



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

## SmartForm TBS411

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 TBS411 – 'light beam' semi-modular – 600 mm module These slender SmartForm recessed luminaires are designed for integration in variety of linear ceiling systems: exposed and concealed T-bar, plaster and the extended versions for bandrastrer ceilings. 'Light beam' TBS411 1-lamp Micro-optics and covers (MLO-PC and Opal) in smallest concept, width 90 mm. Modular length 600, 900, 1200 and 1500 mm. To extend till 2400 mm. 'Light beam' TBS411 1-lamp with AIR Micro-optics and covers in smallest concept with AIR function, width 100 mm. Modular length 600, 900, 1200 and 1500 mm. To extend till 2400 mm. 'Light beam' TBS411 2-lamps Mini-optics, 2-lamps, width 115 mm. Modular length 600, 900, 1200 and 1500 mm. To extend till 2400 mm.

## Benefits

- Slender, recessed 'light beam' luminaires with micro- or mini-optics for unobtrusive ceiling integration
- Complete family of linear luminaires including very small, slender versions, all 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
- Micro- or mini-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>          | TBS411 (semi-modular light beam)                                                                                                                                                                                                                                                      |
| <b>Ceiling grid</b>  | Module size in length: 600 mm for exposed- and symmetrical concealed- T-bar ceiling and plaster (board) ceilings<br>Extended versions, length max. 2400 mm, for bandrastrer ceilings                                                                                                  |
| <b>Light source</b>  | Fluorescent:<br>- 1 x or 2 x MASTER TL5 ECO / G5 / 13, 20, 25, 32, 45, 50, 73 W<br>- 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)<br>Yes, TL5 (lamp color 827, 830 or 840)<br>In certain versions no lamps are included                                                                                                                                                            |
| <b>Gear</b>          | Electronic, 220-240 V / 50-60 Hz:<br>- High Frequency Performer (HFP)<br>- High Frequency Performer, intelligent, multi-watt (HFPI)<br>- High Frequency Regulator, 1-10 V (HFR)<br>- High Frequency Regulator, DALI (HFD)<br>- High Frequency Regulator DALI, touch & dimming (HFD-T) |

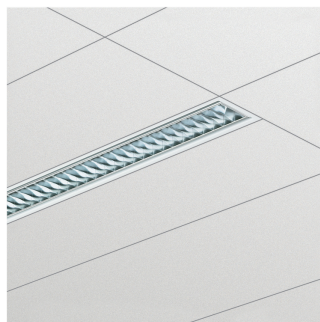
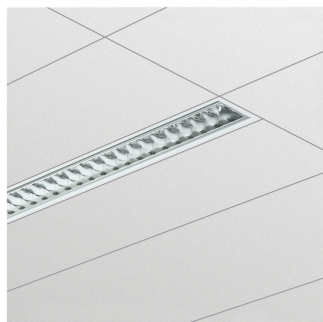
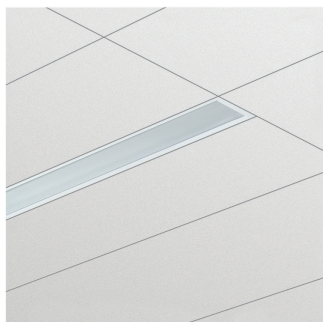
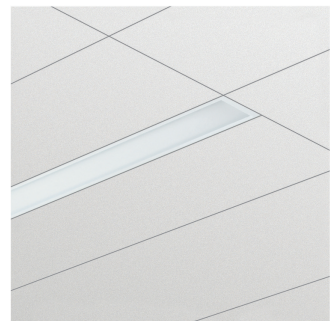
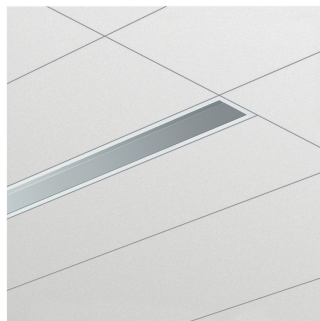
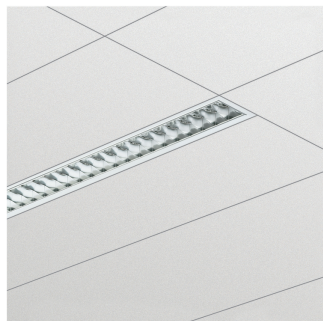
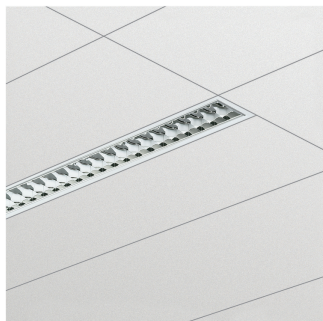
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|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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

