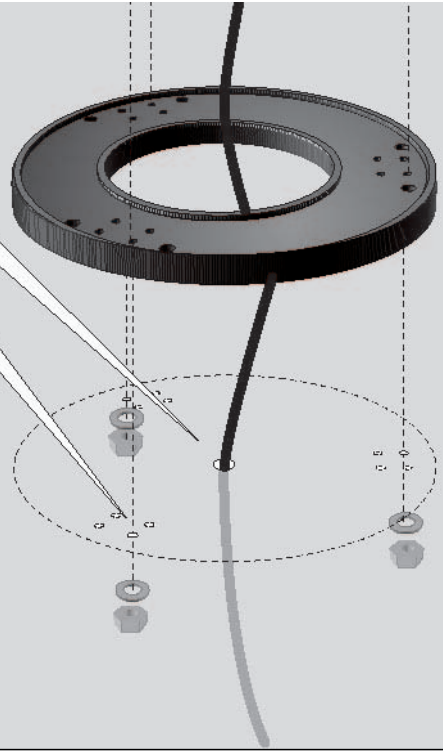
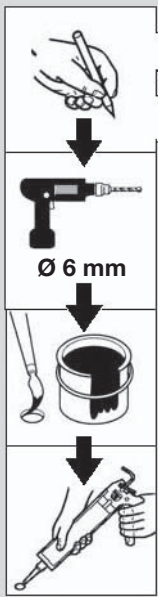


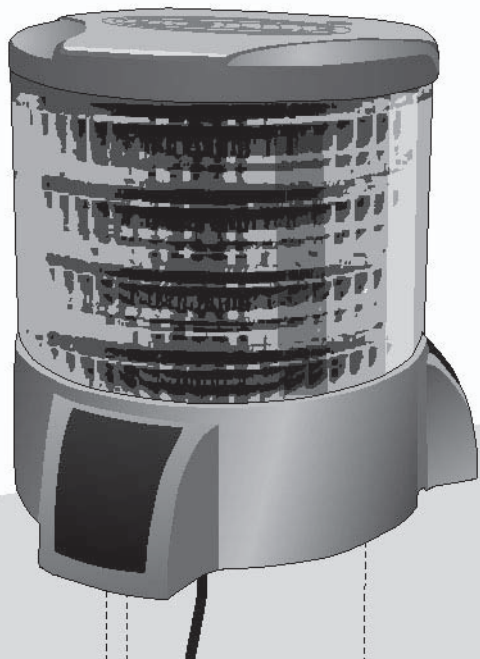
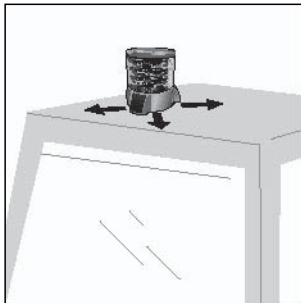
x 4



