



# SmartForm – the new standard for office lighting with slender recessed luminaires

## SmartForm TBS415

Reflecting Philips' drive for simplicity and sustainability, SmartForm recessed is a complete family of highly versatile modular and semi-modular luminaires. These luminaires are available with a choice of LED or MASTER TL5 light sources in very small, slender versions. Designed to fit in a wide range of ceiling types, this complete family can fulfill the majority of project requirements in most applications. Energy efficiency As well as incorporating energy-efficient light sources and electronic ballasts, the SmartForm recessed family can be equipped with lighting controls. These include solutions for presence detection and daylight regulation (ActiLume) or daylight regulation only (Luxsense), thereby further reducing energy consumption ( $W/m^2$  is very low). In this way, this Green Flagship range lowers overall cost of ownership as well as CO<sub>2</sub> levels, making SmartForm an environmentally friendly choice. SmartForm recessed TBS415 – 'light beam' semi-modular – 600 mm module SmartForm recessed luminaires are designed for integration in linear ceiling systems with a width of 148 mm (half module 300 mm) for exposed and concealed T-bar and the extended versions for bandrastrer ceilings. 'Light surface' TBS415 1-lamp MLO and asymmetrical optic in 1/2 modular concept, width 148 mm. Modular length 600, 900, 1200 and 1500 mm. To extend till 2400 mm. 'Light beam' TBS415 1-lamp: micro-optics in 1/2 modular concept with AIR function, width 148 mm. Modular length 600, 900, 1200 and 1500 mm. To extend till 2400 mm. 'Light beam' TBS415 2-lamps Mini-optics, 2-lamps in 1/2 modular concept with AIR function, width 148 mm. Modular length 600, 900, 1200 and 1500 mm. To extend till 2400 mm.

## Benefits

- Slender, recessed 'light surface' luminaires with MLO Micro Lens Optics or 'light beam' luminaires with micro- or mini-optics for unobtrusive ceiling integration
- Complete family of linear luminaires designed to fit a wide range of ceiling types
- Available with either 1 or 2 TL5 lamps for excellent, energy-efficient office lighting solutions

## Features

- Choice of LED or MASTER TL5 light sources
- MLO optics
- Electronic ballast
- Can be equipped with lighting controls for presence detection and daylight regulation (ActiLume) or daylight regulation only (Luxsense)

## Application

- Offices
- Education
- Healthcare
- Recreation
- Retail
- Industry

## Specifications

<b>Type</b>	TBS415 (semi-modular light beam)
<b>Ceiling grid</b>	Width of all luminaires is 150 mm; module size in length: 600 mm for exposed- and symmetrical concealed- T-bar ceiling and plaster (board) ceilings Extended versions, length max. 2400 mm, for bandrastr ceilings
<b>Light source</b>	Fluorescent: - 1 x or 2 x MASTER TL5 ECO / G5 / 13, 20, 25, 32, 45, 50, 73 W - 1 x or 2 x MASTER TL5 / G5 / 14, 21, 24, 28, 35, 39, 49, 54, 80 W
<b>Lamp included</b>	Yes, TL5 ECO (lamp color 830 or 840) Yes, TL5 (lamp color 827, 830 or 840) In certain versions no lamps are included
<b>Gear</b>	Electronic, 220-240 V / 50-60 Hz: - High Frequency Performer (HFP) - High Frequency Performer, intelligent, multi-watt (HFPI) - High Frequency Regulator, DALI (HFD) - High Frequency Regulator, 1-10 V (HFR) - High Frequency Regulator, touch-DALI (HFD-T)

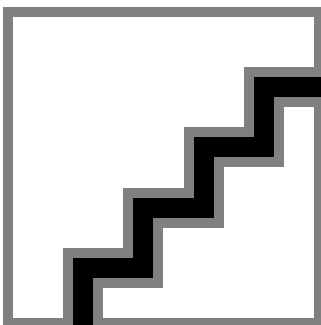
<b>Optic</b>	1-lamp version: - Micro OLC very high efficiency high-gloss optic (C8-VH) - Micro OLC very high efficiency high-gloss optic with top-reflector (T C8-VH) - Micro OLC performer high-gloss optic (C8) - Micro OLC excellent comfort high-gloss optic (C8-C) - Micro OLC very high efficiency semi-high-gloss optic (D8-VH) - Micro OLC very high efficiency semi-high-gloss optic with top-reflector (T D8-VH) - Micro OLC performer semi-high-gloss optic (D8) - Micro OLC excellent comfort semi-high-gloss optic (D8-C) - Micro OLC performer semi-high-gloss bi-directional optic with top-reflector (T D8-BD) - Micro matt mirror, ribbed cross louvers (M2) - Micro high efficiency mirror, ribbed cross louvers (M2-H) - High efficiency asymmetrical optic (A), no AIR function 2-lamp version: - Mini OLC performer high-gloss optic (C6) - Mini OLC very high efficiency high-gloss optic (C6-VH) - Mini OLC performer semi-high-gloss optic (D6) - Mini OLC very high efficiency semi-high-gloss optic (D6-VH)
<b>Optical cover (1-lamp version)</b>	OLC Micro Lens Optic in PC cover with top-reflector (T MLO-PC), no AIR function