## Specifications

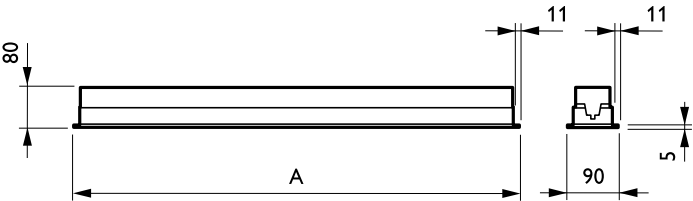
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|-------------------------------------|---------------------------------------------------------------|
| <b>Connection (outside housing)</b> | Push-in connector (PI) or with pull relief (PIP)              |
|                                     | 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, width plus 10 mm (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                                       |
|                                     | Safety cable (SC)                                             |
| <b>Extended versions</b>            | Symmetrical extended variable length, max. 2400 mm (L2400.0)  |
| <b>(bandrafter ceilings)</b>        | Asymmetrical extended variable length, max. 2400 mm (L2400.0) |
| <b>Materials and color</b>          | Housing: zinc-coated steel, white RAL 9016 based              |
|                                     | Optional white RAL 9010 or silver grey RAL 9006 based         |
|                                     | Rim detailing:                                                |
|                                     | - standard versions: width 12 mm, height 5 mm, post-lacquered |
|                                     | - extended versions: width 12 mm, height 11 mm, pre-lacquered |

|                          |                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------|
| <b>Accessories</b>       | Exposed ceilings: lay-in, no brackets needed                                               |
|                          | Concealed ceilings: bracket ZBS415 SMB SET                                                 |
|                          | Plaster ceilings: bracket ZBS460 SMB-PLC (12 pcs)                                          |
|                          | Bandrafter ceilings:                                                                       |
|                          | - SB1 for standard bandrafter (GPS200)                                                     |
| <b>Remarks</b>           | - SB2 for GPS100                                                                           |
|                          | - SB3 for C/U-profile bandrafter, metal ceiling                                            |
|                          | Protection foil to protect the optic during installation                                   |
|                          | Dedicated luminaires available with air-handling functionality (AIR), 50 m³/hour/luminaire |
| <b>Main applications</b> | Office, education, healthcare, recreation, retail, industry                                |

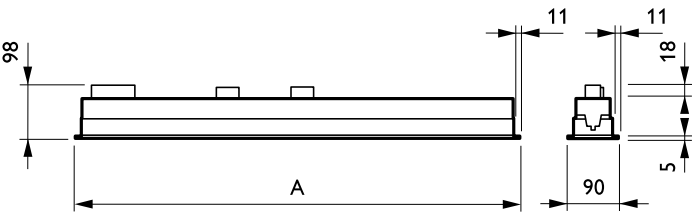
## Versions



Dimensional drawing

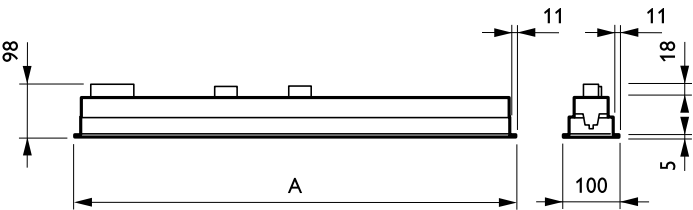


| Product                         | A       |
|---------------------------------|---------|
| TBS411 1x28W/840 HFP C8 PIP     | 1197 mm |
| TBS411 1x14W/840 HFP C8 PIP SC  | 597 mm  |
| TBS411 1x28W/840 HFP C8-VH PIP  | 1197 mm |
| TBS411 1x54W/840 HFP D8 PIP     | 1197 mm |
| TBS411 1x49W/840 HFP D8 PIP     | 1497 mm |
| TBS411 1x35W/840 HFP D8 PIP     | 1497 mm |
| TBS411 1x28W/840 HFP D8 PIP     | 1197 mm |
| TBS411 1x54W/840 HFP C8 PIP     | 1197 mm |
| TBS411 1x49W/840 HFP C8 PIP     | 1497 mm |
| TBS411 1x35W/830 HFP D8 PIP     | 1497 mm |
| TBS411 1x28W/830 HFR D8 PIP     | 1197 mm |
| TBS411 1x28W/830 HFP D8 PIP     | 1197 mm |
| TBS411 1x54W/840 HFP MLO-PC PIP | 1197 mm |
| TBS411 1x49W/840 HFP MLO-PC PIP | 1497 mm |
| TBS411 1x35W/840 HFP MLO-PC PIP | 1497 mm |
| TBS411 1x28W/840 HFP MLO-PC PIP | 1197 mm |
| TBS411 1x80W/840 HFP O PIP      | 1497 mm |
| TBS411 1x54W/840 HFP O PIP      | 1197 mm |
| TBS411 1x28W/840 HFP O PIP      | 1197 mm |
| TBS411 1x54W/840 HFP A PIP      | 1197 mm |
| TBS411 1x49W/840 HFP A PIP      | 1497 mm |
| TBS411 1x35W/840 HFP A PIP      | 1497 mm |
| TBS411 1x28W/840 HFP A PIP      | 1197 mm |
| TBS411 1x54W/840 HFP D8-VH PIP  | 1197 mm |
| TBS411 1x49W/840 HFP D8-VH PIP  | 1497 mm |
| TBS411 1x28W/840 HFP D8-VH PIP  | 1197 mm |
| TBS411 1x54W/840 HFP C8-VH PIP  | 1197 mm |
| TBS411 1x49W/840 HFP C8-VH PIP  | 1497 mm |
| TBS411 1x35W/840 HFP C8-VH PIP  | 1497 mm |
| TBS411 1x35W/840 HFP C8 PIP     | 1497 mm |



