

# BETO system

ceiling / suspended

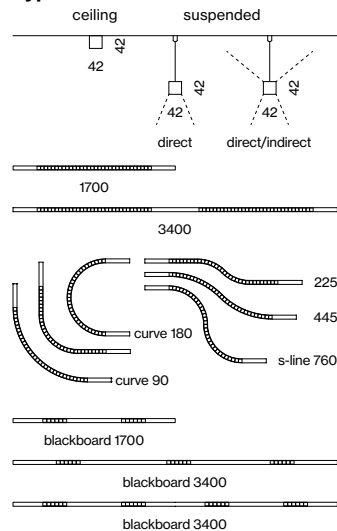
**EN** Luminaire housing from extruded aluminium profile, angular design (only 42 × 42 mm); no visible screws; for lighting systems; linear, S-shaped or CURVE segment (90° or 180°); powder coated; pendant fitting with cable suspension; height adjustment without tools; with feeder cable; extruded profile for improved thermal management; high-gloss reflector with faceted design; direct or direct / indirect light distribution, or with high-quality aluminum-vaporised micro-faceted reflector for homogeneous vertical lighting intensity; indirect light component with integrated PC boards and high-quality lens system for max., homog. ceiling illumination, separately controllable; energy-eff. LEDs – very good colour rendering

**IT** Corpo illuminante in profilo di alluminio estruso, modello squadrato (solo 42 × 42 mm); nessuna vite visibile; per sistemi di illuminazione; lineare, a S o elemento CURVE (90° o 180°); verniciatura a polvere; sospeso con cavo a sospensione; regolazione altezza senza utensili; con cavo di alimentazione; profilo di alluminio estruso per migliorare il bilancio termico; riflettore ad alta lucentezza con design sfaccettato; emissione diretta o diretta/indiretta, oppure con riflett. di alta qual. micro-sfaccettato vaporizzato in alluminio per illuminamento verticale omogeneo; componente luce indir. PCB speciali e ottica lent. di alta qualità per un'illuminazione omog. del soffitto, contr. separ.; LED a risp. energ. – ottima resa cromatica

## Quickinfo

3000 K, 4000 K, TW  
 CRI ≥ 80, CRI ≥ 90, 3 SDCM  
 UGR ≤ 19 / 65° ≤ 1500 cd/m<sup>2</sup>  
 L 3400 direct up to 161lm/W  
 L 3400 D/I up to 164lm/W  
 L 3400 blackboard up to 131lm/W  
 L90 @ 50 000 h  
 DALI-2, DALI-2 sensor  
 reflector (UGR ≤ 19)

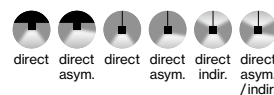
## Types



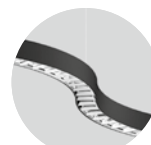
## Colours



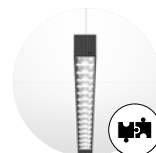
## Light distributions



DiiA® standards  
251, 252, 253



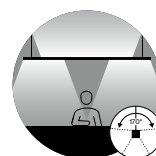
curve  
elements



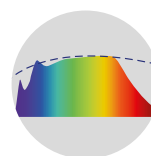
single  
luminaire



DIN EN 12464-1  
UGR ≤ 19



glare-free direct  
and 170° indirect  
illumination



CRI ≥ 98  
XPECTRUM

### Order options

#### COLOUR TEMPERATURE

|                            |   |
|----------------------------|---|
| 3000 K (CRI ≥ 90)          | 0 |
| 4000 K (CRI ≥ 90)          | 1 |
| 3000 K (CRI ≥ 80)          | 5 |
| 4000 K (CRI ≥ 80)          | 6 |
| tunable white 2700–6500 K* |   |

\*DALI-2 DT8, CRI ≥ 90

#### CONTROL

|                |   |
|----------------|---|
| DALI-2         | 3 |
| DALI-2 sensor* | 7 |

\*brightness & presence  
only linear 3400 mm (not blackboard)

#### MATERIAL COLOUR

|                       |   |
|-----------------------|---|
| ○ pure white RAL 9010 | 7 |
| ● jet black RAL 9005  | 8 |

#### REFLECTOR COLOUR

|                |   |
|----------------|---|
| ✓ chrome       | R |
| ● dark chrome* | B |

