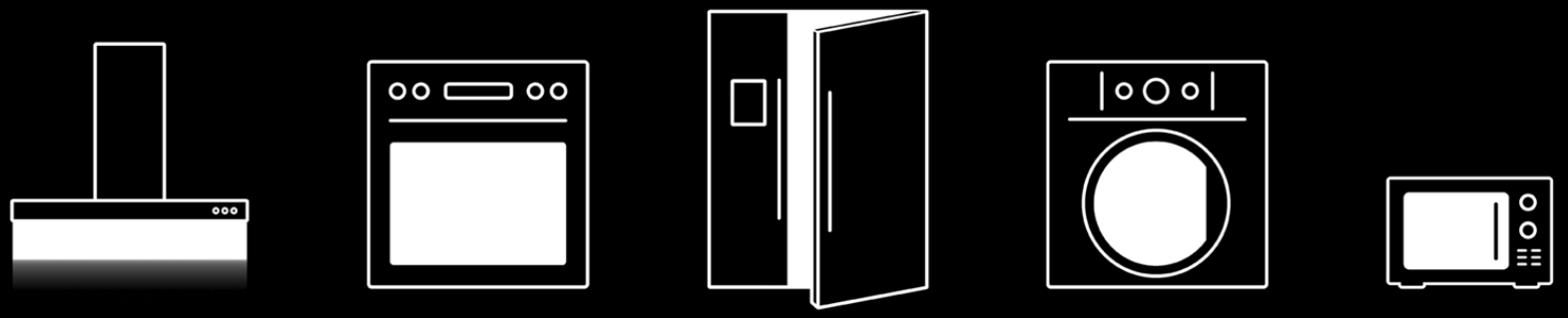
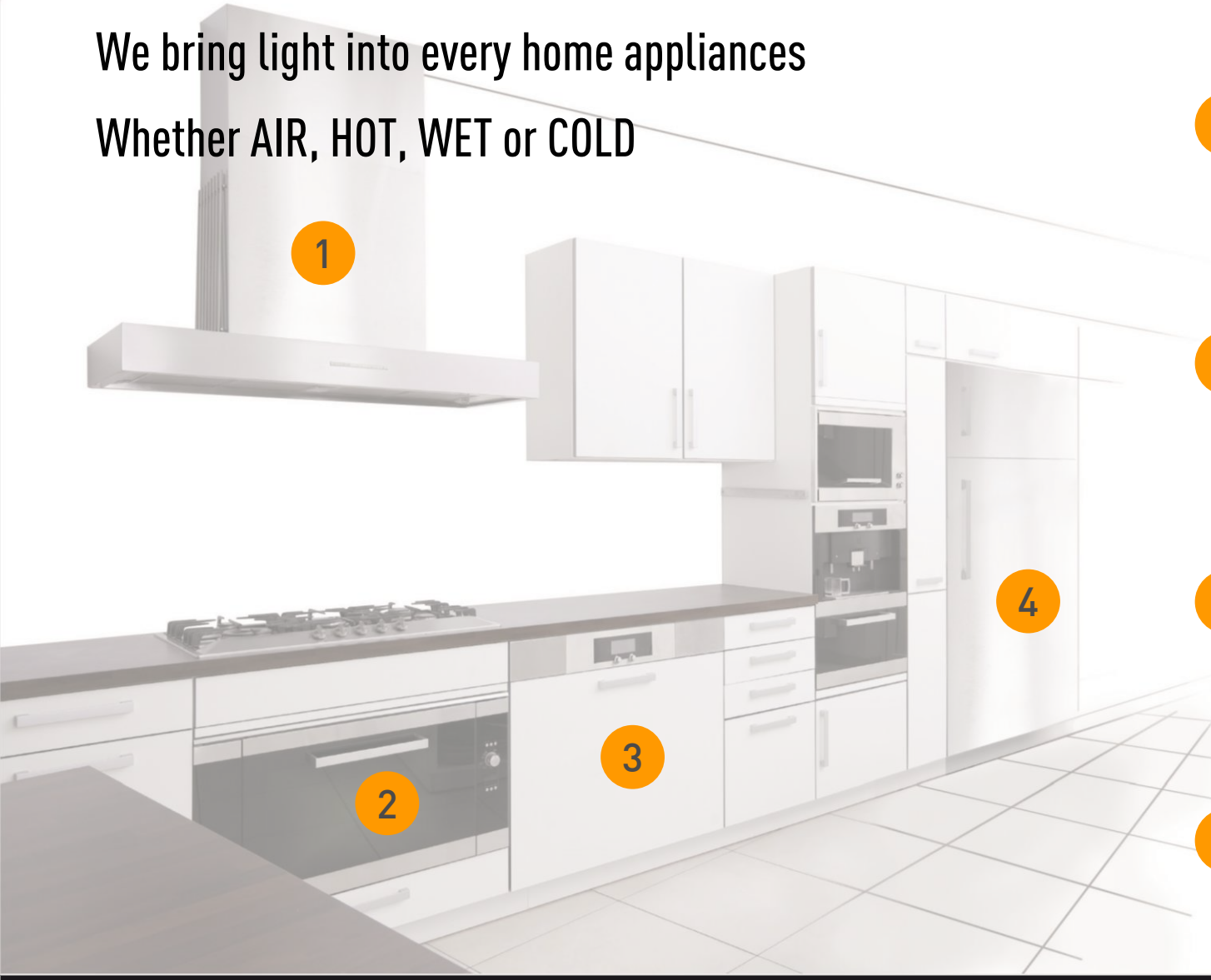
Light for Appliances



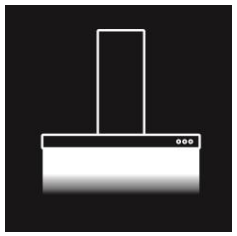
Products for the Domestic Appliance Industry

We bring light into every home appliances

Whether AIR, HOT, WET or COLD

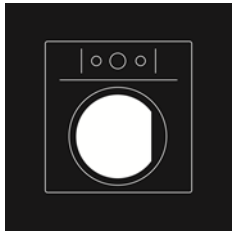


1

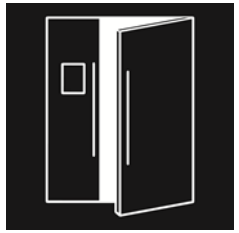


2

3



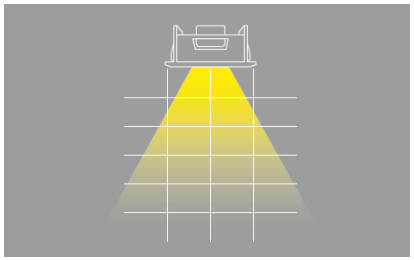
4



Lighting for downdraft hoods and cooker hoods

Linear LED luminaire for cooker hoods

Symmetric
Light emission characteristic



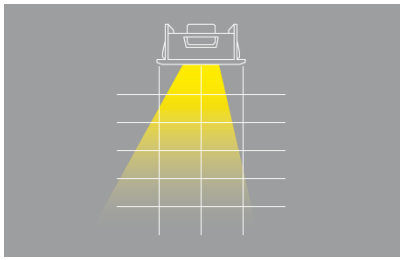
77.105.1002.89

- Suitable as replacements for halogen
- Easy installation through clip-in fixing

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	120 lm
Power consumption:	1,5 W

Linear LED luminaire for cooker hoods

Asymmetric
Light emission characteristic



77.107.1001.89

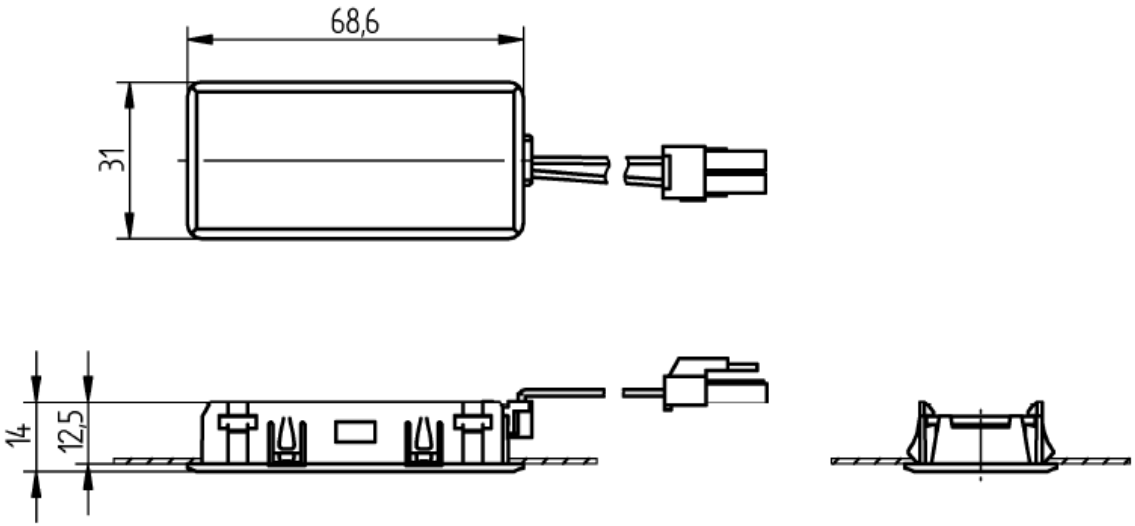
- Suitable as replacements for halogen
- Easy installation through clip-in fixing

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	120 lm
Power consumption:	1,5 W

Linear LED luminaire for cooker hoods

77.105.1002.89 and 77.107.1001.89

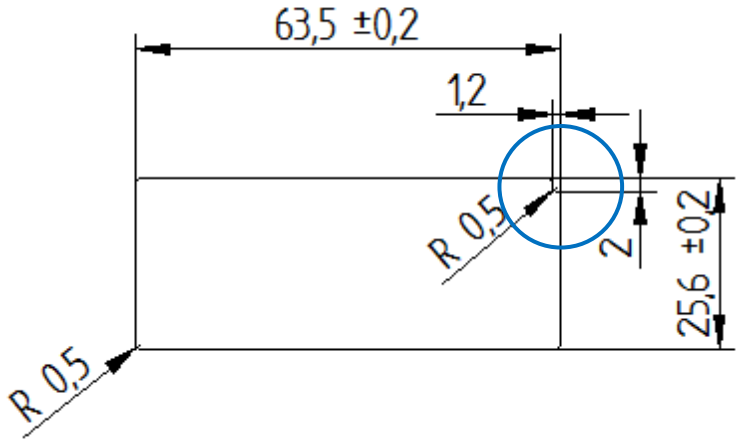
- Product drawing

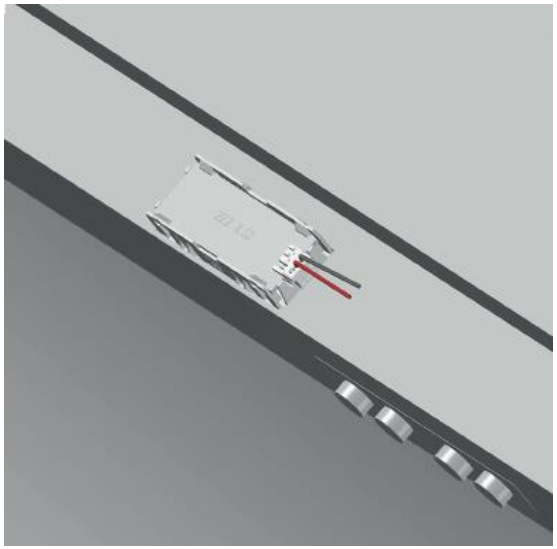


Linear LED luminaire for cooker hoods

77.105.1002.89 and 77.107.1001.89

- Fixing cut-out with geometrical coding to avoid incorrect installation
- Material thickness with enamel 0,5 - 1,0 mm





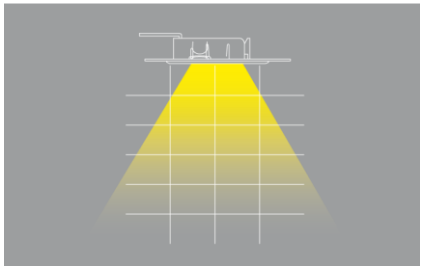
Linear LED luminaire for cooker hoods

77.105.1002.89 and 77.107.1001.89

- Installation example

Round LED luminaire for cooker hoods

Symmetric
Light emission characteristic



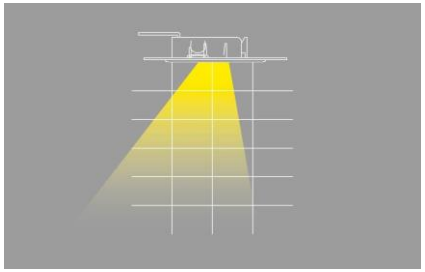
77.104.1001.89

- Easy upgrade from existing halogen solutions to LED - the same cut-out
- Easy installation through clip-in fixing

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	130 lm
Power consumption:	1.9 W

Round LED luminaire for cooker hoods

Asymmetric
Light emission characteristic



77.113.1001.89

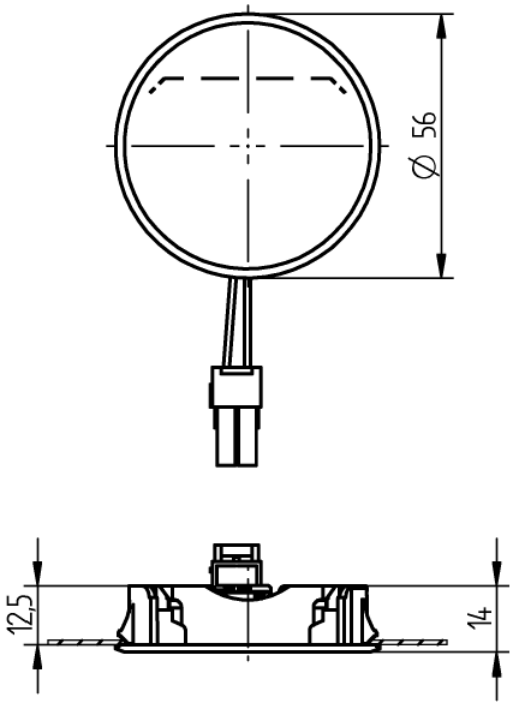
- Suitable for standard cut-out Ø = 51 mm
- Easy installation through clip-in fixing

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	130 lm
Power consumption:	1.9 W