| Product                          | A       |
|----------------------------------|---------|
| TBS411 1x28W/830 HFP D8 W SC     | 1197 mm |
| TBS411 1x35W/830 HFP C8 W SC     | 1497 mm |
| TBS411 1x28W/830 HFP C8 W SC     | 1197 mm |
| TBS411 1x35W/840 HFP MLO-PC W SC | 1497 mm |
| TBS411 1x28W/840 HFP MLO-PC W SC | 1197 mm |
| TBS411 1x35W/840 HFP A W SC      | 1497 mm |
| TBS411 1x28W/840 HFP A W SC      | 1197 mm |
| TBS411 1x28W/840 HFP D8-VH W SC  | 1197 mm |
| TBS411 1x28W/840 HFP C8-VH W SC  | 1197 mm |
| TBS411 1x35W/840 HFP D8 W SC     | 1497 mm |
| TBS411 1x28W/840 HFP D8 W SC     | 1197 mm |
| TBS411 1x35W/840 HFP C8 W SC     | 1497 mm |
| TBS411 1x28W/840 HFP C8 W SC     | 1197 mm |
| TBS411 1x35W/830 HFP A W         | 1497 mm |

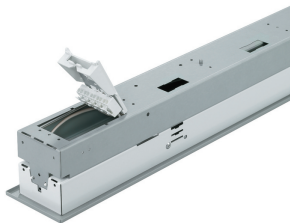
Dimensional drawing



| Product                           | A       |
|-----------------------------------|---------|
| TBS411 1x49W/830 HFP D8-C W AIR   | 1497 mm |
| TBS411 1x35W/830 HFP D8-C W AIR   | 1497 mm |
| TBS411 1x28W/830 HFP D8-C W AIR   | 1197 mm |
| TBS411 1x49W/830 HFP D8-VH W AIR  | 1497 mm |
| TBS411 1x35W/830 HFP D8-VH W AIR  | 1497 mm |
| TBS411 1x28W/830 HFP D8-VH W AIR  | 1197 mm |
| TBS411 1x54W/830 HFP D8 W AIR     | 1197 mm |
| TBS411 1x49W/830 HFR D8 LXM W AIR | 1497 mm |
| TBS411 1x35W/830 HFR D8 LXM W AIR | 1497 mm |
| TBS411 1x28W/830 HFR D8 LXM W AIR | 1197 mm |
| TBS411 1x49W/830 HFP D8 W AIR     | 1497 mm |
| TBS411 1x35W/830 HFP D8 W AIR     | 1497 mm |
| TBS411 1x28W/830 HFP D8 W AIR     | 1197 mm |

Product details

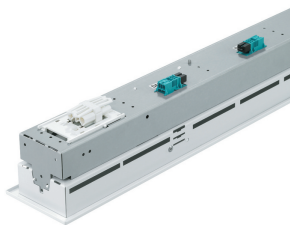
Push-in connector (with pull relief)



OLC micro-lens optic in polycarbonate cover



Wieland/Adels push-in connector 3 or 4-pole mains (and 2-pole control signal)



Luxsense lighting control for micro optic mounting



## Accessories

Ordercode 910403204903



Ordercode 910403205603



### Operating and Electrical

|               |              |
|---------------|--------------|
| Input Voltage | 220 to 240 V |
|---------------|--------------|

### General Information

|                         |                                  |
|-------------------------|----------------------------------|
| CE mark                 | CE mark                          |
| Protection class IEC    | Safety class I                   |
| Emergency lighting      | -                                |
| Glow-wire test          | Temperature 850 °C, duration 5 s |
| Kombipack               | Lamp(s) included                 |
| Lamp family code        | TL5                              |
| Number of light sources | 1 pc                             |
| Product Family Code     | TBS411                           |
| Safety bracket          | -                                |
| Top reflector           | -                                |
| Internal wiring         | Standard                         |