\*not available for blackboard wallwash.,  
blackboard wallwasher/indirect

#### LIGHT OPTIC COVER

reflector (UGR ≤ 19)

### Options on request

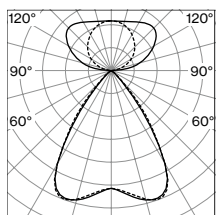
#### COLOUR RENDERING INDEX

CRI ≥ 98 XPECTRUM

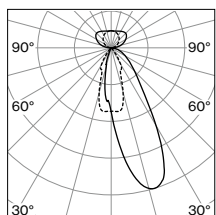
#### SYSTEM SOLUTION

continuous reflector  
individual length

### Light distributions

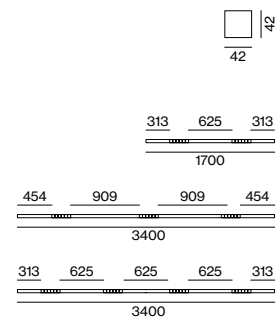
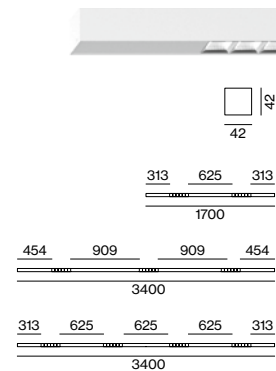
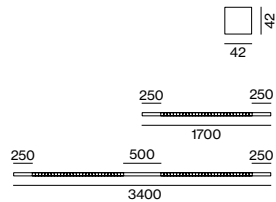
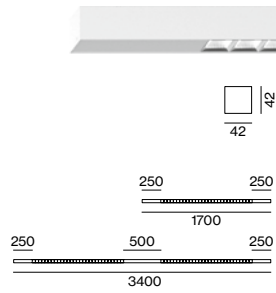


reflector (UGR ≤ 16)  
direct/indirect power

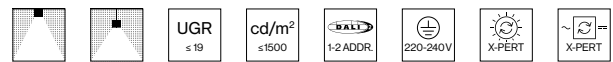


blackboard  
direct/indirect

**LUMINOUS FLUX** value calculated for  
CRI ≥ 80, colour white, reflector chrome;  
reflector black -29%

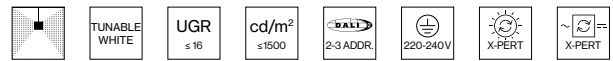


### BETO linear ceiling/suspended system



#### DIRECT

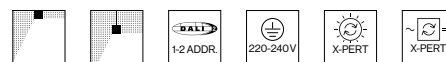
| SYS. POWER           | COLOUR TEMP. | LUM. FLUX | L (mm) | ORDER CODE |
|----------------------|--------------|-----------|--------|------------|
| 22.6 W<br>(1 × DALI) | 3000 K       | 3170 lm   | 1700   | 074-6006   |
| 45 W<br>(2 × DALI)   | 4000 K       | 3610 lm   |        |            |
|                      | 3000 K       | 6360 lm   | 3400   | 074-6009   |
|                      | 4000 K       | 7240 lm   |        |            |



#### DIRECT/INDIRECT POWER

| SYS. POWER          | COLOUR TEMP. | LUM. FLUX          | L (mm) | ORDER CODE |
|---------------------|--------------|--------------------|--------|------------|
| 51 W<br>(2 × DALI)  | 3000 K       | ↓ 3170 / ↑ 3710 lm | 1700   | 074-6036   |
|                     | 4000 K       | ↓ 3610 / ↑ 4220 lm |        |            |
| 95 W<br>(3 × DALI)  | 3000 K       | ↓ 6350 / ↑ 7330 lm | 3400   | 074-6039   |
|                     | 4000 K       | ↓ 7220 / ↑ 8350 lm |        |            |
| 106 W<br>(3 × DALI) | 3000 K       | ↓ 5930 lm          | 3400   | 074-60D95  |
|                     | 2700–6500 K  | ↑ 6870 lm          |        |            |
| 106 W<br>(3 × DALI) | 4000 K       | ↓ 6410 lm          | 3400   | 074-60D96  |
|                     | 2700–6500 K  | ↑ 6870 lm          |        |            |