Round LED luminaire for cooker hoods

77.104.1001.89 and 77.113.1001.89

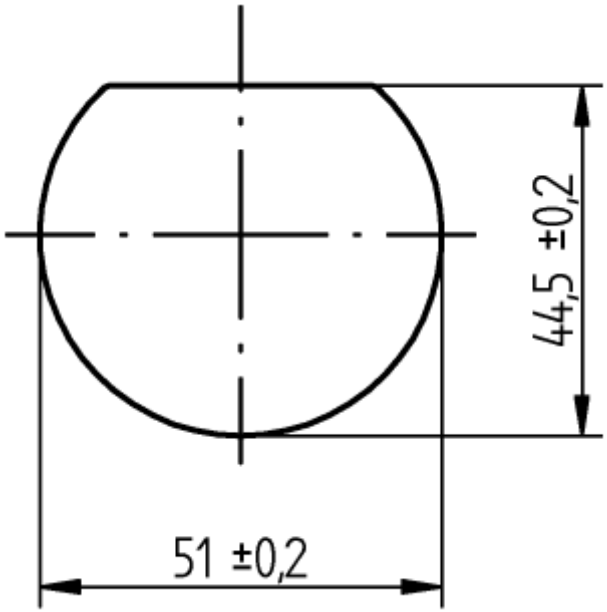
- Product drawing



Round LED luminaire for cooker hoods

77.104.1001.89 and 77.113.1001.89

- Fixing cut-out with geometrical coding to avoid incorrect installation
- Material thickness with enamel 0,5 - 1,0 mm



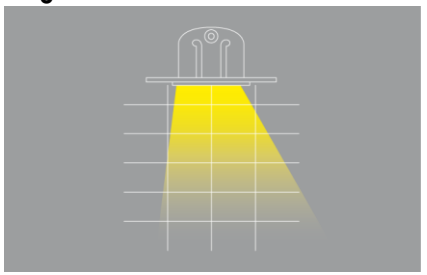
Round LED luminaire for cooker hoods

77.104.1001.89 and 77.113.1001.89

- Installation example

Linear LED luminaire for cooker hoods

Asymmetric
Light emission characteristic



77.101.2002.00

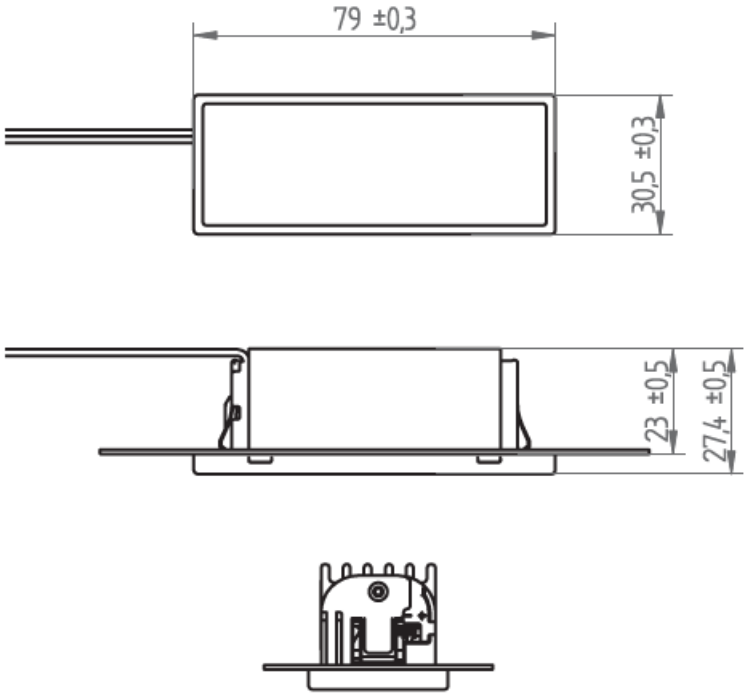
- Most optimal illumination of the hob by means of asymmetrical lens
  (Reduces the number of the required LED luminaries)
- Individual design versions possible
- Cover plate in glass

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	350 lm
Power consumption:	4.3 W

Linear LED luminaire for cooker hoods

77.101.2002.00

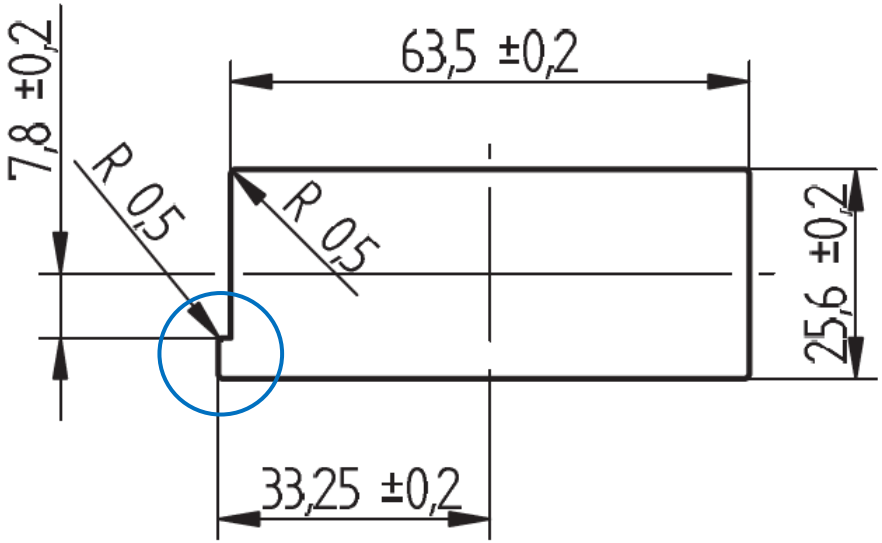
- Product drawing

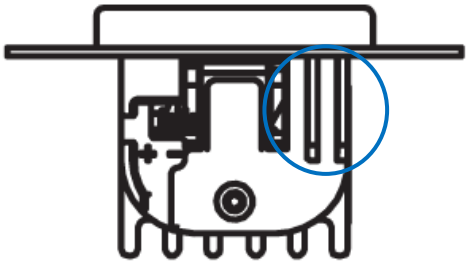


Linear LED luminaire for cooker hoods

77.101.2002.00

- Fixing cut-out with geometrical coding to avoid incorrect installation
- Material thickness with enamel 0,5 - 1,0 mm





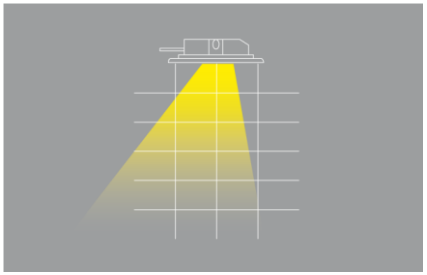
Linear LED luminaire for cooker hoods

77.101.2002.00

- Installation example

Round LED luminaire for cooker hoods

Asymmetric
Light emission characteristic



77.102.2001.00

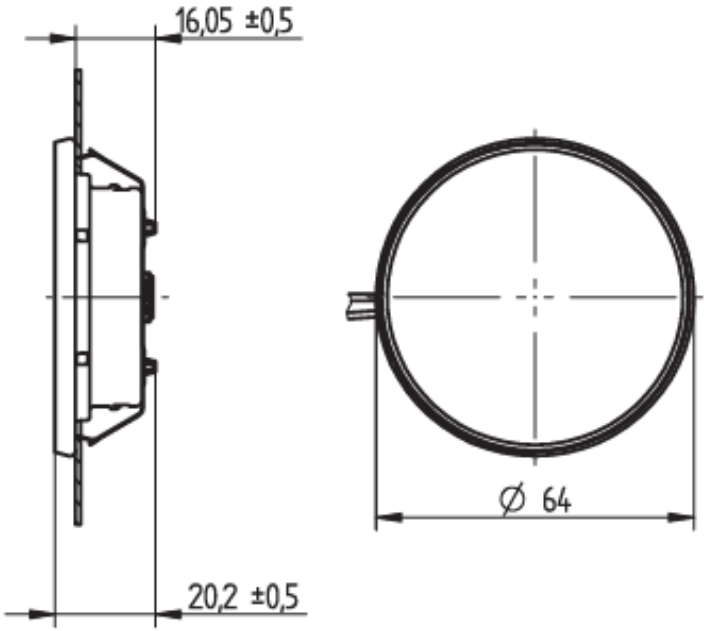
- Easy upgrade from existing halogen solutions to LED - the same cut-out
- Excellent illumination of the hob by means of asymmetrical reflector
- Glare free
- Cover plate in glass

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	230 lm
Power consumption:	2.0 W

Round LED luminaire for cooker hoods

77.102.2001.00

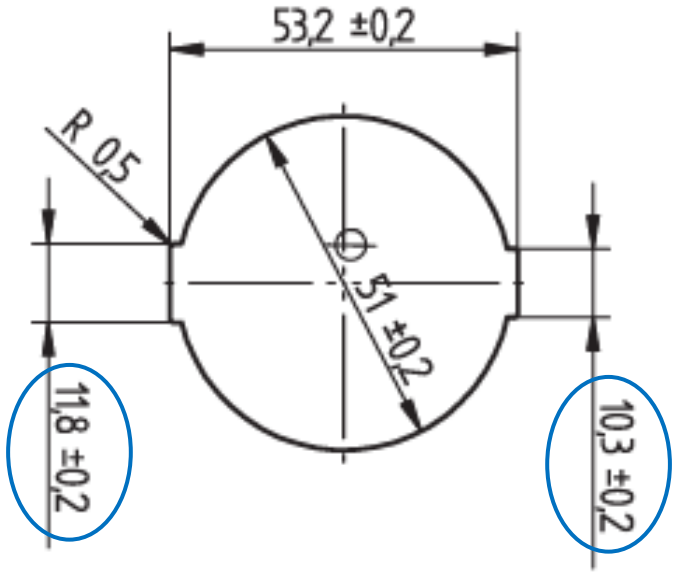
- Product drawing



Round LED luminaire for cooker hoods

77.102.2001.00

- Fixing cut-out with geometrical coding to avoid incorrect installation
- Material thickness with enamel 0,5 - 1,0 mm



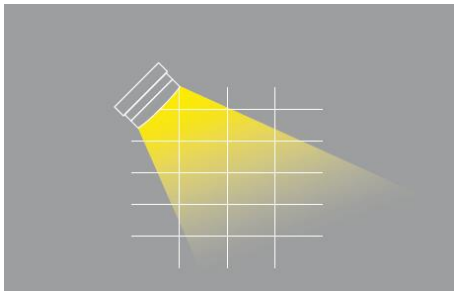
Round LED luminaire for cooker hoods

77.102.2001.00

- Installation example

Linear LED light system for downdraft hoods

Light emission characteristic



77.121

CONCEPT

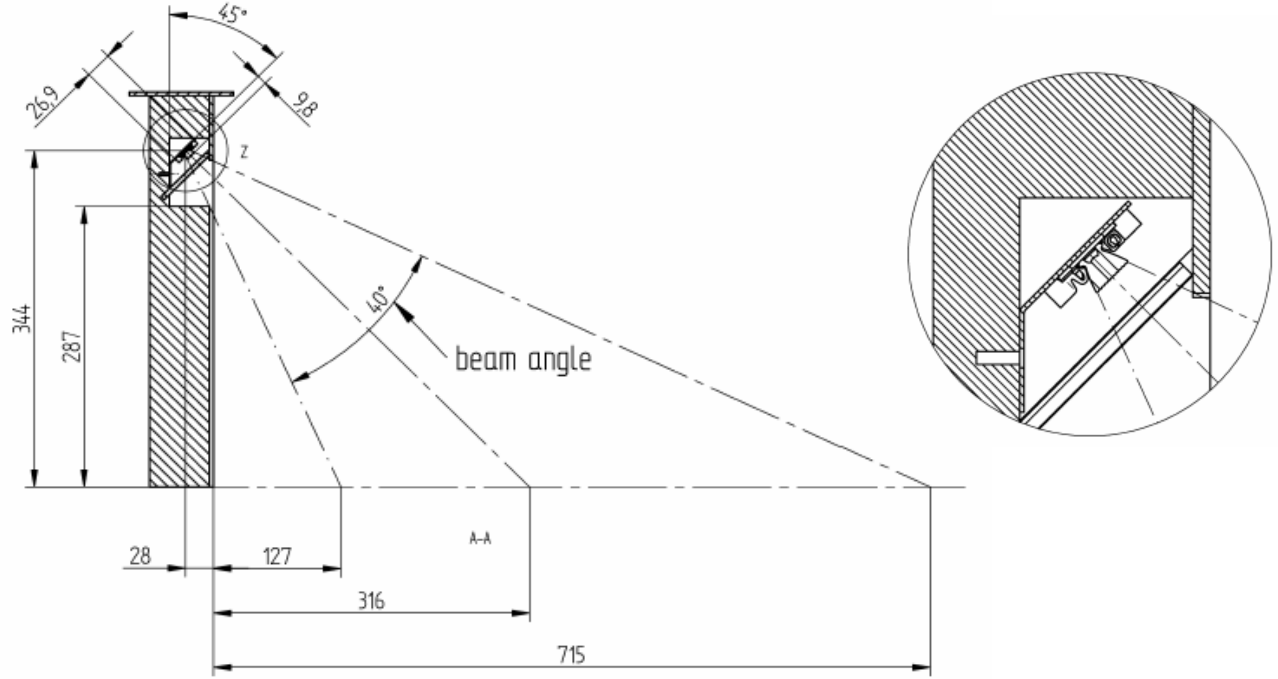
- Light directed onto the cooker hob
- Efficient optics eliminate glare and minimise stray light
- Variable module lenghts

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	1.180 lm
Power consumption:	9.9 W

Linear LED light system for downdraft hoods

77.121

- Light emission characteristic and basic installation situation

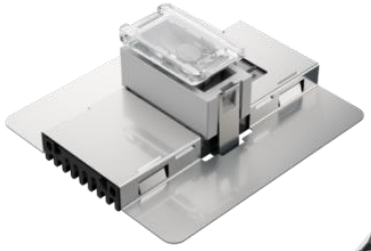


Linear LED light system for downdraft hoods

77.121

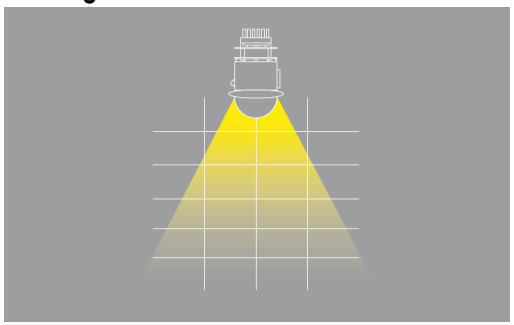
- Installation example

LED luminaires for ovens, microwaves and steam cookers



LED oven lamp for round standard cut-out

Symmetric
Light emission characteristic



77.110.1001.10

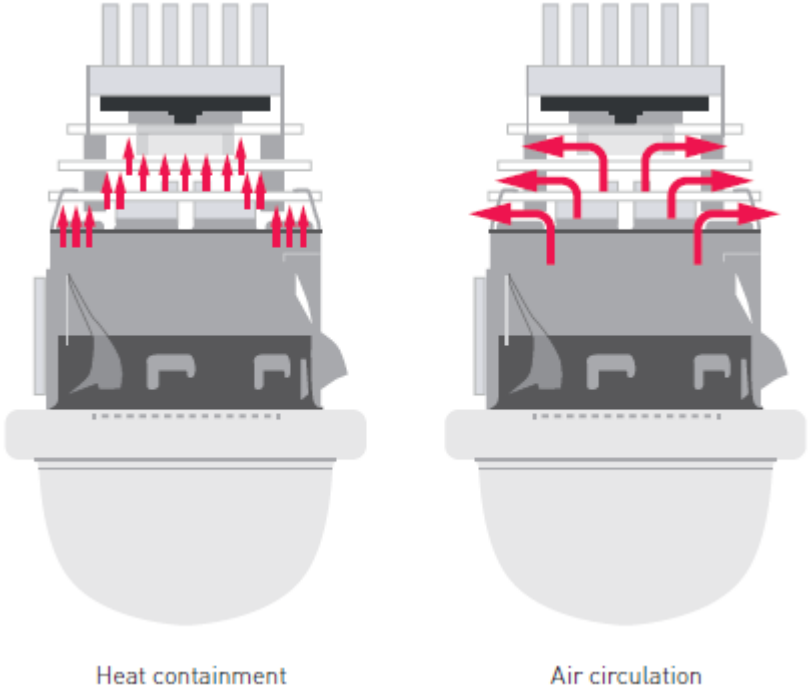
- Easy upgrade to LED due to standard Ø = 35.5 mm cut-out
- In spite of the hot environment: AIRPASS technology ensures low temperatures in the area of the LED