### Mechanical and Housing

|       |       |
|-------|-------|
| Color | White |
|-------|-------|

### Approval and Application

| Order Code   | Full Product Name               | Mech. impact protection code | Ingress protection code |
|--------------|---------------------------------|------------------------------|-------------------------|
| 910501874203 | TBS411 1x14W/840 HFP C8 PIP SC  | IK02                         | IP20                    |
| 910501886003 | TBS411 1x28W/840 HFP C8 PIP     | IK07                         | IP20                    |
| 910501886103 | TBS411 1x35W/840 HFP C8 PIP     | IK07                         | IP20                    |
| 910501886203 | TBS411 1x49W/840 HFP C8 PIP     | IK07                         | IP20                    |
| 910501886303 | TBS411 1x54W/840 HFP C8 PIP     | IK07                         | IP20                    |
| 910501887003 | TBS411 1x28W/840 HFP C8-VH PIP  | IK07                         | IP20                    |
| 910501887103 | TBS411 1x35W/840 HFP C8-VH PIP  | IK07                         | IP20                    |
| 910501887203 | TBS411 1x49W/840 HFP C8-VH PIP  | IK07                         | IP20                    |
| 910501887303 | TBS411 1x54W/840 HFP C8-VH PIP  | IK07                         | IP20                    |
| 910501924803 | TBS411 1x28W/840 HFP C8 W SC    | IK02                         | IP20                    |
| 910501924903 | TBS411 1x35W/840 HFP C8 W SC    | IK02                         | IP20                    |
| 910501925203 | TBS411 1x28W/840 HFP C8-VH W SC | IK02                         | IP20                    |
| 910501926003 | TBS411 1x28W/830 HFP C8 W SC    | IK02                         | IP20                    |
| 910501926103 | TBS411 1x35W/830 HFP C8 W SC    | IK02                         | IP20                    |
| 910501886503 | TBS411 1x28W/840 HFP D8 PIP     | IK07                         | IP20                    |
| 910501886603 | TBS411 1x35W/840 HFP D8 PIP     | IK07                         | IP20                    |
| 910501886703 | TBS411 1x49W/840 HFP D8 PIP     | IK07                         | IP20                    |
| 910501886803 | TBS411 1x54W/840 HFP D8 PIP     | IK07                         | IP20                    |
| 910501887503 | TBS411 1x28W/840 HFP D8-VH PIP  | IK07                         | IP20                    |
| 910501887703 | TBS411 1x49W/840 HFP D8-VH PIP  | IK07                         | IP20                    |
| 910501887803 | TBS411 1x54W/840 HFP D8-VH PIP  | IK07                         | IP20                    |
| 910501916803 | TBS411 1x28W/830 HFP D8 PIP     | IK02                         | IP20                    |
| 910501916903 | TBS411 1x28W/830 HFR D8 PIP     | IK02                         | IP20                    |
| 910501917003 | TBS411 1x35W/830 HFP D8 PIP     | IK02                         | IP20                    |
| 910501925003 | TBS411 1x28W/840 HFP D8 W SC    | IK02                         | IP20                    |
| 910501925103 | TBS411 1x35W/840 HFP D8 W SC    | IK02                         | IP20                    |
| 910501925403 | TBS411 1x28W/840 HFP D8-VH W SC | IK02                         | IP20                    |
| 910501926203 | TBS411 1x28W/830 HFP D8 W SC    | IK02                         | IP20                    |
| 910501888503 | TBS411 1x28W/840 HFP A PIP      | IK02                         | IP20                    |
| 910501888603 | TBS411 1x35W/840 HFP A PIP      | IK02                         | IP20                    |
| 910501888703 | TBS411 1x49W/840 HFP A PIP      | IK02                         | IP20                    |
| 910501888803 | TBS411 1x54W/840 HFP A PIP      | IK02                         | IP20                    |
| 910501895203 | TBS411 1x35W/830 HFP A W        | IK02                         | IP20                    |
| 910501925603 | TBS411 1x28W/840 HFP A W SC     | IK02                         | IP20                    |
| 910501925703 | TBS411 1x35W/840 HFP A W SC     | IK02                         | IP20                    |
| 910501889003 | TBS411 1x28W/840 HFP O PIP      | IK02                         | IP40                    |
| 910501889303 | TBS411 1x54W/840 HFP O PIP      | IK02                         | IP40                    |