### BETO linear blackboard ceiling/suspended system



#### WALLWASHER

| SYS. POWER         | COLOUR TEMP. | LUM. FLUX | L (mm) | ORDER CODE |
|--------------------|--------------|-----------|--------|------------|
| 47 W<br>(1 × DALI) | 3000 K       | 5020 lm   | 1700   | 074-7706   |
|                    | 4000 K       | 5120 lm   |        |            |
| 71 W<br>(2 × DALI) | 3000 K       | 7530 lm   | 3400   | 074-7719   |
|                    | 4000 K       | 7680 lm   |        |            |
| 93 W<br>(2 × DALI) | 3000 K       | 10000 lm  | 3400   | 074-7729   |
|                    | 4000 K       | 10200 lm  |        |            |



#### WALLWASHER/INDIRECT

| SYS. POWER          | COLOUR TEMP. | LUM. FLUX           | L (mm) | ORDER CODE |
|---------------------|--------------|---------------------|--------|------------|
| 76 W<br>(2 × DALI)  | 3000 K       | ↓ 5020 / ↑ 3710 lm  | 1700   | 074-7736   |
|                     | 4000 K       | ↓ 5120 / ↑ 4220 lm  |        |            |
| 122 W<br>(3 × DALI) | 3000 K       | ↓ 7530 / ↑ 7590 lm  | 3400   | 074-7749   |
|                     | 4000 K       | ↓ 7680 / ↑ 8640 lm  |        |            |
| 144 W<br>(3 × DALI) | 3000 K       | ↓ 10000 / ↑ 7590 lm | 3400   | 074-7759   |
|                     | 4000 K       | ↓ 10200 / ↑ 8640 lm |        |            |

### More components and accessories

see next page

**Order options**

**COLOUR TEMPERATURE**

|                   |   |
|-------------------|---|
| 3000 K (CRI ≥ 90) | 0 |
| 4000 K (CRI ≥ 90) | 1 |
| 3000 K (CRI ≥ 80) | 5 |
| 4000 K (CRI ≥ 80) | 6 |

**CONTROL**

|        |  |
|--------|--|
| DALI-2 |  |
|--------|--|

**MATERIAL COLOUR**

|                       |   |
|-----------------------|---|
| ○ pure white RAL 9010 | 7 |
| ● jet black RAL 9005  | 8 |

**REFLECTOR COLOUR**

|               |   |
|---------------|---|
| ↗ chrome      | R |
| ● dark chrome | B |

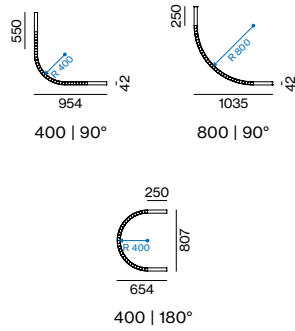
**LIGHT OPTIC COVER**

|                      |  |
|----------------------|--|
| reflector (UGR ≤ 16) |  |
|----------------------|--|

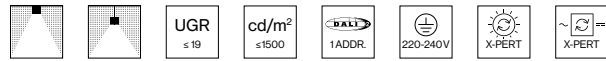
**Options on request**

**COLOUR RENDERING INDEX**

|                   |  |
|-------------------|--|
| CRI ≥ 98 XPECTRUM |  |
|-------------------|--|



**BETO curve ceiling/suspended system**



**DIRECT**

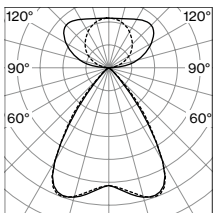
| SYS. POWER | COLOUR TEMP. | LUM. FLUX | R (mm)     | ORDER CODE  |
|------------|--------------|-----------|------------|-------------|
| 22.6 W     | 3000 K       | 3170 lm   | 400   90°  | 074-7101::3 |
|            | 4000 K       | 3610 lm   |            |             |
| 22.6 W     | 3000 K       | 3170 lm   | 800   90°  | 074-7103::3 |
|            | 4000 K       | 3610 lm   |            |             |
| 22.6 W     | 3000 K       | 3170 lm   | 400   180° | 074-7102::3 |
|            | 4000 K       | 3610 lm   |            |             |



**DIRECT/INDIRECT POWER**

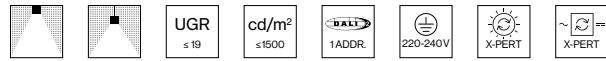
| S. POWER | COLOUR TEMP. | LUM. FLUX          | R (mm)     | ORDER CODE  |
|----------|--------------|--------------------|------------|-------------|
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 400   90°  | 074-7131::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |            |             |
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 800   90°  | 074-7133::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |            |             |
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 400   180° | 074-7132::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |            |             |