CRI:	> 80
Colour temperature:	3,500 K
Luminous flux:	100 lm
Power consumption:	3,1 W

LED oven lamp for round standard cut-out

77.110.1001.10

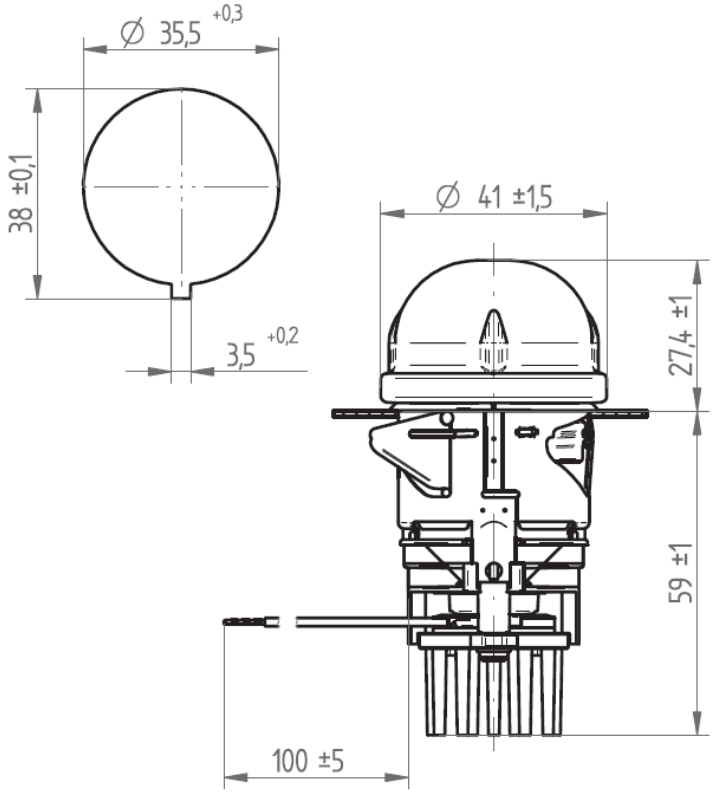
- AIRPASS Technology
- Air circulation
- Heat containment



LED oven lamp for round standard cut-out

77.110.1001.10

- Product drawing and fixing cut-out
- Material thickness with enamel 1,0 - 2,0 mm



LED oven lamp for round standard cut-out

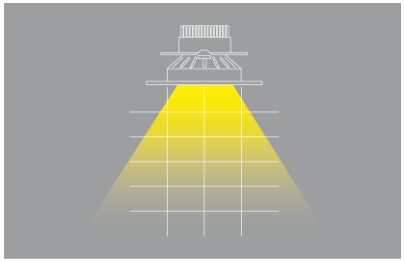
77.110.1001.10

- Installation example

LED lamp for microwaves

CONCEPT

Symmetric
Light emission characteristic



77.109

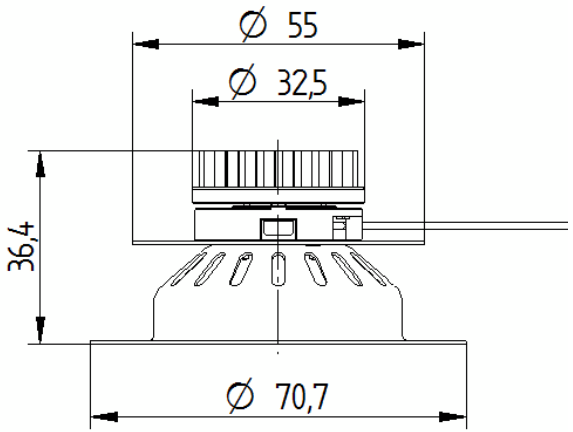
- Homogeneous illumination of the oven cavity
- Simpler design: Depending on installation situation, no further measures required to shield against microwaves
- Bayonet mounting allows easy replacement

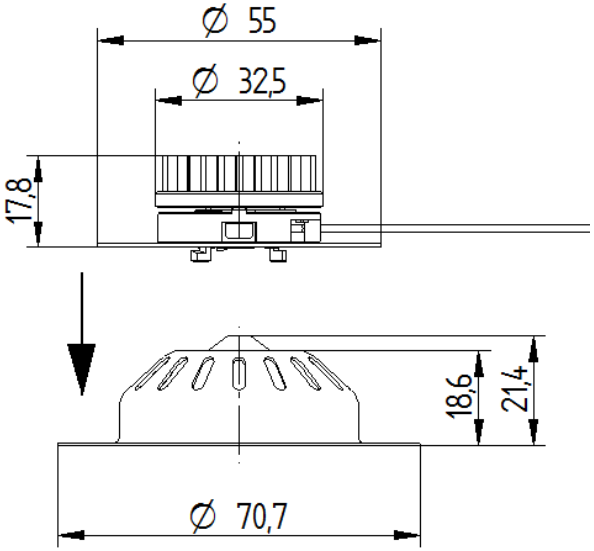
CRI:	>80
Colour temperature:	3,000 K
Luminous flux:	180 lm
Power consumption:	1.7 W

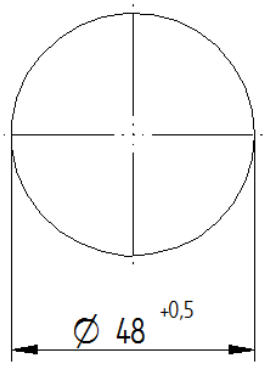
LED lamp for microwaves

77.109

- Product drawing and fixing cut-out

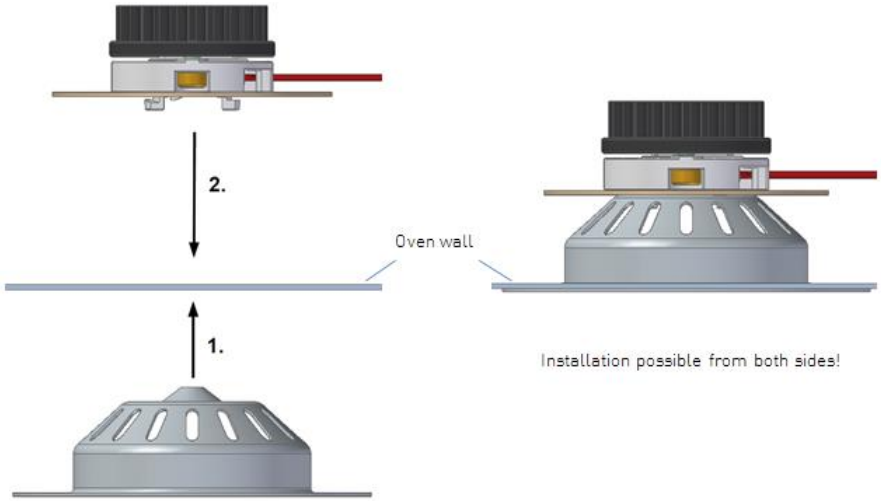


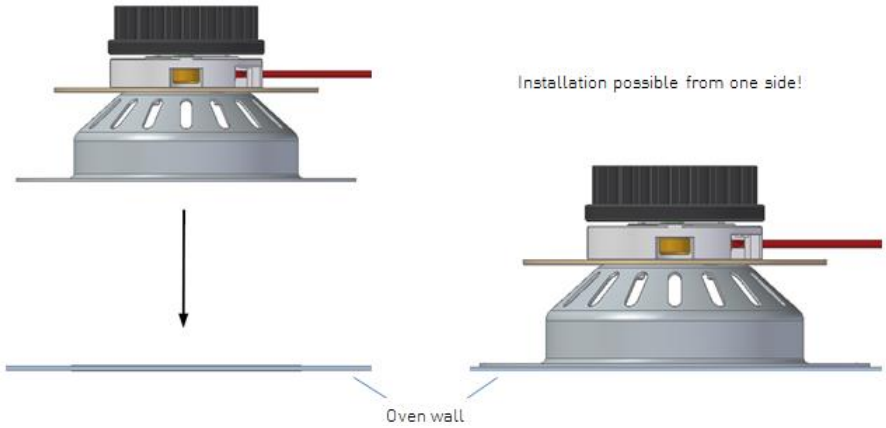




77.109 - Fixation in the cavity

- Clinch/Tox connection or screw fixing



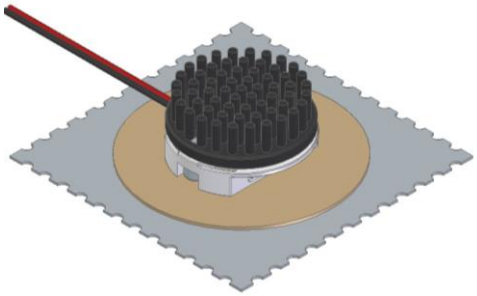


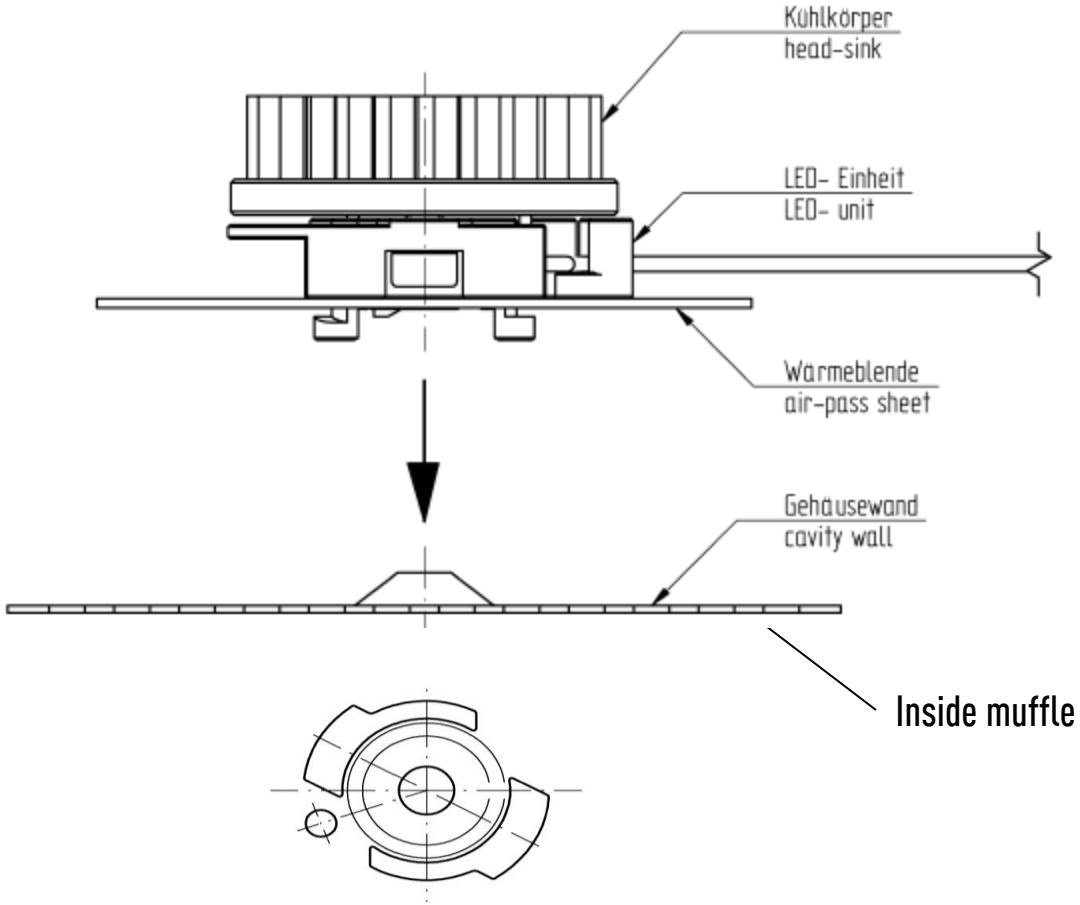
77.109

- Installation example

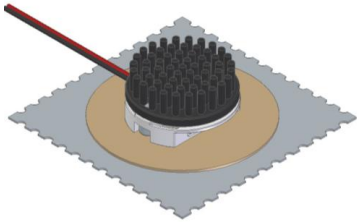
77.109 - Application without Reflector

- Instead of the reflector, an embossing with bayonet fixing can be provided directly in the muffle