| Order Code   | Full Product Name                 | Mech. impact protection code | Ingress protection code |
|--------------|-----------------------------------|------------------------------|-------------------------|
| 910501889403 | TBS411 1x80W/840 HFP O PIP        | IK02                         | IP40                    |
| 910501889503 | TBS411 1x28W/840 HFP MLO-PC PIP   | IK02                         | IP40                    |
| 910501889603 | TBS411 1x35W/840 HFP MLO-PC PIP   | IK02                         | IP40                    |
| 910501889703 | TBS411 1x49W/840 HFP MLO-PC PIP   | IK02                         | IP40                    |
| 910501889803 | TBS411 1x54W/840 HFP MLO-PC PIP   | IK02                         | IP40                    |
| 910501925803 | TBS411 1x28W/840 HFP MLO-PC W SC  | IK02                         | IP40                    |
| 910501925903 | TBS411 1x35W/840 HFP MLO-PC W SC  | IK02                         | IP40                    |
| 910501908303 | TBS411 1x28W/830 HFP D8 W AIR     | IK02                         | IP20                    |
| 910501908403 | TBS411 1x35W/830 HFP D8 W AIR     | IK02                         | IP20                    |
| 910501908503 | TBS411 1x49W/830 HFP D8 W AIR     | IK02                         | IP20                    |
| 910501908603 | TBS411 1x28W/830 HFR D8 LXM W AIR | IK02                         | IP20                    |
| 910501908703 | TBS411 1x35W/830 HFR D8 LXM W AIR | IK02                         | IP20                    |
| 910501908803 | TBS411 1x49W/830 HFR D8 LXM W AIR | IK02                         | IP20                    |
| 910501908903 | TBS411 1x54W/830 HFP D8 W AIR     | IK02                         | IP20                    |
| 910501909103 | TBS411 1x28W/830 HFP D8-VH W AIR  | IK02                         | IP20                    |
| 910501909203 | TBS411 1x35W/830 HFP D8-VH W AIR  | IK02                         | IP20                    |
| 910501909303 | TBS411 1x49W/830 HFP D8-VH W AIR  | IK02                         | IP20                    |
| 910501909403 | TBS411 1x28W/830 HFP D8-C W AIR   | IK02                         | IP20                    |
| 910501909503 | TBS411 1x35W/830 HFP D8-C W AIR   | IK02                         | IP20                    |
| 910501909603 | TBS411 1x49W/830 HFP D8-C W AIR   | IK02                         | IP20                    |

## General Information (1/2)

| Order Code   | Full Product Name                  | Air-handling | Optical cover/<br>lens type | Gear | Lamp<br>power | Order Code   | Full Product Name                 | Air-handling | Optical cover/<br>lens type | Gear            | Lamp<br>power |
|--------------|------------------------------------|--------------|-----------------------------|------|---------------|--------------|-----------------------------------|--------------|-----------------------------|-----------------|---------------|
| 910501874203 | TBS411 1x14W/840<br>HFP C8 PIP SC  | -            | -                           | HFP  | 14 W          | 910501926103 | TBS411 1x35W/830<br>HFP C8 W SC   | -            | -                           | HFP             | 35 W          |
| 910501886003 | TBS411 1x28W/840<br>HFP C8 PIP     | -            | -                           | HFP  | 28 W          | 910501886503 | TBS411 1x28W/840<br>HFP D8 PIP    | -            | -                           | HFP             | 28 W          |
| 910501886103 | TBS411 1x35W/840<br>HFP C8 PIP     | -            | -                           | HFP  | 35 W          | 910501886603 | TBS411 1x35W/840<br>HFP D8 PIP    | -            | -                           | HFP             | 35 W          |
| 910501886203 | TBS411 1x49W/840<br>HFP C8 PIP     | -            | -                           | HFP  | 49 W          | 910501886703 | TBS411 1x49W/840<br>HFP D8 PIP    | -            | -                           | HFP             | 49 W          |
| 910501886303 | TBS411 1x54W/840<br>HFP C8 PIP     | -            | -                           | HFP  | 54 W          | 910501886803 | TBS411 1x54W/840<br>HFP D8 PIP    | -            | -                           | HFP             | 54 W          |
| 910501887003 | TBS411 1x28W/840<br>HFP C8-VH PIP  | -            | -                           | HFP  | 28 W          | 910501887503 | TBS411 1x28W/840<br>HFP D8-VH PIP | -            | -                           | HFP             | 28 W          |
| 910501887103 | TBS411 1x35W/840<br>HFP C8-VH PIP  | -            | -                           | HFP  | 35 W          | 910501887703 | TBS411 1x49W/840<br>HFP D8-VH PIP | -            | -                           | HFP             | 49 W          |
| 910501887203 | TBS411 1x49W/840<br>HFP C8-VH PIP  | -            | -                           | HFP  | 49 W          | 910501887803 | TBS411 1x54W/840<br>HFP D8-VH PIP | -            | -                           | HFP             | 54 W          |
| 910501887303 | TBS411 1x54W/840<br>HFP C8-VH PIP  | -            | -                           | HFP  | 54 W          | 910501916803 | TBS411 1x28W/830<br>HFP D8 PIP    | -            | -                           | HFP             | 28 W          |
| 910501924803 | TBS411 1x28W/840<br>HFP C8 W SC    | -            | -                           | HFP  | 28 W          | 910501916903 | TBS411 1x28W/830<br>HFR D8 PIP    | -            | -                           | HF<br>Regulator | 28 W          |
| 910501924903 | TBS411 1x35W/840<br>HFP C8 W SC    | -            | -                           | HFP  | 35 W          | 910501917003 | TBS411 1x35W/830<br>HFP D8 PIP    | -            | -                           | HFP             | 35 W          |
| 910501925203 | TBS411 1x28W/840<br>HFP C8-VH W SC | -            | -                           | HFP  | 28 W          | 910501925003 | TBS411 1x28W/840<br>HFP D8 W SC   | -            | -                           | HFP             | 28 W          |
| 910501926003 | TBS411 1x28W/830<br>HFP C8 W SC    | -            | -                           | HFP  | 28 W          | 910501925103 | TBS411 1x35W/840<br>HFP D8 W SC   | -            | -                           | HFP             | 35 W          |