**Light distribution**



reflector (UGR ≤ 16)  
direct/indirect power

**BETO s-line ceiling/suspended system**



**DIRECT**

| SYS. POWER | COLOUR TEMP. | LUM. FLUX | TYPE  | ORDER CODE  |
|------------|--------------|-----------|-------|-------------|
| 22.6 W     | 3000 K       | 3170 lm   | 225 L | 074-7201::3 |
|            | 4000 K       | 3610 lm   |       |             |
| 22.6 W     | 3000 K       | 3170 lm   | 225 R | 074-7202::3 |
|            | 4000 K       | 3610 lm   |       |             |
| 22.6 W     | 3000 K       | 3170 lm   | 445 L | 074-7205::3 |
|            | 4000 K       | 3610 lm   |       |             |
| 22.6 W     | 3000 K       | 3170 lm   | 445 R | 074-7206::3 |
|            | 4000 K       | 3610 lm   |       |             |
| 22.6 W     | 3000 K       | 3170 lm   | 760 L | 074-7203::3 |
|            | 4000 K       | 3610 lm   |       |             |
| 22.6 W     | 3000 K       | 3170 lm   | 760 R | 074-7204::3 |
|            | 4000 K       | 3610 lm   |       |             |



**DIRECT/INDIRECT POWER**

| S. POWER | COLOUR TEMP. | LUM. FLUX          | TYPE  | ORDER CODE  |
|----------|--------------|--------------------|-------|-------------|
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 225 L | 074-7231::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |       |             |
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 225 R | 074-7232::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |       |             |
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 445 L | 074-7235::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |       |             |
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 445 R | 074-7236::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |       |             |
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 760 L | 074-7233::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |       |             |
| 53 W     | 3000 K       | ↓ 3170 / ↑ 3960 lm | 760 R | 074-7234::3 |
|          | 4000 K       | ↓ 3610 / ↑ 4510 lm |       |             |

**LUMINOUS FLUX** value calculated for CRI ≥ 80, colour white, reflector chrome; reflector black -29%

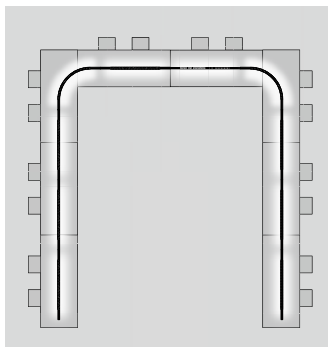
### Order options

| MATERIAL COLOUR       |   | <input checked="" type="checkbox"/> |
|-----------------------|---|-------------------------------------|
| ○ pure white RAL 9010 | 7 |                                     |
| ● jet black RAL 9005  | 8 |                                     |

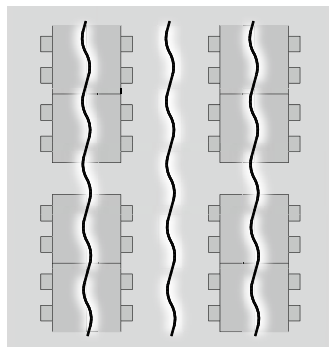
### Accessories

|   |  |   |
|---|--|---|
|   |  |   |
| <b>END CAPS</b>   |  |   |
| <b>TYPE</b>   | end caps (pair)  | <b>ORDER CODE</b><br>074-609001 <input checked="" type="checkbox"/> |
|   |  |   |
| <b>LINEAR CONNECTOR</b>   |  |   |
| <b>TYPE</b>   | mechanical linear connector ceiling  | <b>ORDER CODE</b><br>074-6091110                                    |
|   | mechanical linear connector suspended*   | 074-6091120   |
|   | *incl. 1500mm cable suspension   |   |
|   |  |   |
| <b>CORNER CONNECTOR 90°</b>   |  |   |
| <b>TYPE</b>   | corner connector 90°   | <b>ORDER CODE</b><br>074-609121 <input checked="" type="checkbox"/> |
|   | incl. through wire 5 × 1.5 mm <sup>2</sup> ; order two mechanical linear connectors separately |   |
|   |  |   |
| <b>BLIND COVER</b>  |  |   |
| <b>TYPE</b>   | blind cover 250 mm   | <b>ORDER CODE</b><br>074-609910 <input checked="" type="checkbox"/> |
|   | blind cover 500 mm   | 074-609911 <input checked="" type="checkbox"/>                      |
|   | order 1 × blind cover 500 mm for each linear connector and 1 × 250 mm for each end             |   |
|   |  |   |
| <b>CEILING FASTENER / CABLE SUSPENSION / POWER FEEDER</b>               |  |   |
| <b>TYPE</b>   | <b>L (mm)</b>  | <b>ORDER CODE</b>   |
| ceiling fastener  | 67   | 050-204121 <input checked="" type="checkbox"/>                      |
| cable suspension  | 1500   | 005-2152110   |
| canopy/feeder cable 5 × 1.5 mm <sup>2</sup>                             | 1500   | 005-221241 <input checked="" type="checkbox"/>                      |
| through wire 5 × 1.5 mm <sup>2</sup> (10 pieces)                        |  | 004-90005   |
| for electrical system configuration see luminaire data sheet at xal.com |  |   |