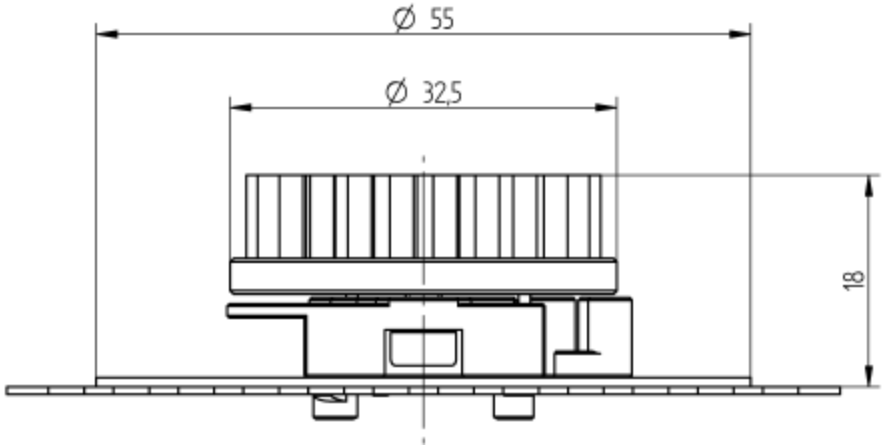


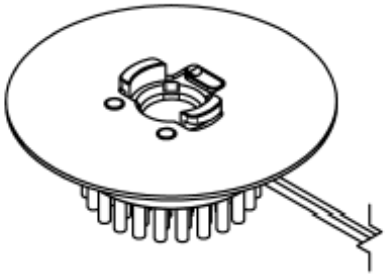


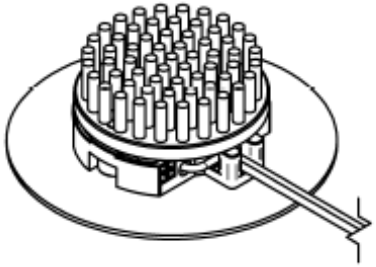
77.109 - Application without Reflector



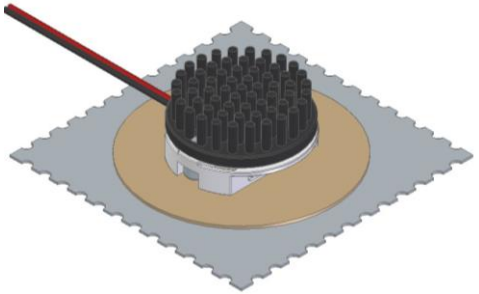
- Product drawing



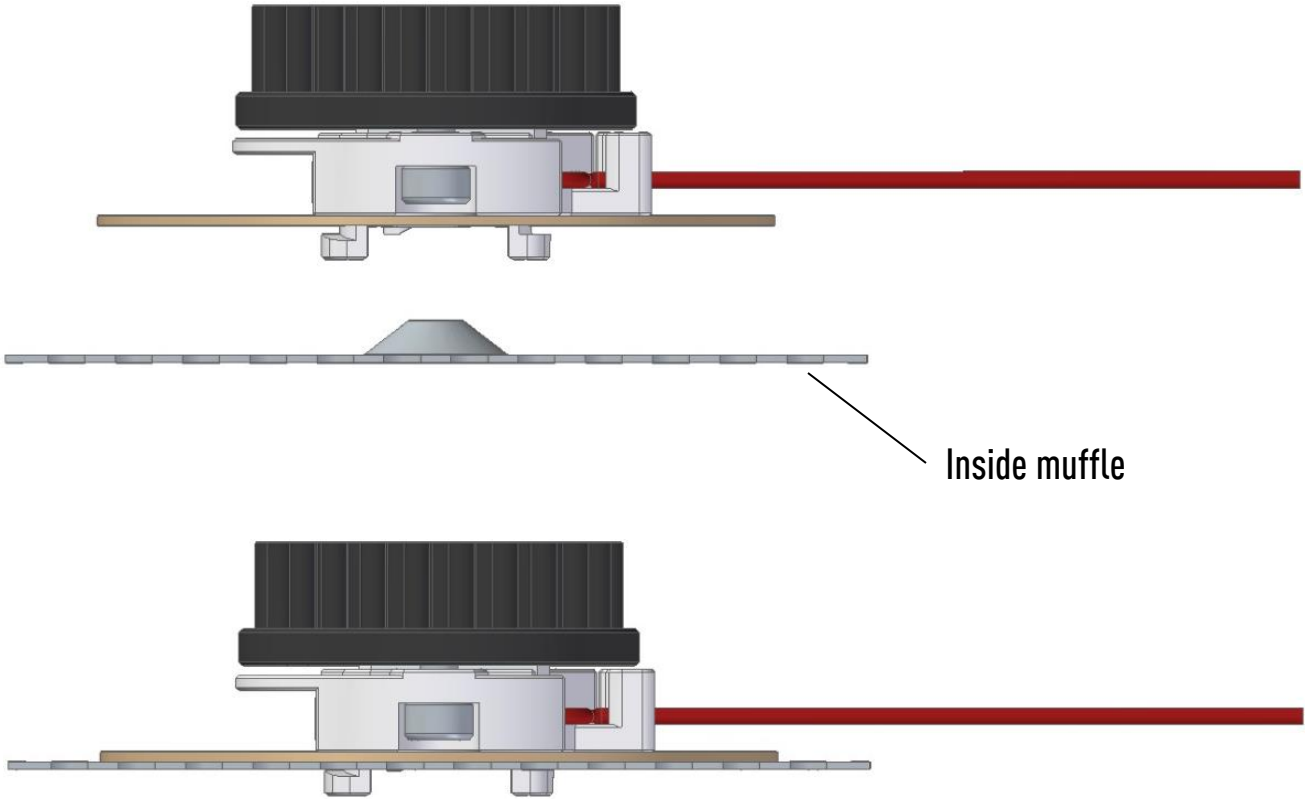




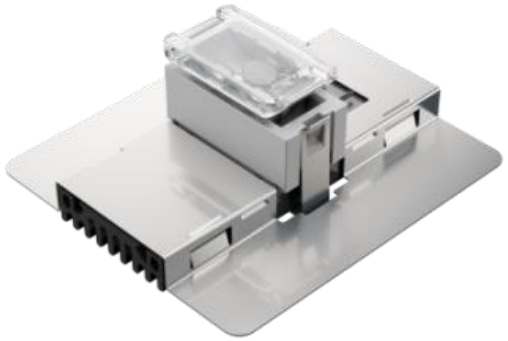
77.109 - Application without Reflector



- Mounting via bayonet fixing in the muffle

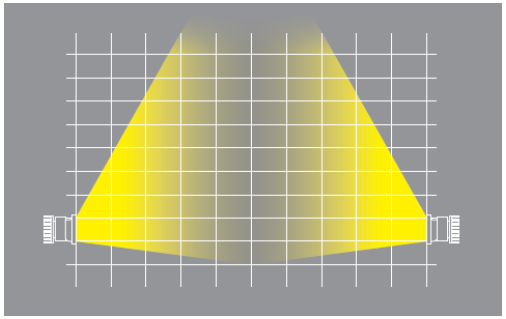


Compact LED oven lamp



CONCEPT

Asymmetric
Light emission characteristic



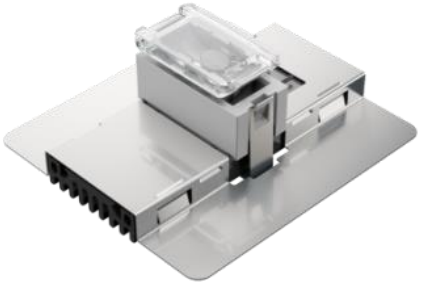
77.119.1001.00

- Position between the shelves is variably
- Small cut-outs reduce energy losses to a minimum

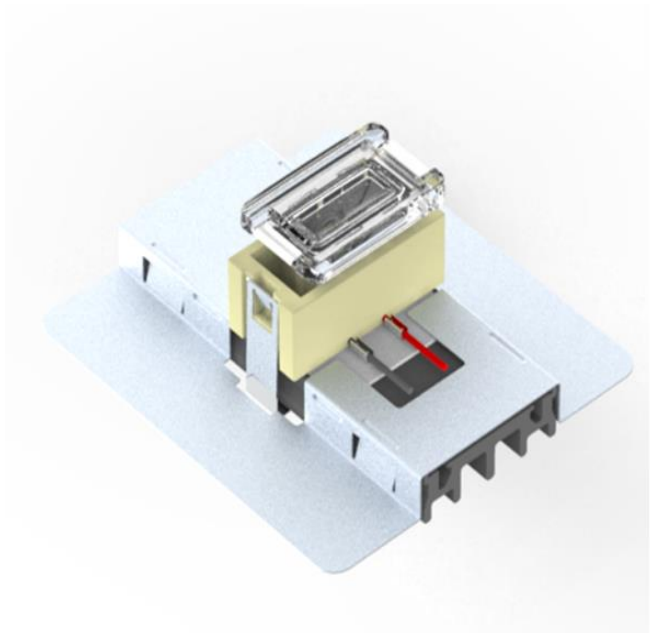
CRI:	> 80
Colour temperature:	3,500 K
Luminous flux:	120 lm
Power consumption:	3 W

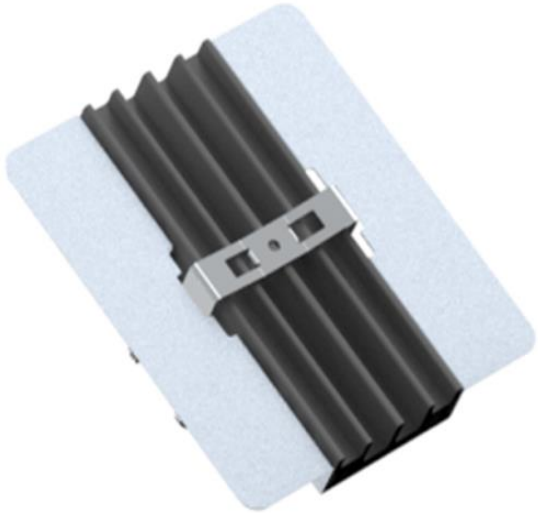
Compact LED oven lamp

77.119.1001.00



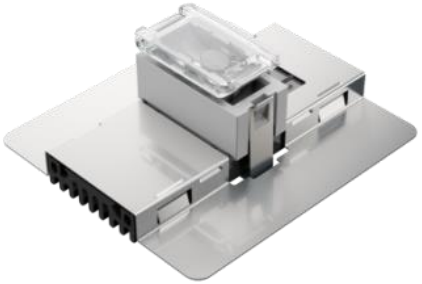
- Shielding plate - prevents the heat sink from being covered by the insulation material



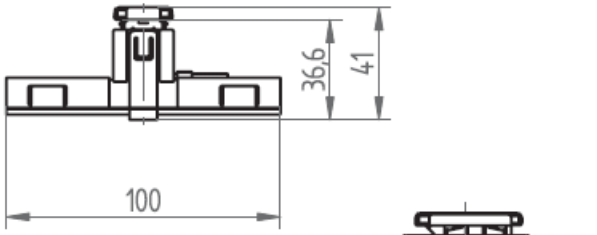


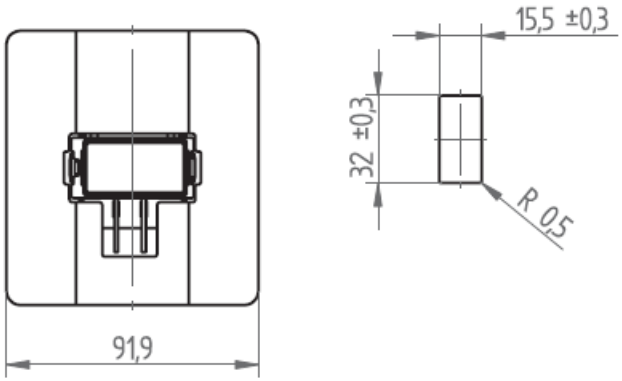
Compact LED oven lamp

77.119.1001.00



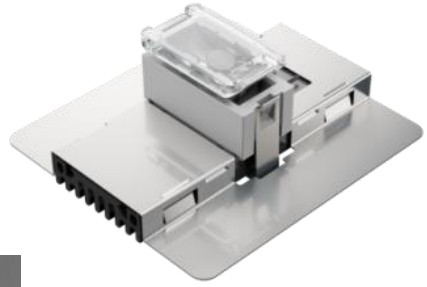
- Product drawing and fixing cut-out
- Material thickness with enamel 0,5 - 1,2 mm





Compact LED oven lamp

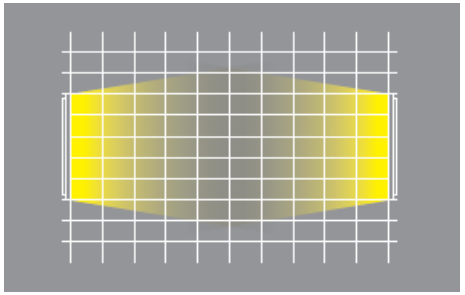
77.119.1001.00



- Installation example

LED door lamp for professional cooking equipment

Symmetric
Light emission characteristic



77.116.1001.00 (130 mm) / 77.116.1002.00 (230 mm)

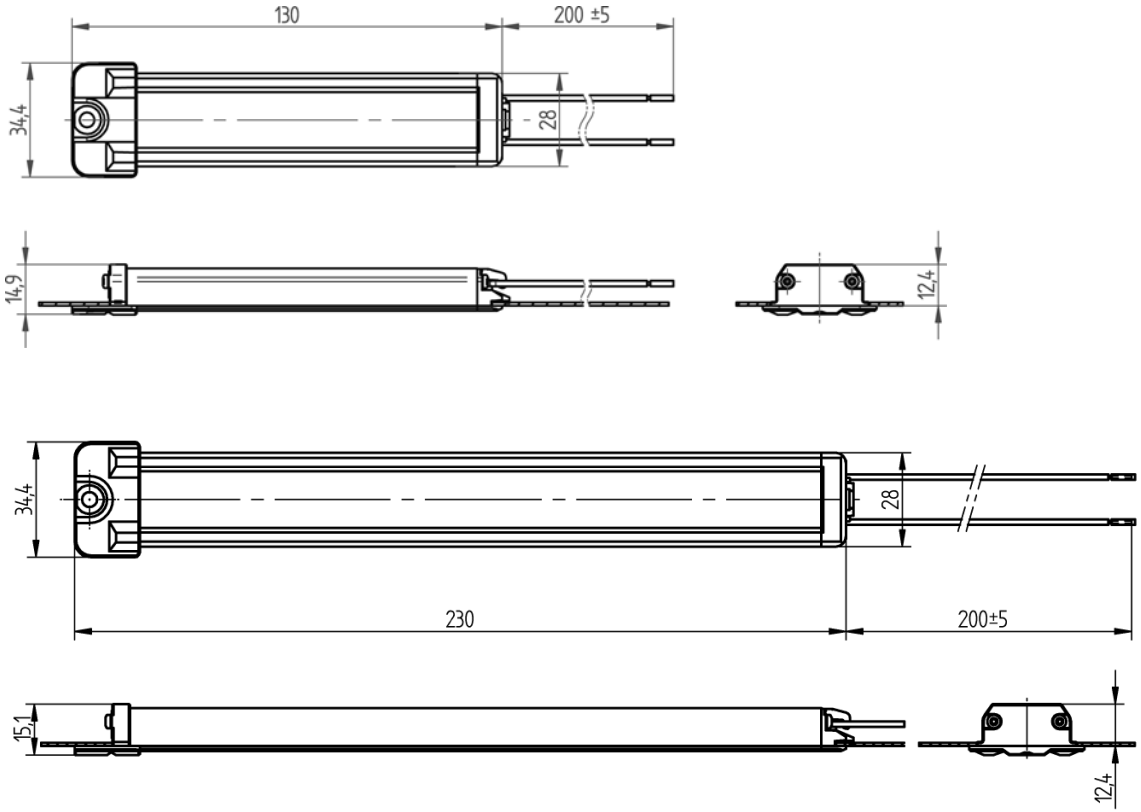
- Easy installation by swivel- and screw fixing
- Different lengths possible
- Maximum ambient temperature 100 C°

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	270 lm
Power consumption:	3,5 W

LED door lamp for professional cooking equipment

77.116.1001.00 (130 mm) / 77.116.1002.00 (230 mm)