| Order Code   | Full Product Name                  | Air-handling | Optical cover/<br>lens type                   | Gear | Lamp power |
|--------------|------------------------------------|--------------|-----------------------------------------------|------|------------|
| 910501925403 | TBS411 1x28W/840<br>HFP D8-VH W SC | -            | -                                             | HFP  | 28 W       |
| 910501926203 | TBS411 1x28W/830<br>HFP D8 W SC    | -            | -                                             | HFP  | 28 W       |
| 910501888503 | TBS411 1x28W/840<br>HFP A PIP      | -            | -                                             | HFP  | 28 W       |
| 910501888603 | TBS411 1x35W/840<br>HFP A PIP      | -            | -                                             | HFP  | 35 W       |
| 910501888703 | TBS411 1x49W/840<br>HFP A PIP      | -            | -                                             | HFP  | 49 W       |
| 910501888803 | TBS411 1x54W/840<br>HFP A PIP      | -            | -                                             | HFP  | 54 W       |
| 910501895203 | TBS411 1x35W/830<br>HFP A W        | -            | -                                             | HFP  | 35 W       |
| 910501925603 | TBS411 1x28W/840<br>HFP A W SC     | -            | -                                             | HFP  | 28 W       |
| 910501925703 | TBS411 1x35W/840<br>HFP A W SC     | -            | -                                             | HFP  | 35 W       |
| 910501889003 | TBS411 1x28W/840<br>HFP O PIP      | -            | Opal                                          | HFP  | 28 W       |
| 910501889303 | TBS411 1x54W/840<br>HFP O PIP      | -            | Opal                                          | HFP  | 54 W       |
| 910501889403 | TBS411 1x80W/840<br>HFP O PIP      | -            | Opal                                          | HFP  | 80 W       |
| 910501889503 | TBS411 1x28W/840<br>HFP MLO-PC PIP | -            | Micro-lens optic<br>in polycarbonate<br>cover | HFP  | 28 W       |
| 910501889603 | TBS411 1x35W/840<br>HFP MLO-PC PIP | -            | Micro-lens optic<br>in polycarbonate<br>cover | HFP  | 35 W       |
| 910501889703 | TBS411 1x49W/840<br>HFP MLO-PC PIP | -            | Micro-lens optic<br>in polycarbonate<br>cover | HFP  | 49 W       |
| 910501889803 | TBS411 1x54W/840<br>HFP MLO-PC PIP | -            | Micro-lens optic<br>in polycarbonate<br>cover | HFP  | 54 W       |