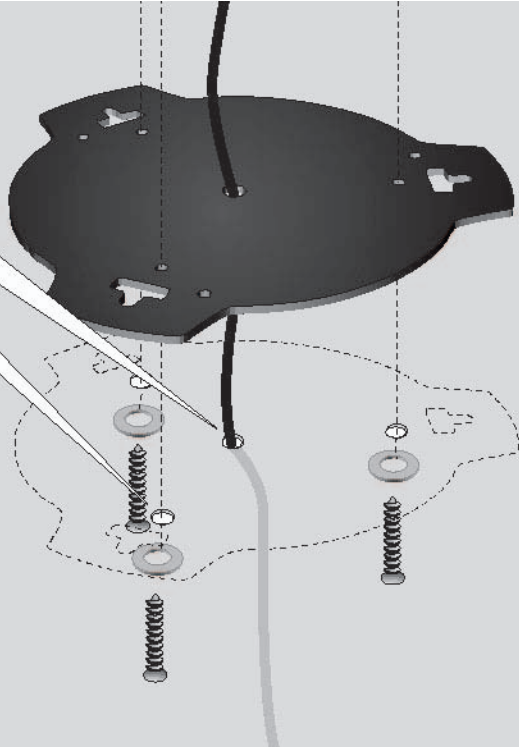


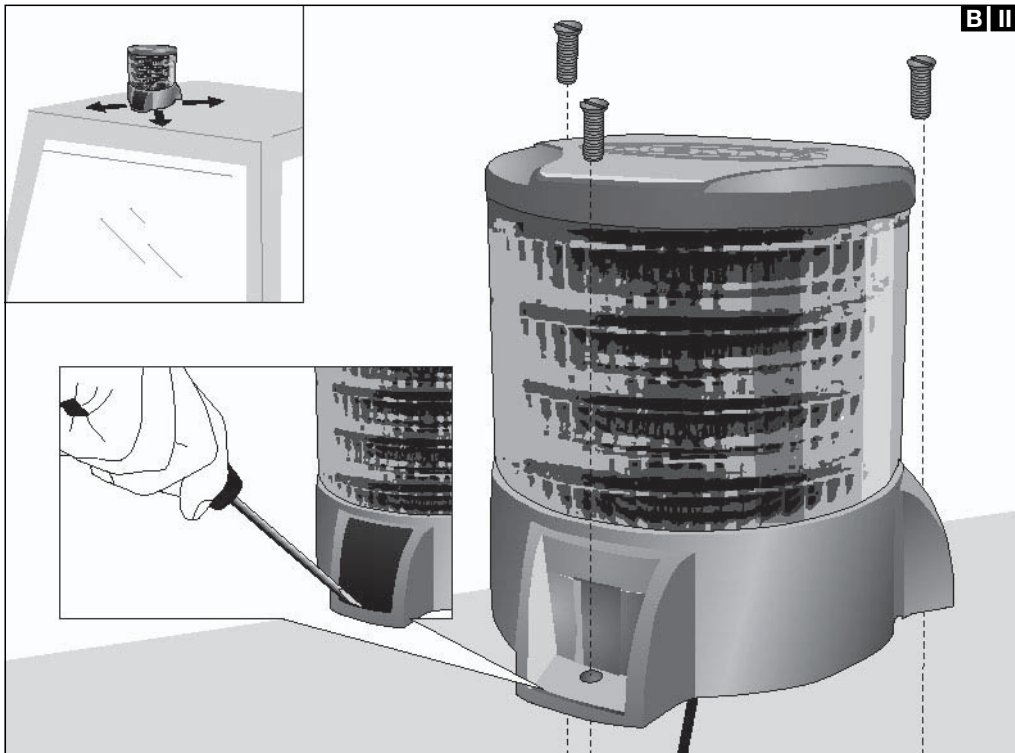
x 4



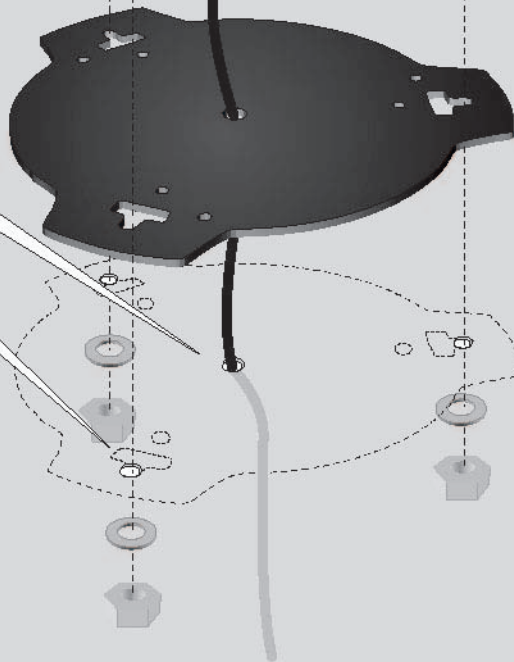


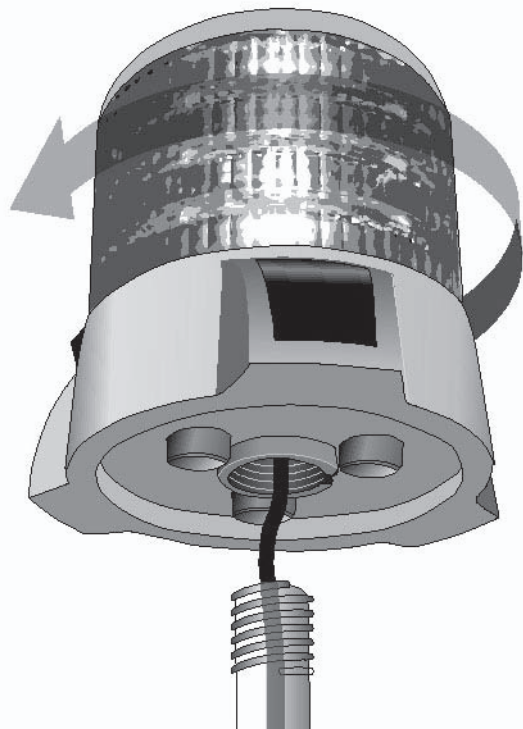
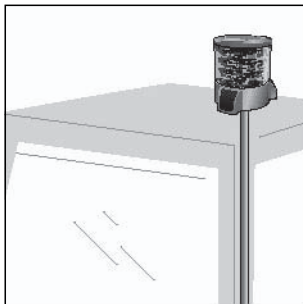
x 4