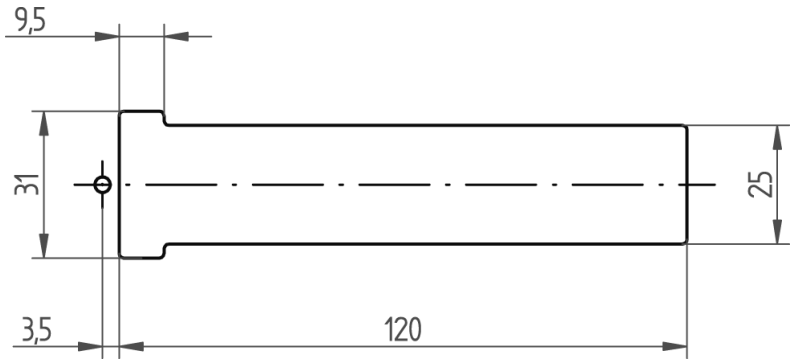
- Product drawing

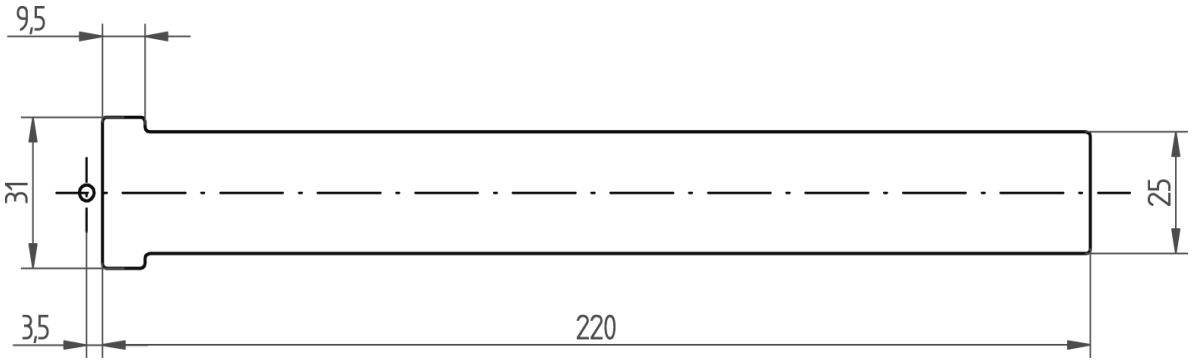


LED door lamp for professional cooking equipment

77.116.1001.00 /77.116.1002.00

- Fixing cut-out
- Material thickness 0,5 - 1,0 mm

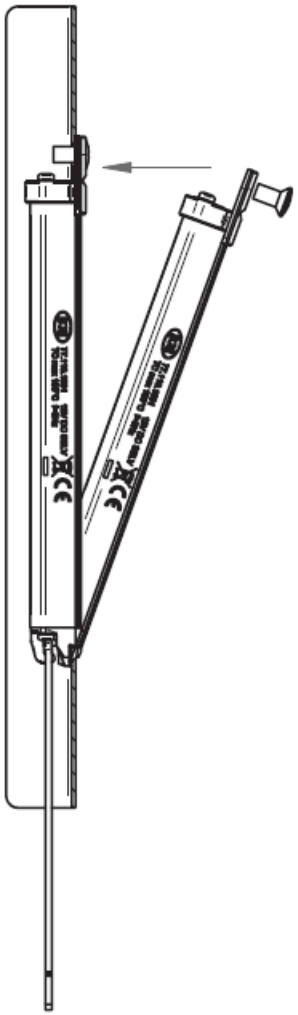




LED door lamp for professional cooking equipment

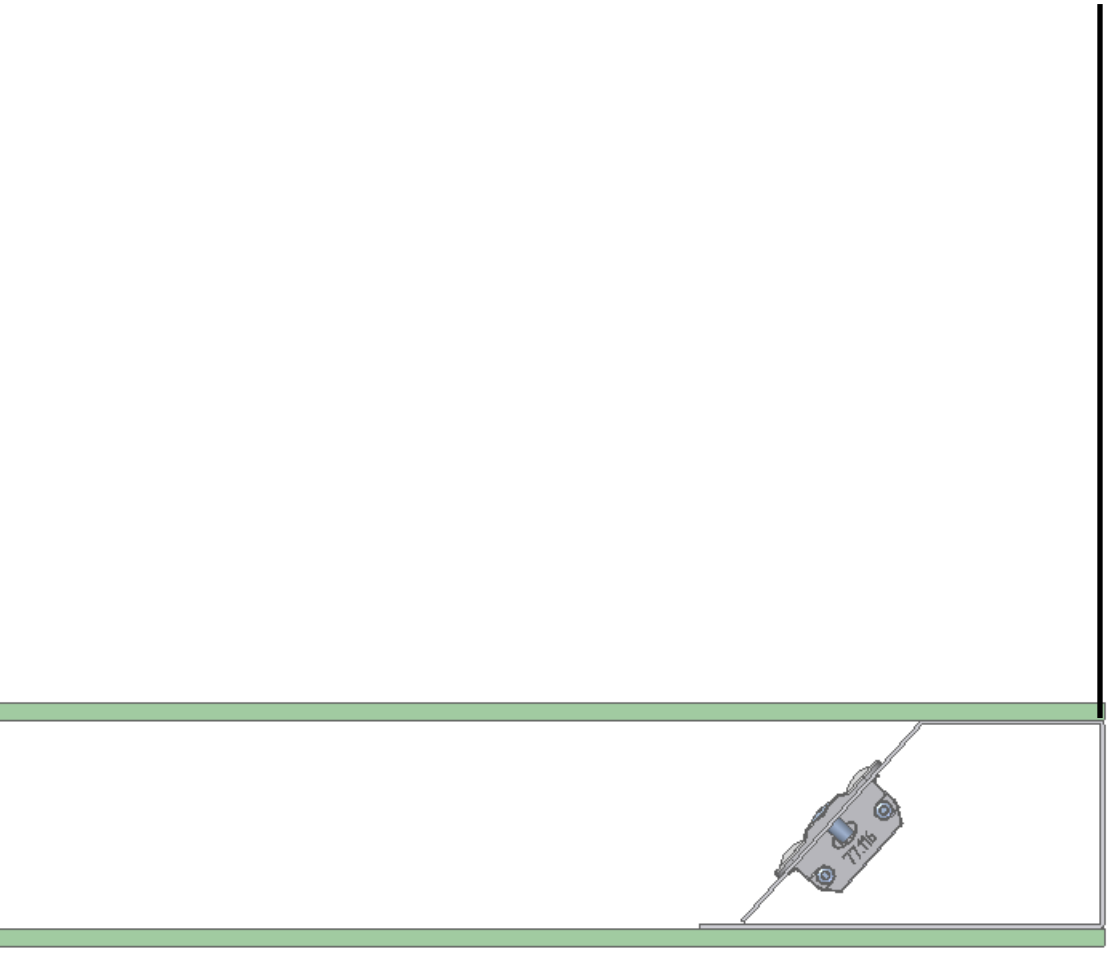
77.116.1001.00 / 77.116.1002.00

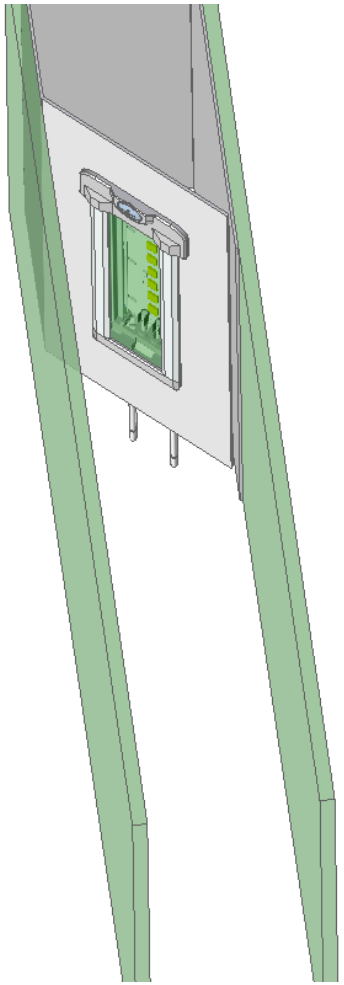
- Swivel- and screw fixing



77.116.1001.00 / 77.116.1002.00

- Installation example

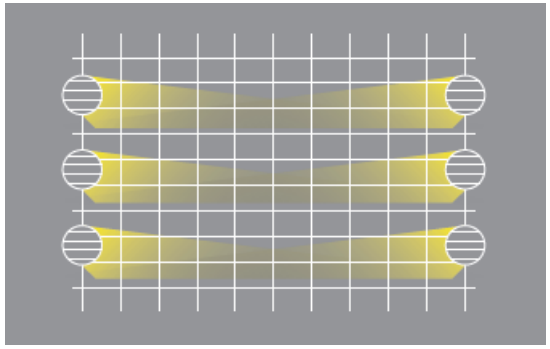




LED lighting system for ovens

CONCEPT

Light emission characteristic



77.112

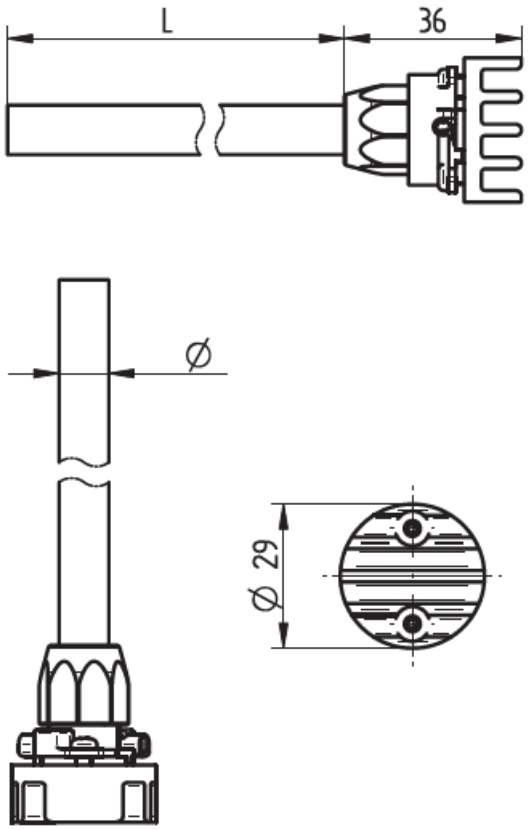
- Homogeneous illumination of all levels by means of light guides
- Directional light control focused on the food being cooked
- Brilliant colour rendering realistically displays degree of browning

CRI:	> 80
Colour temperature:	3,000 K
Luminous flux:	230 lm
Power consumption:	2,6 W

LED lighting system for ovens

77.112

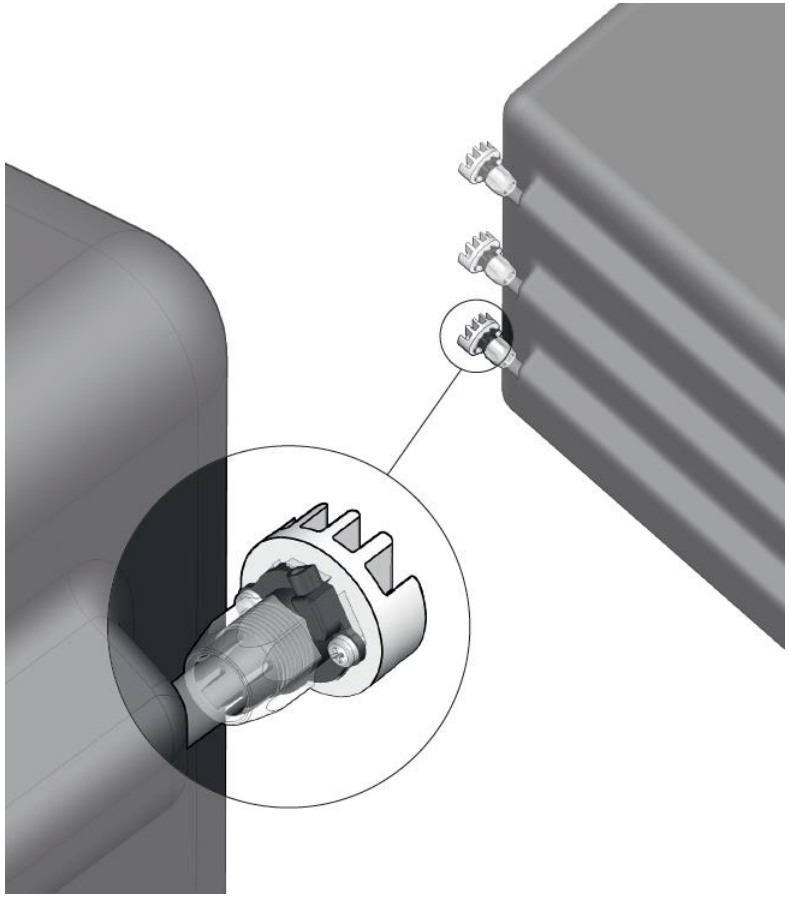
- Product drawing



LED lighting system for ovens

77.112

- Installation example



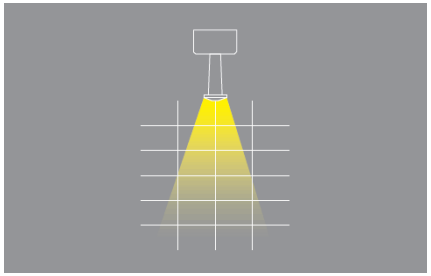
Lighting for dishwashers, washing machines,
tumble driers and small appliances

Universal LED luminaire 77.103 for dishwashers, washing machines, tumble driers and small appliances

Adapters for different cut-outs

CONCEPT

Symmetric
Light emission characteristic

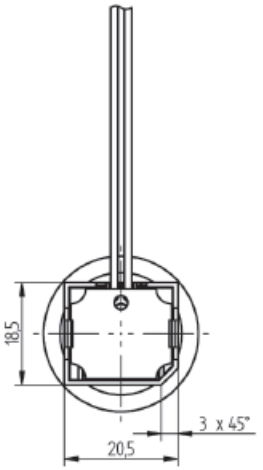


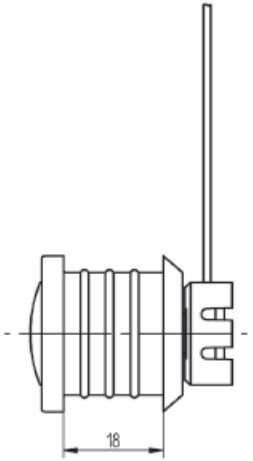
- Flexible positioning due to small installation size
- Uniform light guide rod module - can be combined with adapters for individual cut-outs
- Small cut-outs minimize energy losses

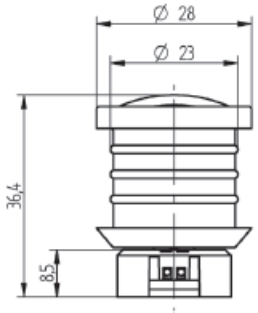
CRI:	> 80
Colour temperature:	4,000 K
Luminous flux:	83 lm
Power consumption:	0.9 W

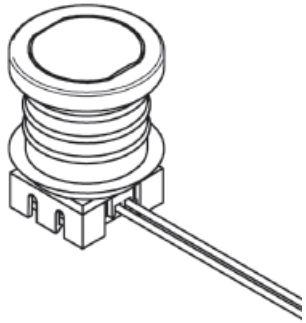
Universal LED luminaire 77.103 for dishwashers, washing machines, tumble driers and small appliances