| Order Code   | Full Product Name                    | Air-handling                 | Optical cover/<br>lens type                   | Gear            | Lamp power |
|--------------|--------------------------------------|------------------------------|-----------------------------------------------|-----------------|------------|
| 910501925803 | TBS411 1x28W/840<br>HFP MLO-PC W SC  | -                            | Micro-lens optic<br>in polycarbonate<br>cover | HFP             | 28 W       |
| 910501925903 | TBS411 1x35W/840<br>HFP MLO-PC W SC  | -                            | Micro-lens optic<br>in polycarbonate<br>cover | HFP             | 35 W       |
| 910501908303 | TBS411 1x28W/830<br>HFP D8 W AIR     | Suitable for<br>air-handling | -                                             | HFP             | 28 W       |
| 910501908403 | TBS411 1x35W/830<br>HFP D8 W AIR     | Suitable for<br>air-handling | -                                             | HFP             | 35 W       |
| 910501908503 | TBS411 1x49W/830<br>HFP D8 W AIR     | Suitable for<br>air-handling | -                                             | HFP             | 49 W       |
| 910501908603 | TBS411 1x28W/830<br>HFR D8 LXM W AIR | Suitable for<br>air-handling | -                                             | HF<br>Regulator | 28 W       |
| 910501908703 | TBS411 1x35W/830<br>HFR D8 LXM W AIR | Suitable for<br>air-handling | -                                             | HF<br>Regulator | 35 W       |
| 910501908803 | TBS411 1x49W/830<br>HFR D8 LXM W AIR | Suitable for<br>air-handling | -                                             | HF<br>Regulator | 49 W       |
| 910501908903 | TBS411 1x54W/830<br>HFP D8 W AIR     | Suitable for<br>air-handling | -                                             | HFP             | 54 W       |
| 910501909103 | TBS411 1x28W/830<br>HFP D8-VH W AIR  | Suitable for<br>air-handling | -                                             | HFP             | 28 W       |
| 910501909203 | TBS411 1x35W/830<br>HFP D8-VH W AIR  | Suitable for<br>air-handling | -                                             | HFP             | 35 W       |
| 910501909303 | TBS411 1x49W/830<br>HFP D8-VH W AIR  | Suitable for<br>air-handling | -                                             | HFP             | 49 W       |
| 910501909403 | TBS411 1x28W/830<br>HFP D8-C W AIR   | Suitable for<br>air-handling | -                                             | HFP             | 28 W       |
| 910501909503 | TBS411 1x35W/830<br>HFP D8-C W AIR   | Suitable for<br>air-handling | -                                             | HFP             | 35 W       |
| 910501909603 | TBS411 1x49W/830<br>HFP D8-C W AIR   | Suitable for<br>air-handling | -                                             | HFP             | 49 W       |

## General Information (2/2)

| Order Code   | Full Product Name                 | Embedded control | Optic type                         |
|--------------|-----------------------------------|------------------|------------------------------------|
| 910501874203 | TBS411 1x14W/840 HFP C8<br>PIP SC | -                | High-gloss optic 3D micro-lamellae |
| 910501886003 | TBS411 1x28W/840 HFP C8<br>PIP    | -                | High-gloss optic 3D micro-lamellae |
| 910501886103 | TBS411 1x35W/840 HFP C8<br>PIP    | -                | High-gloss optic 3D micro-lamellae |
| 910501886203 | TBS411 1x49W/840 HFP C8<br>PIP    | -                | High-gloss optic 3D micro-lamellae |
| 910501886303 | TBS411 1x54W/840 HFP C8<br>PIP    | -                | High-gloss optic 3D micro-lamellae |

| Order Code   | Full Product Name                 | Embedded control | Optic type                                               |
|--------------|-----------------------------------|------------------|----------------------------------------------------------|
| 910501887003 | TBS411 1x28W/840 HFP<br>C8-VH PIP | -                | High-gloss optic 3D micro-lamellae very high reflectance |
| 910501887103 | TBS411 1x35W/840 HFP<br>C8-VH PIP | -                | High-gloss optic 3D micro-lamellae very high reflectance |
| 910501887203 | TBS411 1x49W/840 HFP<br>C8-VH PIP | -                | High-gloss optic 3D micro-lamellae very high reflectance |
| 910501887303 | TBS411 1x54W/840 HFP<br>C8-VH PIP | -                | High-gloss optic 3D micro-lamellae very high reflectance |
| 910501924803 | TBS411 1x28W/840 HFP C8<br>W SC   | -                | High-gloss optic 3D micro-lamellae                       |