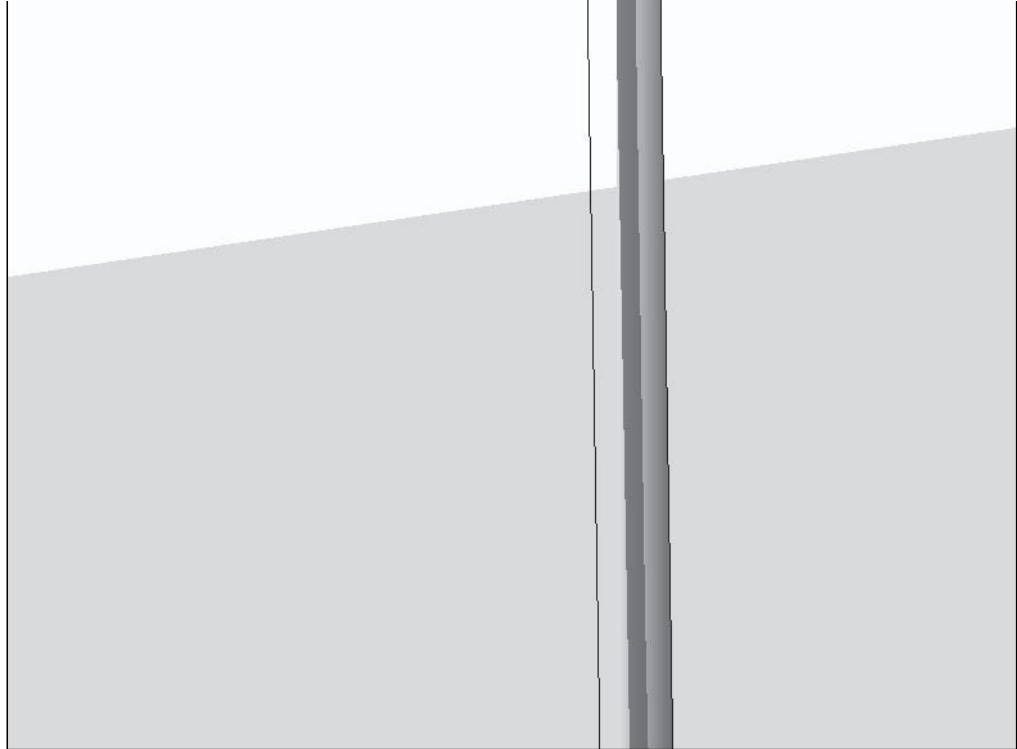




x 4







Approval

Hella rotating beam (K-LED Art. Nr. 2XD 009 386 001, Art. Nr. 2XD 009 386 101 and Art. Nr. 2XD 009 386 401) have been

officially approved within the validity area of ECE R65. They must be attached to the highest point on the vehicle and vertical to the roadway when the vehicle is loaded for use in an emergency.

All rotating beacons are interference suppressed and in compliance with VDE 0879 Part 2. They have EU approval according to RL72/245 EEC in the version 95/54EU.

Tools required

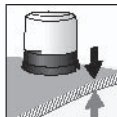
- Screwdriver

- Drill with bit
DuraRay: dia. 5 and 7 mm
K-LED: dia. 4.2 and 6 mm

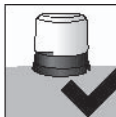
Electrical connection

(fused plus cable).
Use a cable cross section of at least 1.5mm², fuse 7.5 A slow-acting.

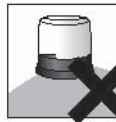
Installation



> 0.6 mm



r > 3000 mm



Choose a suitable position on the vehicle roof (see above).
If the prescribed visibility (see FMVSS) is not achieved due to other roof attachments, **additional beacons** must be mounted.

Page 22-25 K-LED

- Use M5 screws for **attachment from below A I**.
- The unit has to be opened for **attachment from above or below A II**. To do this, remove the light dome as shown. Attachment from above is possible using M5 screws. Screw the light dome tightly back in place to ensure leak proofness. Make sure the seal is in the right position. Do not forget the safety screw.

Page 26-29 DuraRay

- Use M4 screws for **attachment from below B I**.
- For **attachment from above B II**, the protective caps have to be removed with the aid of a screwdriver. Then attachment is possible using M6 screws, after which the caps must be replaced.

Technical Data

Operating voltage range:	10 - 30 V
Overall current consumption:	12V - 2.2A 24V - 1A
Flashing frequency:	Single, double, triple, quadruple flash
Temperature range:	-40°C to +60°C

Fused plus cable:	7.5 A slow acting
Inverse polarity protection:	Yes
Light dome:	PMMA
Housing:	GD AISi12
Interference suppression:	e1 approval in compliance with 72/245 EU in the version 94/95.

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