- Product drawing
  (example light guide rod module with adapter for washing machines or tumble driers)



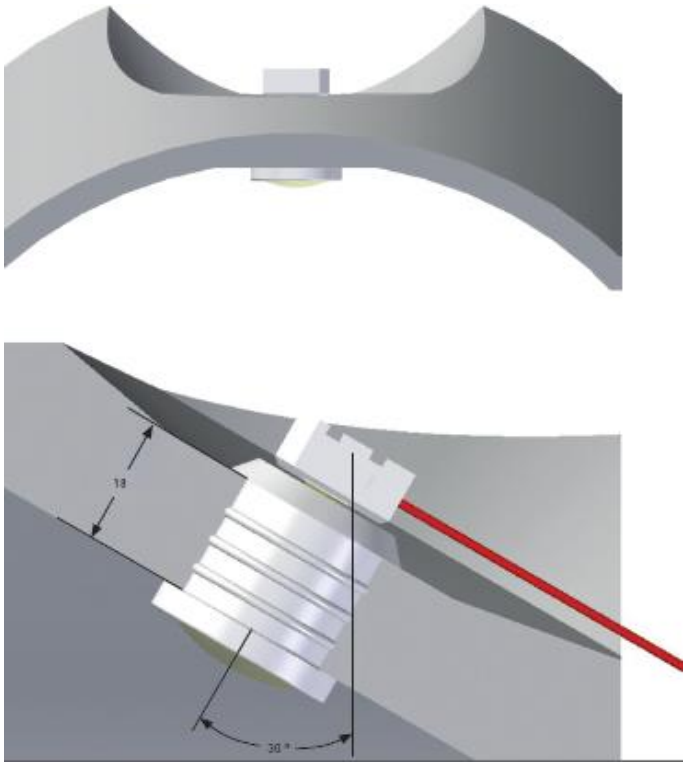




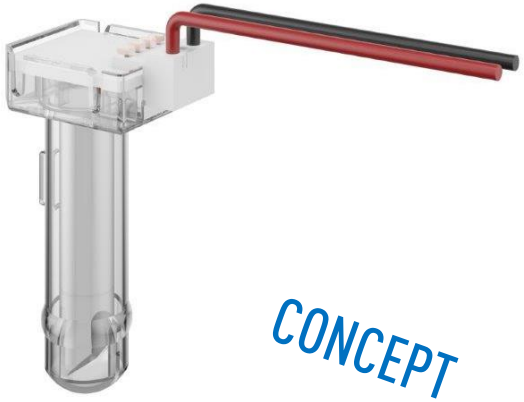


Universal LED luminaire 77.103 for dishwashers, washing machines, tumble driers and small appliances

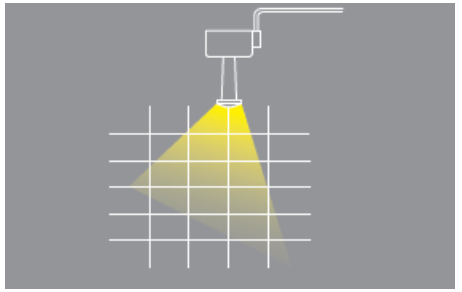
- Installation example: Insertion into rubber seal of washing machine or drier



LED lamp for washing machines and tumble driers



Asymmetric
Light emission characteristic



77.103

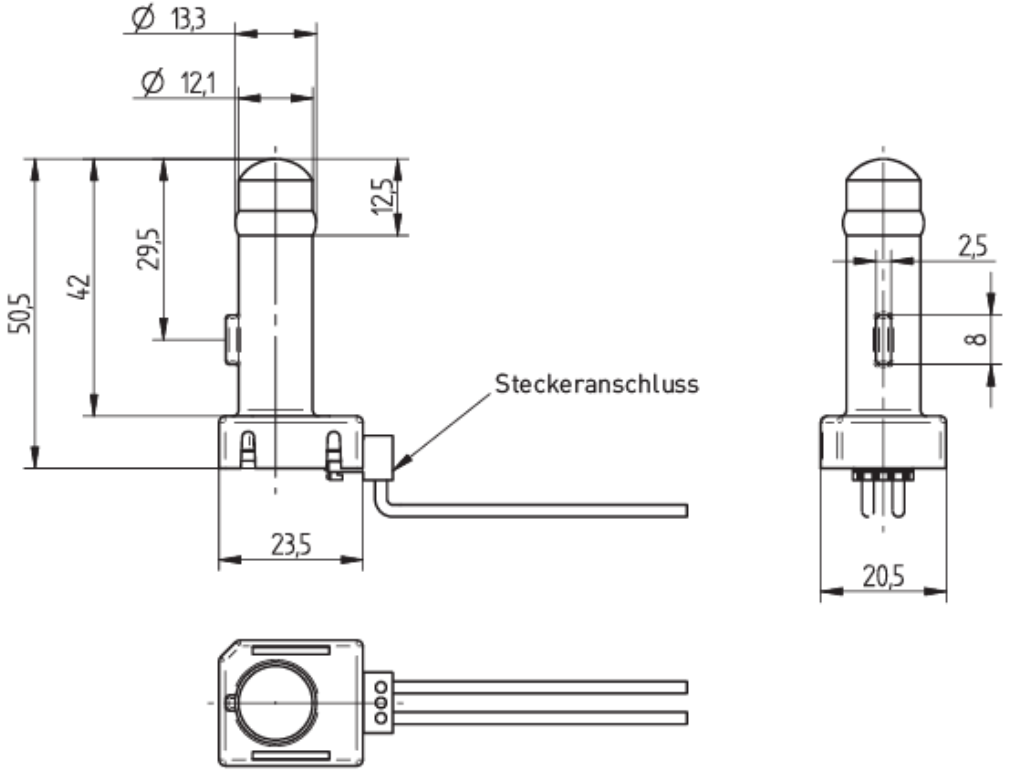
- High degree of flexibility in positioning due to small light emitting area
- Easy installation by inserting push-in fixing into rubber seal
- Completely waterproof thanks to one-piece housing

CRI:	> 80
Colour temperature:	4.000 K
Luminous flux:	110 lm
Power consumption:	1,25 W

LED lamp for washing machines and tumble driers

77.103

- Product drawing



LED lamp for washing machines and tumble driers

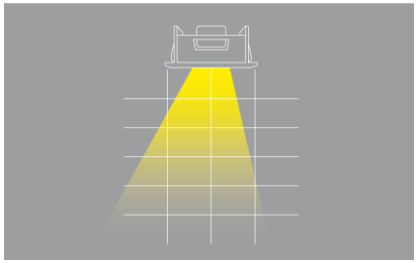
77.103

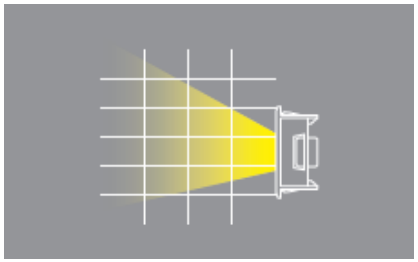
- Installation example: Insertion into rubber seal

Lighting for refrigerators, freezers, climate-cooled wine cabinets and wine coolers

LED side/ceiling light for refrigerators

Asymmetric
Light emission characteristic





77.108.1001.89

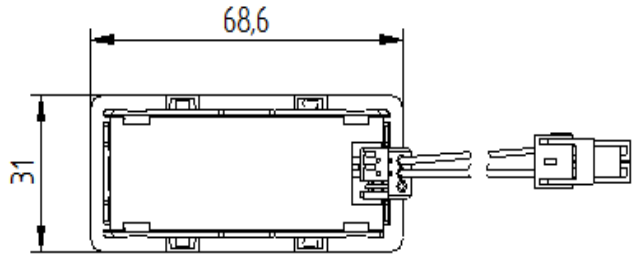
- Small installation opening minimises energy loses
- Cover for foam sealing 77.108.-302.50 (Concept)
- Plastic housing food safe

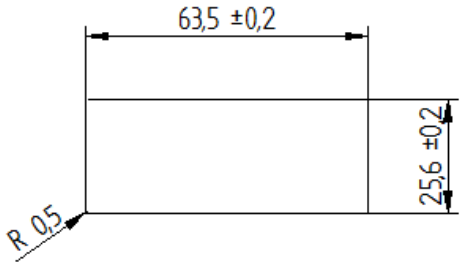
CRI:	> 80
Colour temperature:	4,000 K
Luminous flux:	120 lm
Power consumption:	1,5 W

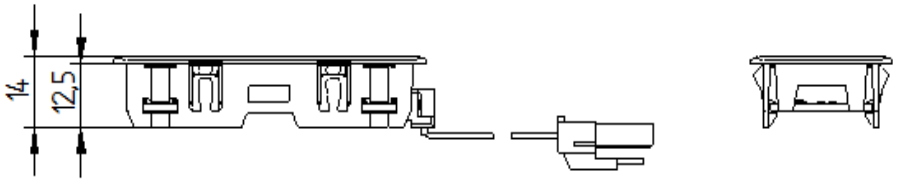
LED side/ceiling light for refrigerators

77.108.1001.89

- Product drawing and fixing cut-out
- Material thickness with enamel 0,5 - 1,0 mm