| Order Code   | Full Product Name               | Embedded control | Optic type                                                    |
|--------------|---------------------------------|------------------|---------------------------------------------------------------|
| 910501924903 | TBS411 1x35W/840 HFP C8 W SC    | -                | High-gloss optic 3D micro-lamellae                            |
| 910501925203 | TBS411 1x28W/840 HFP C8-VH W SC | -                | High-gloss optic 3D micro-lamellae very high reflectance      |
| 910501926003 | TBS411 1x28W/830 HFP C8 W SC    | -                | High-gloss optic 3D micro-lamellae                            |
| 910501926103 | TBS411 1x35W/830 HFP C8 W SC    | -                | High-gloss optic 3D micro-lamellae                            |
| 910501886503 | TBS411 1x28W/840 HFP D8 PIP     | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501886603 | TBS411 1x35W/840 HFP D8 PIP     | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501886703 | TBS411 1x49W/840 HFP D8 PIP     | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501886803 | TBS411 1x54W/840 HFP D8 PIP     | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501887503 | TBS411 1x28W/840 HFP D8-VH PIP  | -                | Semi-high-gloss optic 3D micro-lamellae very high reflectance |
| 910501887703 | TBS411 1x49W/840 HFP D8-VH PIP  | -                | Semi-high-gloss optic 3D micro-lamellae very high reflectance |
| 910501887803 | TBS411 1x54W/840 HFP D8-VH PIP  | -                | Semi-high-gloss optic 3D micro-lamellae very high reflectance |
| 910501916803 | TBS411 1x28W/830 HFP D8 PIP     | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501916903 | TBS411 1x28W/830 HFR D8 PIP     | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501917003 | TBS411 1x35W/830 HFP D8 PIP     | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501925003 | TBS411 1x28W/840 HFP D8 W SC    | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501925103 | TBS411 1x35W/840 HFP D8 W SC    | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501925403 | TBS411 1x28W/840 HFP D8-VH W SC | -                | Semi-high-gloss optic 3D micro-lamellae very high reflectance |
| 910501926203 | TBS411 1x28W/830 HFP D8 W SC    | -                | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501888503 | TBS411 1x28W/840 HFP A PIP      | -                | Asymmetrical mirror                                           |
| 910501888603 | TBS411 1x35W/840 HFP A PIP      | -                | Asymmetrical mirror                                           |
| 910501888703 | TBS411 1x49W/840 HFP A PIP      | -                | Asymmetrical mirror                                           |
| 910501888803 | TBS411 1x54W/840 HFP A PIP      | -                | Asymmetrical mirror                                           |
| 910501895203 | TBS411 1x35W/830 HFP A W        | -                | Asymmetrical mirror                                           |
| 910501925603 | TBS411 1x28W/840 HFP A W SC     | -                | Asymmetrical mirror                                           |

| Order Code   | Full Product Name                 | Embedded control         | Optic type                                                    |
|--------------|-----------------------------------|--------------------------|---------------------------------------------------------------|
| 910501925703 | TBS411 1x35W/840 HFP A W SC       | -                        | Asymmetrical mirror                                           |
| 910501889003 | TBS411 1x28W/840 HFP O PIP        | -                        | -                                                             |
| 910501889303 | TBS411 1x54W/840 HFP O PIP        | -                        | -                                                             |
| 910501889403 | TBS411 1x80W/840 HFP O PIP        | -                        | -                                                             |
| 910501889503 | TBS411 1x28W/840 HFP MLO-PC PIP   | -                        | -                                                             |
| 910501889603 | TBS411 1x35W/840 HFP MLO-PC PIP   | -                        | -                                                             |
| 910501889703 | TBS411 1x49W/840 HFP MLO-PC PIP   | -                        | -                                                             |
| 910501889803 | TBS411 1x54W/840 HFP MLO-PC PIP   | -                        | -                                                             |
| 910501925803 | TBS411 1x28W/840 HFP MLO-PC W SC  | -                        | -                                                             |
| 910501925903 | TBS411 1x35W/840 HFP MLO-PC W SC  | -                        | -                                                             |
| 910501908303 | TBS411 1x28W/830 HFP D8 W AIR     | -                        | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501908403 | TBS411 1x35W/830 HFP D8 W AIR     | -                        | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501908503 | TBS411 1x49W/830 HFP D8 W AIR     | -                        | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501908603 | TBS411 1x28W/830 HFR D8 LXM W AIR | Luxsense for micro optic | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501908703 | TBS411 1x35W/830 HFR D8 LXM W AIR | Luxsense for micro optic | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501908803 | TBS411 1x49W/830 HFR D8 LXM W AIR | Luxsense for micro optic | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501908903 | TBS411 1x54W/830 HFP D8 W AIR     | -                        | Semi-high-gloss optic 3D micro-lamellae                       |
| 910501909103 | TBS411 1x28W/830 HFP D8-VH W AIR  | -                        | Semi-high-gloss optic 3D micro-lamellae very high reflectance |
| 910501909203 | TBS411 1x35W/830 HFP D8-VH W AIR  | -                        | Semi-high-gloss optic 3D micro-lamellae very high reflectance |
| 910501909303 | TBS411 1x49W/830 HFP D8-VH W AIR  | -                        | Semi-high-gloss optic 3D micro-lamellae very high reflectance |
| 910501909403 | TBS411 1x28W/830 HFP D8-C W AIR   | -                        | Semi-high-gloss optic 3D micro-lamellae comfort               |
| 910501909503 | TBS411 1x35W/830 HFP D8-C W AIR   | -                        | Semi-high-gloss optic 3D micro-lamellae comfort               |
| 910501909603 | TBS411 1x49W/830 HFP D8-C W AIR   | -                        | Semi-high-gloss optic 3D micro-lamellae comfort               |