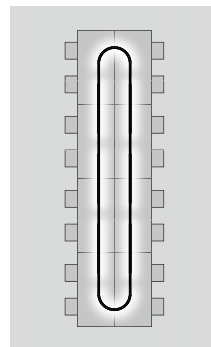
### Arrangement examples (top view)



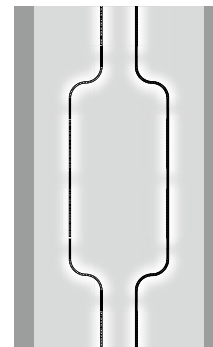
**BETO curve 90**  
conference/seminar



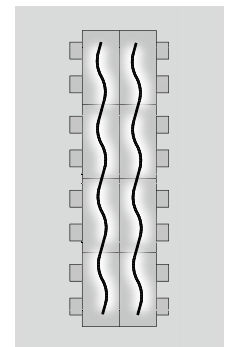
**BETO s-line 445**  
office



**BETO curve 180**  
conference/seminar

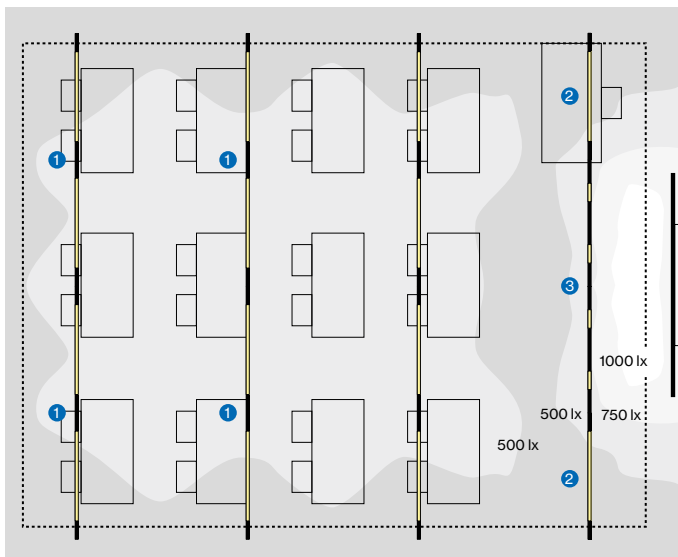


**BETO s-line 760**  
corridor



**BETO s-line 445**  
conference/seminar

### Technical data (top view)



- ① **BETO 3400** ceiling system, 45W, 4000K
- ② **BETO 1700** ceiling system, 22.6W, 4000K
- ③ **BETO 3400** blackboard ceiling system, 93W, 4000K

| ROOM VALUES        |                 | CALCULATION SURFACE .....             |           |
|--------------------|-----------------|---------------------------------------|-----------|
| Room dimensions    | 9.5 × 7.5 × 3 m | Surface dimensions                    | 8.5 × 6.5 |
| Reflection factor  | 0.7   0.5   0.2 | Surface height                        | 0.75      |
| Maintenance factor | 0.8             | Average illuminance (E <sub>m</sub> ) | > 500 lx  |
| Mounting height    | 3 m             | Uniformity (U <sub>0</sub> )          | > 0.6     |

| GLARE EVALUATION                           |      |
|--|------|
| Table Classification X=4H   Y=8H   S=0.25H |      |
| UGR transversal                            | ≤ 19 |
| UGR axial                                  | ≤ 19 |