LED side/ceiling light for refrigerators

77.108.-302.50

- Cover 77.108.-302.50 for foam sealing

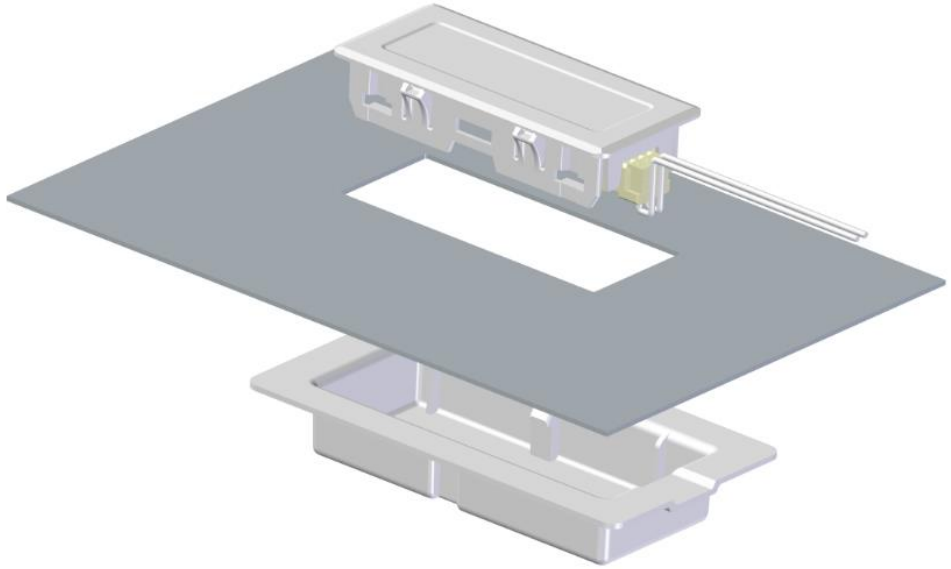
CONCEPT

LED side/ceiling light for refrigerators

77.108.-302.50

- Cover 77.108.-302.50 for foam sealing
- Application

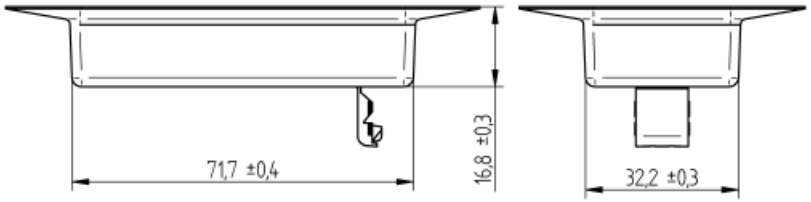
CONCEPT

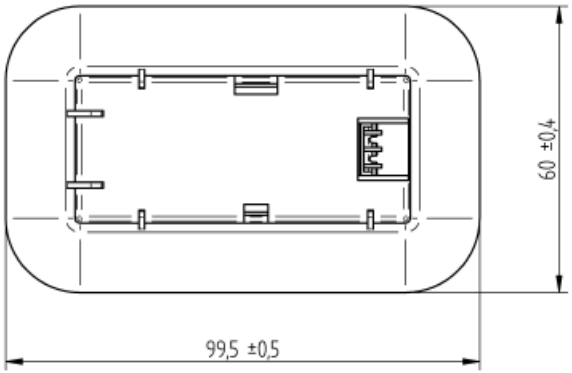


LED side/ceiling light for refrigerators

77.108.-302.50

- Product drawing

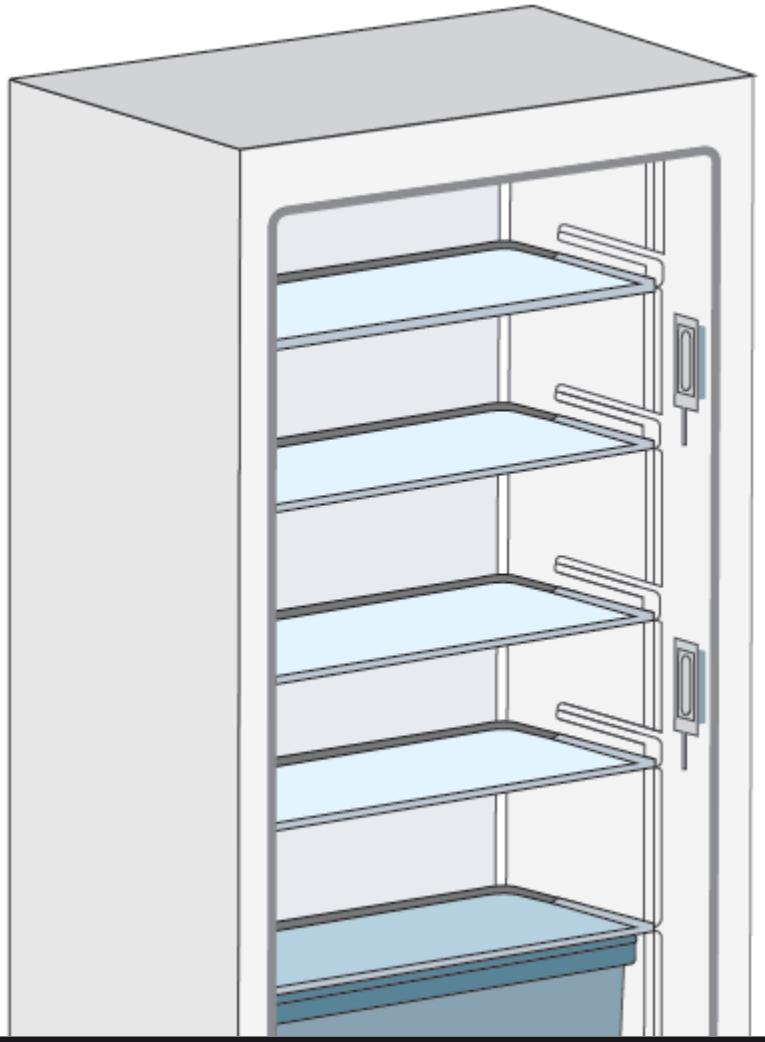




LED side/ceiling light for refrigerators

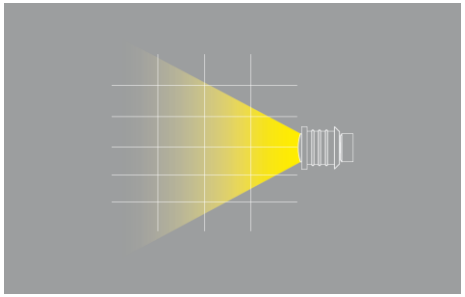
77.108.-302.50

- Installation example



77.103 LED lamp for refrigerators

Symmetric
Light emission characteristic



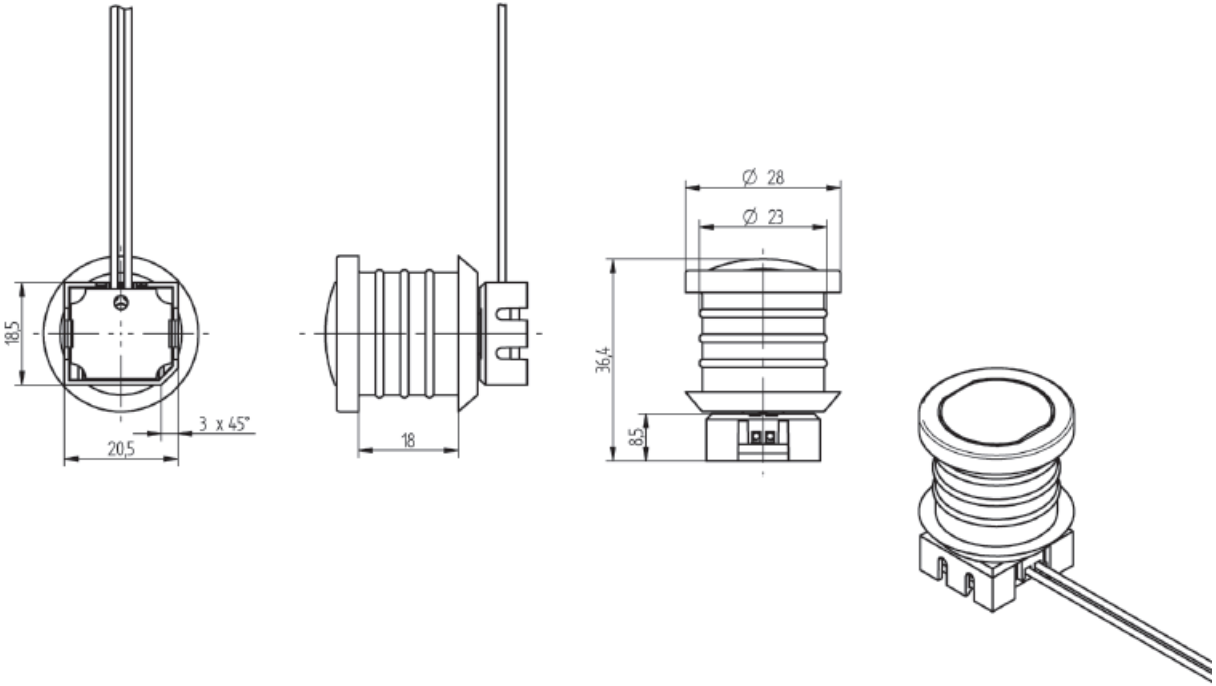
CONCEPT

- Flexible positioning due to small installation size
- Uniform light guide rod module - can be combined with adapters for individual cut-outs
- Small cut-outs minimize energy losses

CRI:	> 80
Colour temperature:	4,000 K
Luminous flux:	83 lm
Power consumption:	0.9 W

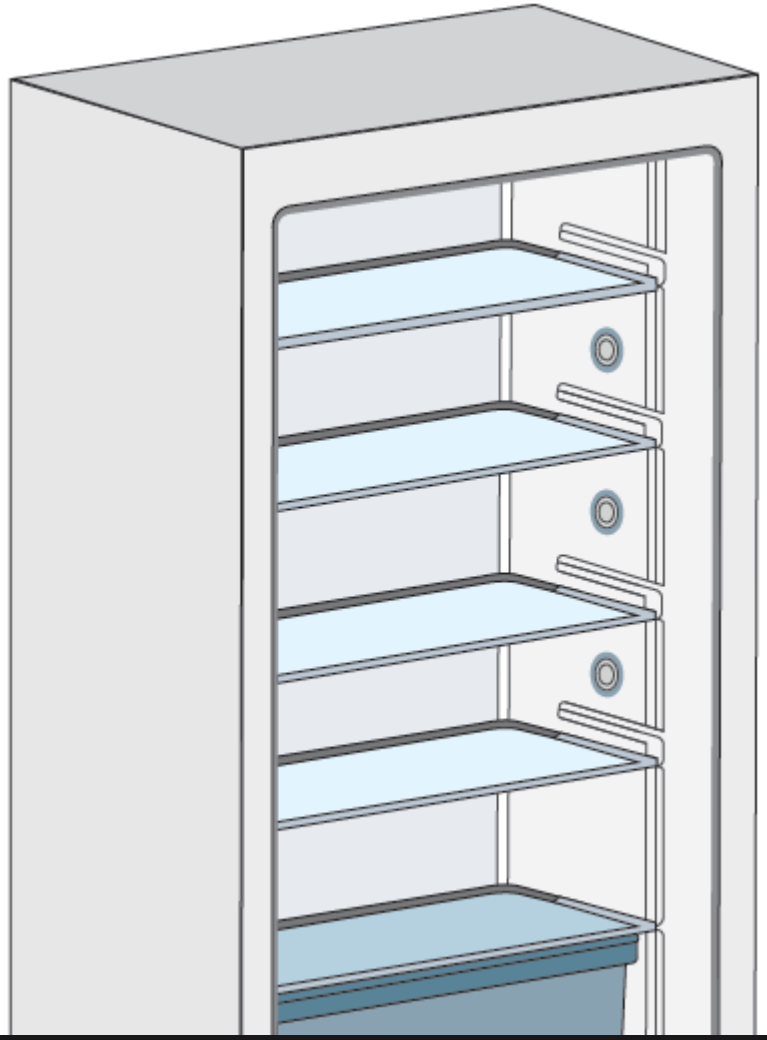
77.103 LED lamp for refrigerators

- Product drawing
  (example light guide rod module with adapter)



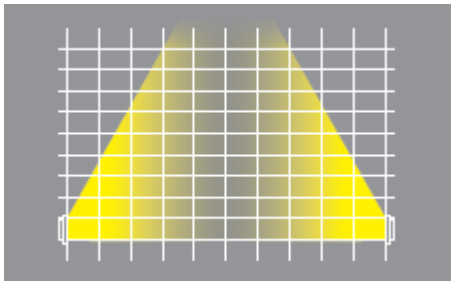
77.103 LED lamp for refrigerators

- Installation example



Amber Light LED lamp 77.116 for storing wine

Asymmetric
Light emission characteristic



77.116

- The amber colour temperature protects the quality of wine
- Easy installation using swivel-screw fixing
- Minimal protrusion into the interior
- Variable length

Colour temperature:	amber
Luminous flux:	ca. 250 lm
Power consumption:	3,5 W

Amber Light LED lamp 77.116 for storing wine

77.116

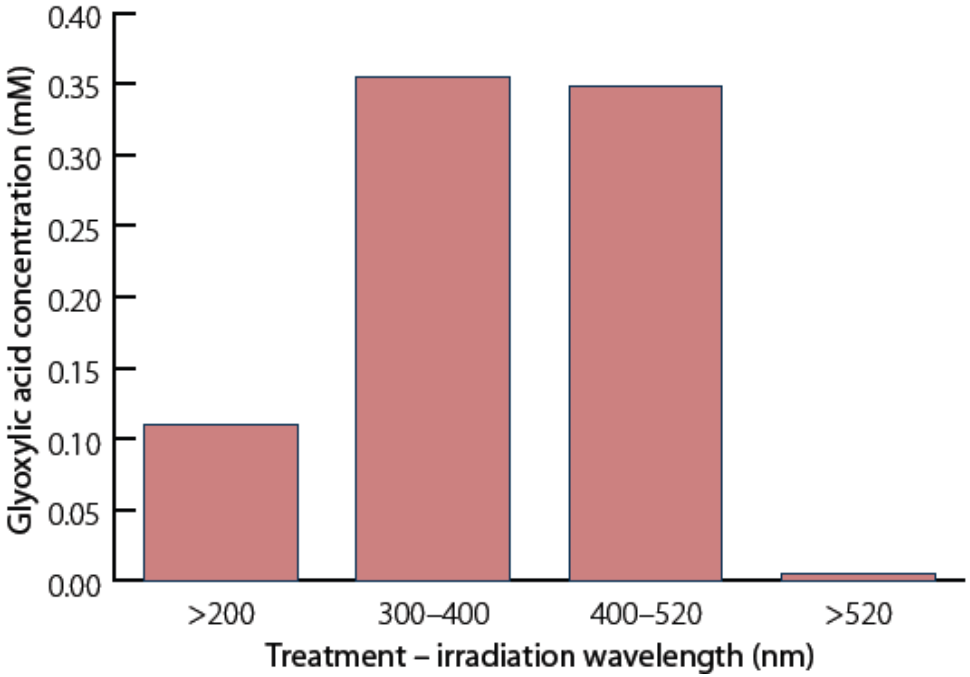
Why Amber Light?

- Wine coloured yellowish brown when exposed to false light or to high temperatures.
- For example, Chardonnay improperly exposed for 18 days for (16 + 8 hrs), the aromas in the wine change.

77.116

Why Amber Light?

- For wavelengths between 200-300 nm and > 520 nm, less glyoxylic acid (and thus less discoloration) is produced than between 300-520 nm.

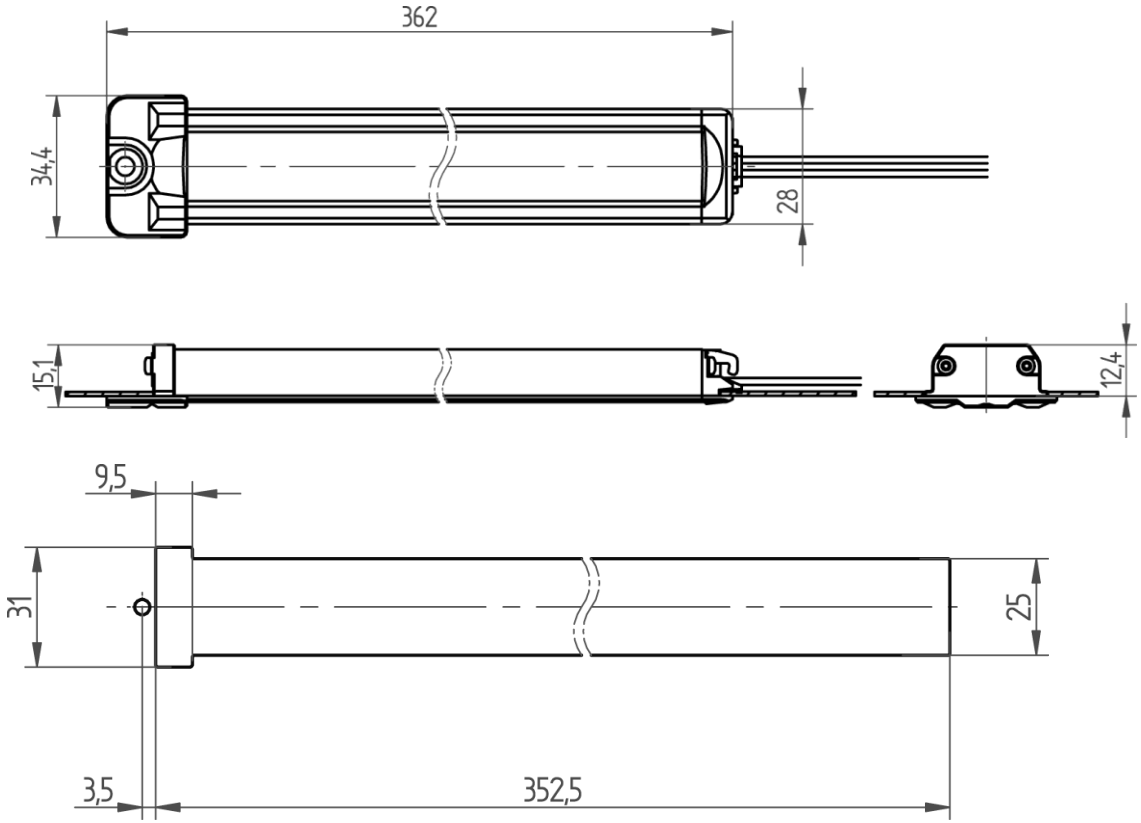


- Amber Light has a wavelength of 590 nm and thus protects the wine.