## Specifications

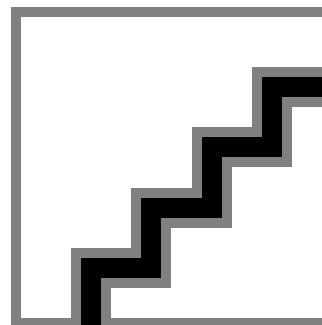
<b>Connection (outside housing)</b>	Push-in connector (PI) or with pull relief (PIP)
	Wieland connector GST 18, 3 or 4 poles (W, W4 respectively)
	Wago connector, 3 or 4 poles (WA, WA4 respectively)
	Ensto connector, 3 or 4 poles (EN, EN4 respectively)
	Cable, length 200 cm, with plug CEE7 (CCE)
<b>Options</b>	Air handling, slots besides optics, (AIR)
	Emergency lighting: 1 hour (EL1), 3 hours (EL3)
	Lighting controls:
	- Luxsense daylight controller micro (LXM)
	- ActiLume multi controller (ACL)
	Internal PVC free wiring (PVCFR)
	Euro fuse (FU) included
<b>Extended versions (bandrastrer ceilings)</b>	Symmetrical extended variable length, max. 2400 mm (L2400.0)
	Asymmetrical extended variable length, max. 2400 mm (L2400.0)

<b>Materials and finishing</b>	Housing: zinc-coated steel, white RAL 9016 based
	Optional white RAL 9010 or silver grey RAL 9006 based
	Rim detailing:
<b>Accessories</b>	- standard versions: width 12 mm, height 5 mm, post-lacquered
	- extended versions: width 12 mm, height 11 mm, pre-lacquered
	Exposed ceilings: lay-in, no brackets needed
	Concealed ceilings: bracket ZBS415 SMB SET
	Plaster ceilings: bracket ZBS460 SMB-PLC (12 pcs)
	Bandrastrer ceilings:
	- SB1 for standard bandrastrer (GPS200)
<b>Remarks</b>	- SB2 for GPS100
	- SB3 for C/U-profile bandrastrer, metal ceiling
	Protection foil to protect the optic during installation
<b>Main applications</b>	Dedicated luminaires available with air-handling functionality (AIR), 50 m³/hour/luminaire
	Office, education, healthcare, recreation, retail, industry

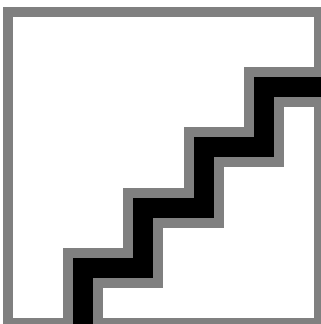
## Product details



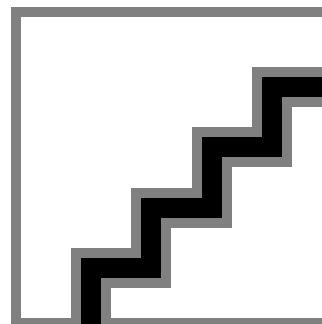
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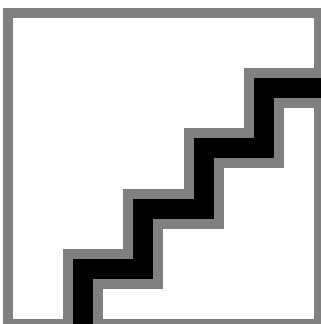
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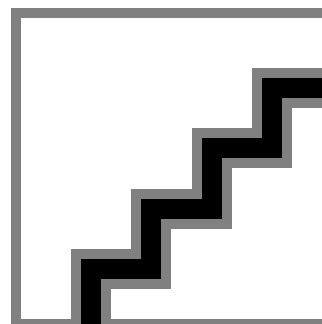
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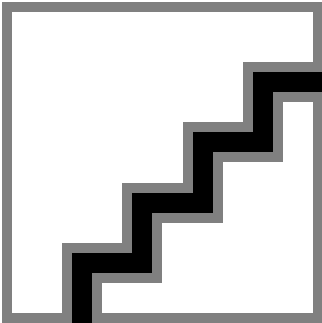


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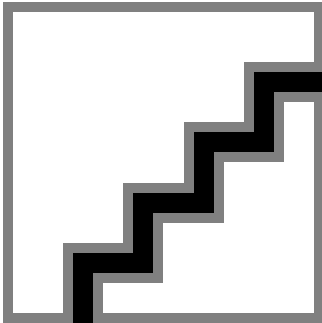


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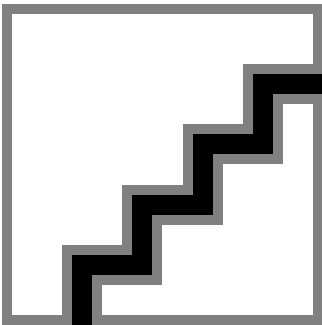
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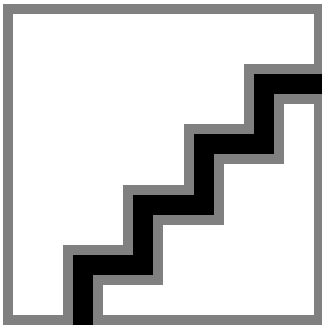
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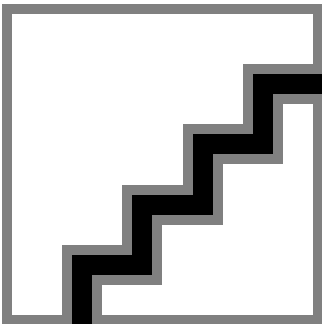
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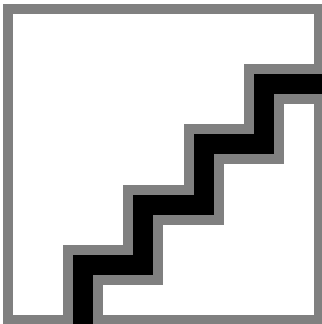
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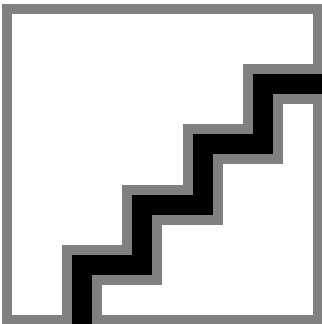
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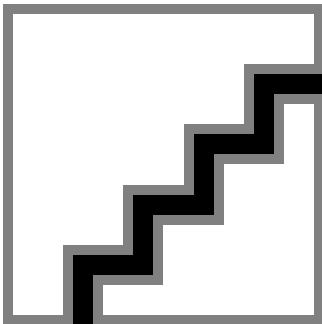
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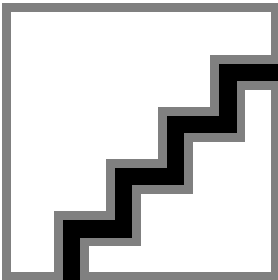
Accessories



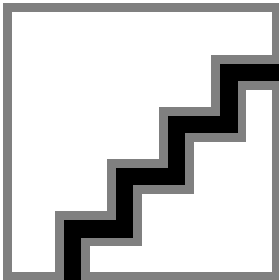
Optical cover remover

Ordercode 98469599

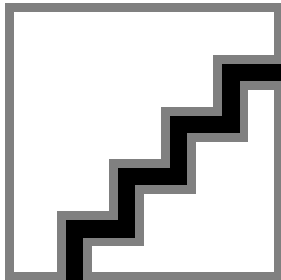
Polar Wide Diagrams



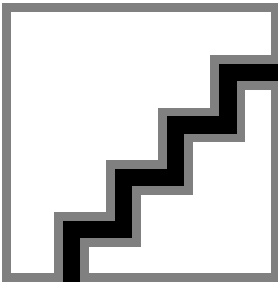
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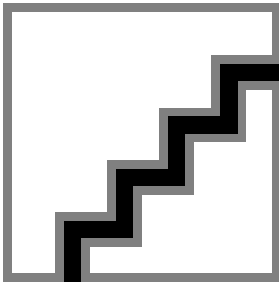
IFPS\_TBS415 1xTL5-35W HFP D8-Polar Normal (separate)



IFPS\_TBS415 1xTL5-49W HFP D8-Polar Normal (separate)



IFPS\_TBS415 1xTL5-54W HFP D8-Polar Normal (separate)



IFPS\_TBS415 1xTL5-35W HFP D8-VH-Polar Normal (separate)