Amber Light LED lamp 77.116 for storing wine

77.116

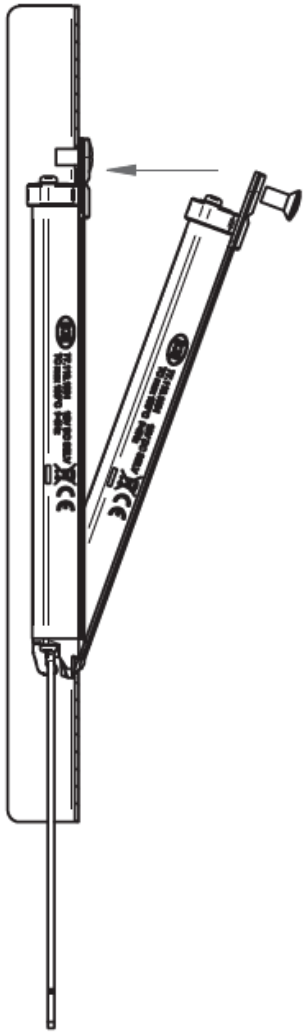
- Product drawing and fixing cut-out
- Material thickness 0,5 - 1,0 mm



Amber Light LED lamp 77.116 for storing wine

77.116

- Swivel- and screw fixing



Amber Light LED lamp 77.116 for storing wine

77.116

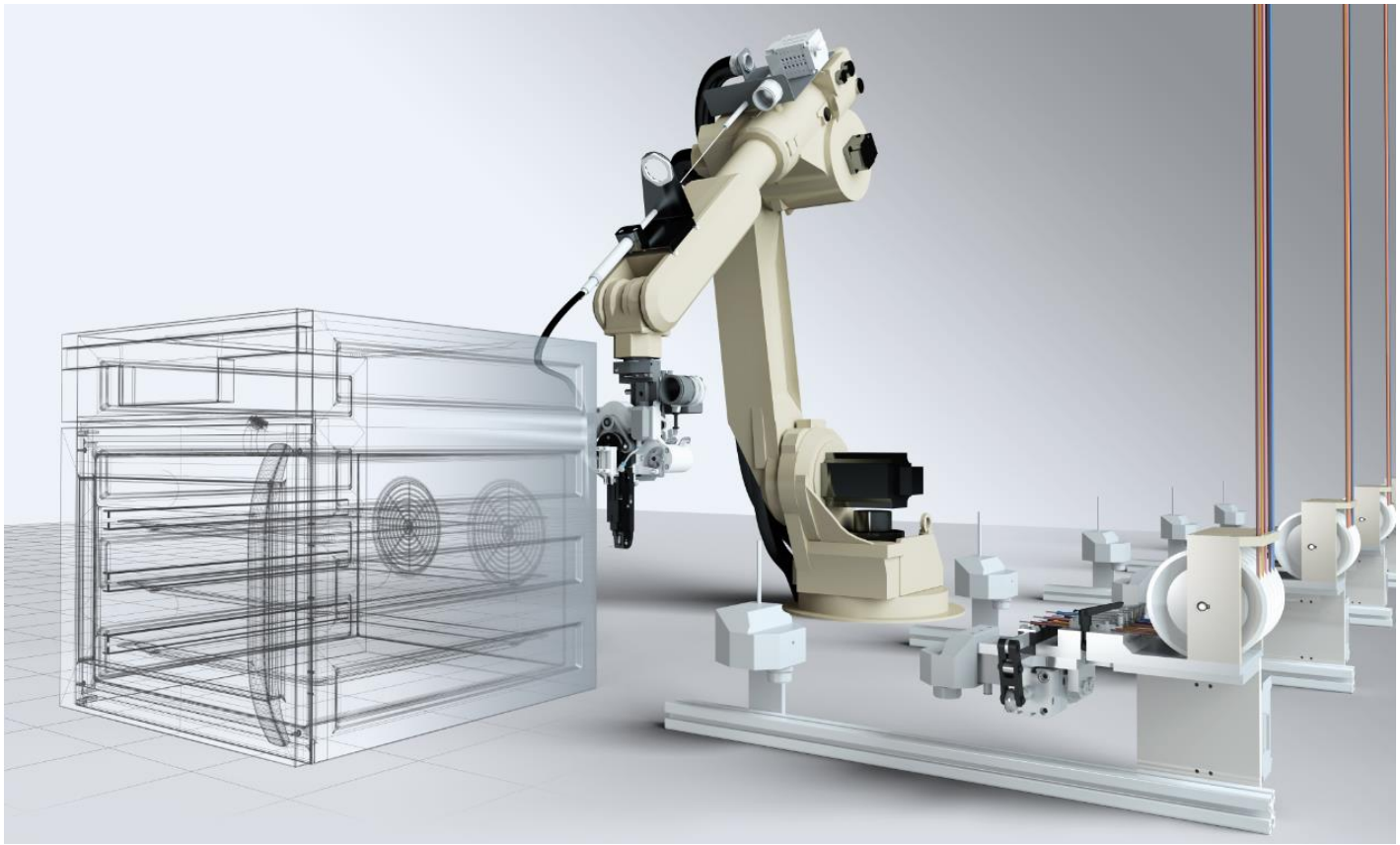
- Installation example

Automation for Appliances

- Assembly
- Wiring
- Testing

Automation for Appliances

- Example: Automatic wiring of ovens

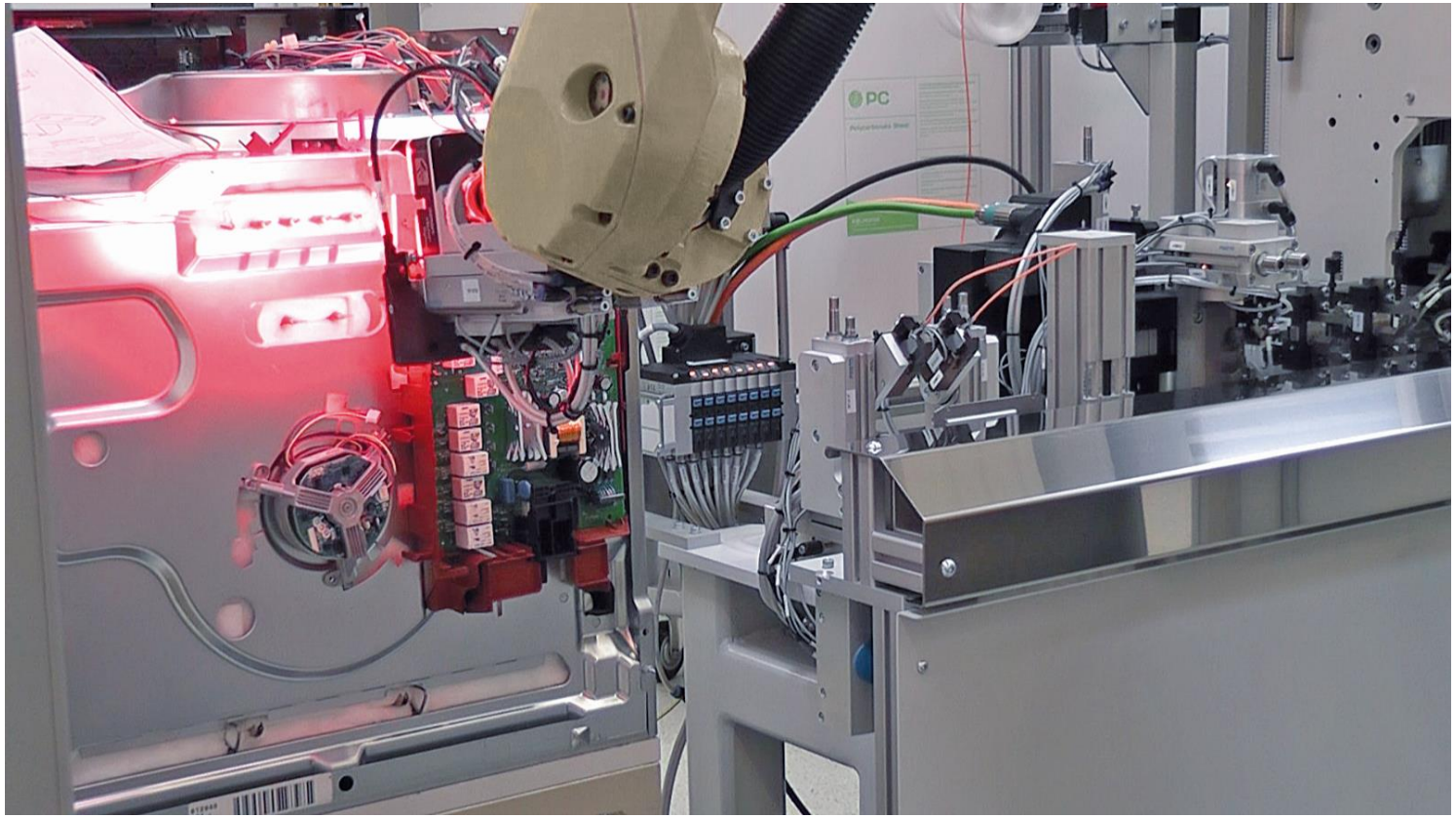


Automation for Appliances

- Machines for the preparation of various conductors

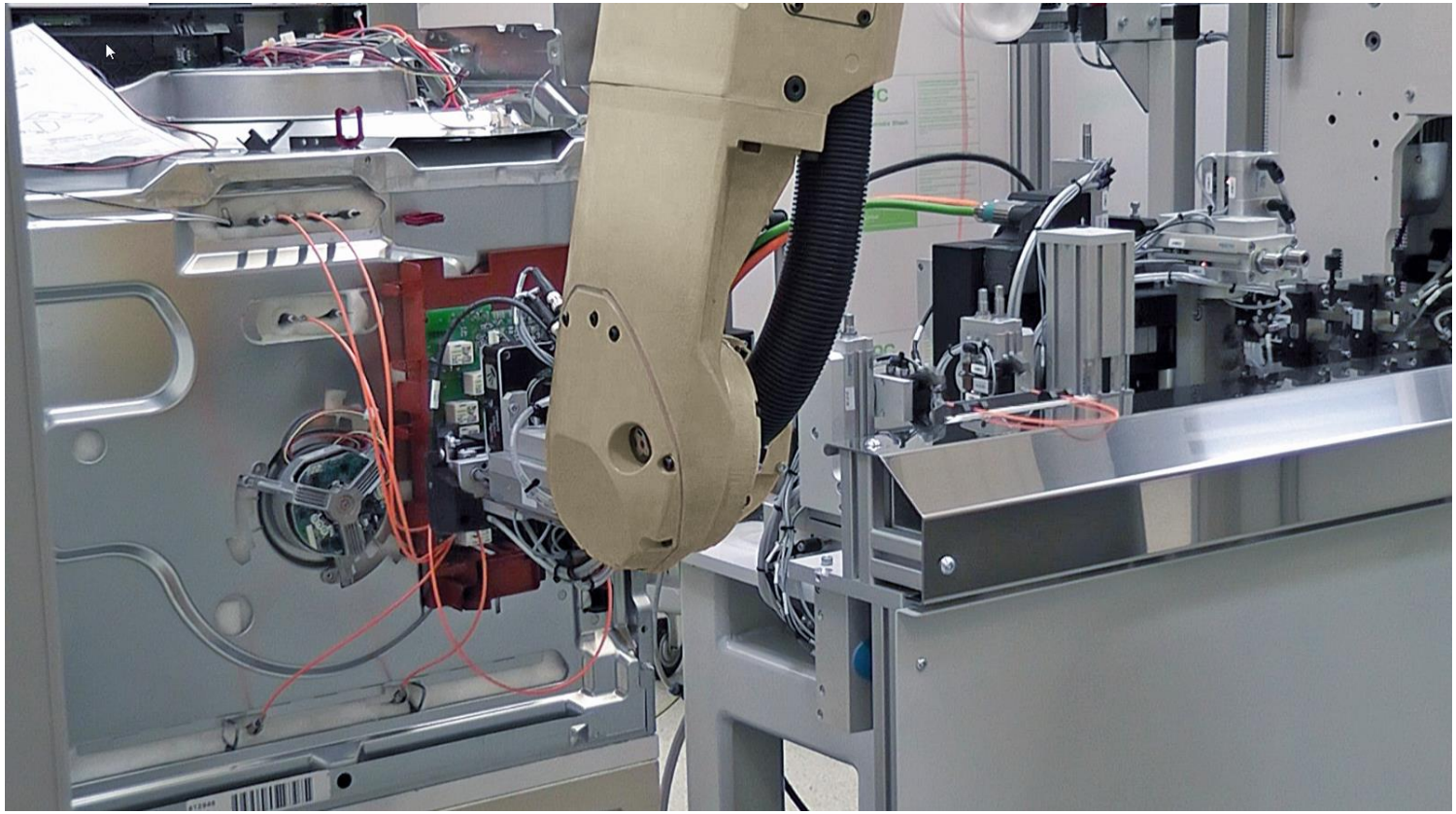
Automation for Appliances

- Optical measurement of push-wire connection positions



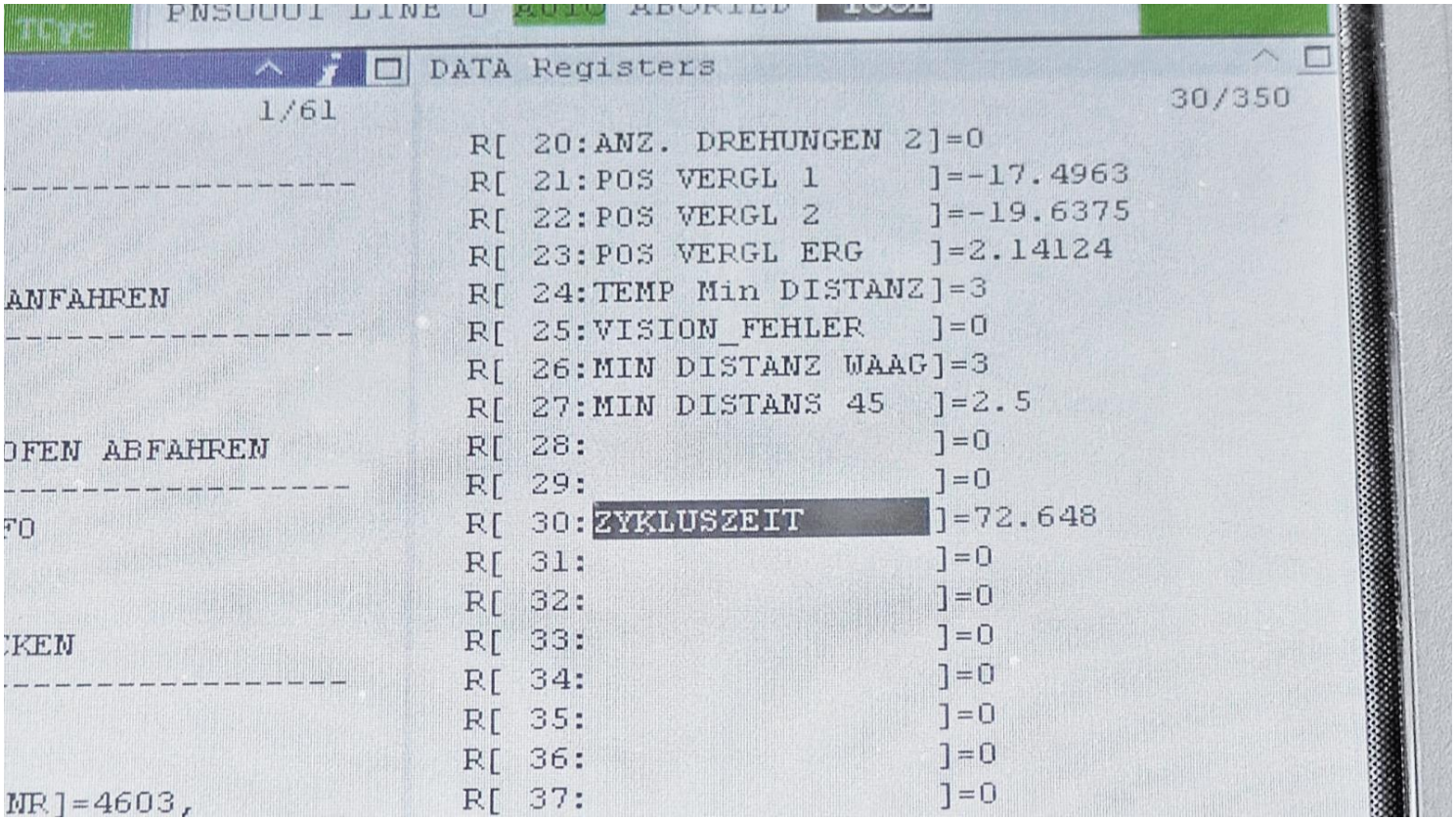
Automation for Appliances

- Automatic wiring of an oven on the rear side of the appliance



Automation for Appliances

- Recording and documentation



Automation for Appliances

- Film

Thank You for Your Attention