

BETO system

ceiling / suspended

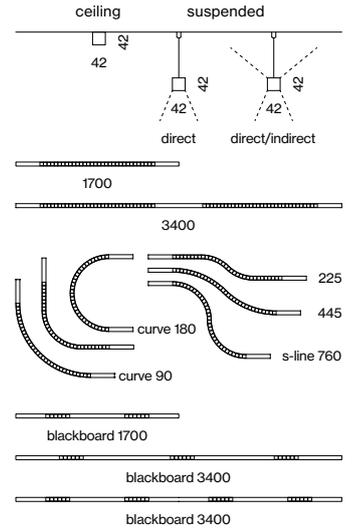
EN Luminaire housing from extruded aluminium profile, angular design (only 42 × 42 mm); no visible screws; for lighting systems; linear, S-shaped or CURVE segment (90° or 180°); powder coated; pendant fitting with cable suspension; height adjustment without tools; with feeder cable; extruded profile for improved thermal management; high-gloss reflector with faceted design; direct or direct / indirect light distribution, or with high-quality aluminium-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

DE Leuchtenkörper aus Aluminiumstrangpressprofil, kantige Ausführung (nur 42 × 42 mm); keine sichtbaren Schrauben; für Lichtsysteme; linear, S-förmig, oder CURVE Element (90° bzw. 180°); pulverbeschichtet; abgependelt mit Seilabhängung; werkzeuglose Höhenverstellung; inkl. Einspeiseleitung; Strangpressprofil für verbessertes Thermomanagement; hochglänzender Reflektor mit Facettenoptik; direkte bzw. direkt / indirekte Abstrahlcharakteristik, oder mit hochwert. aluminiumbedampften microfacettierten Refl. für homogene vertikale Beleuchtung; Indirektlichtanteil mit eigenen Platinen u. hochwertiger Linsenoptik für max., homog. Deckenaufhellung, separat steuerbar; energieeff. LEDs – sehr gute Farbwiedergabe

Quickinfo

3000 K, 4000 K, TW
 CRI ≥ 80, CRI ≥ 90, 3 SDCM
 UGR ≤ 19 / 65° ≤ 1500 cd/m²
 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)

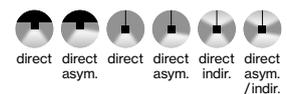
Types



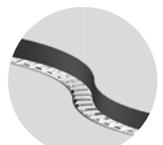
Colours



Light distributions



DiiA® standards
251, 252, 253



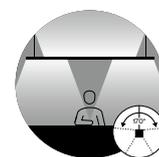
curve
elements



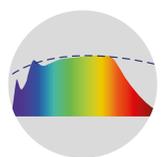
single
luminaire



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* | |

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

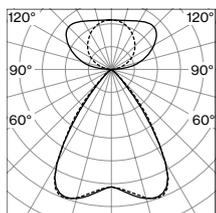
COLOUR RENDERING INDEX

CRI ≥ 98 XPECTRUM

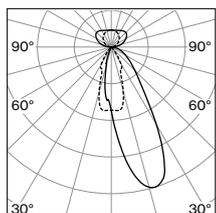
SYSTEM SOLUTION

continuous reflector
individual length

Light distributions

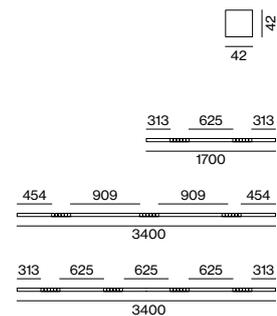
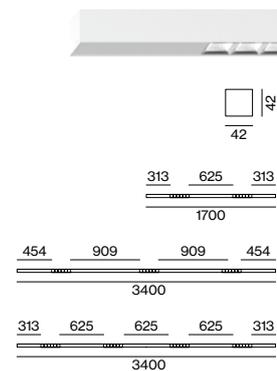
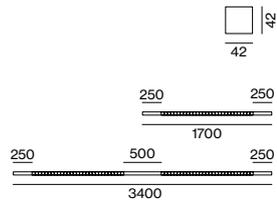
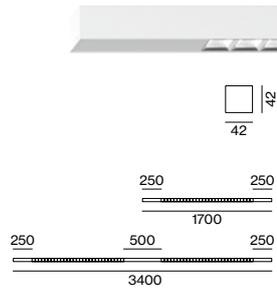


reflector (UGR ≤ 16)
direct/indirect power

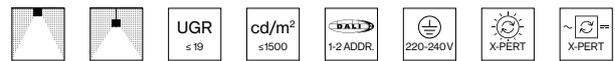


blackboard
direct/indirect

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

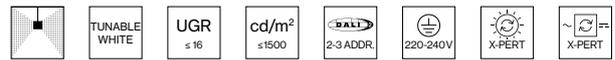


BETO linear ceiling/suspended system



DIRECT

| SYS. POWER | COLOUR TEMP. | LUM. FLUX | L (mm) | ORDER CODE |
|-------------------|--------------|-----------|--------|------------|
| 22.6 W (1 × DALI) | 3000 K | 3170 lm | 1700 | 074-6006 |
| 45 W (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 (2 × DALI) | 3000 K | ↓ 3170 / ↑ 3710 lm | 1700 | 074-6036 |
| | 4000 K | ↓ 3610 / ↑ 4220 lm | | |
| 95 W (3 × DALI) | 3000 K | ↓ 6350 / ↑ 7330 lm | 3400 | 074-6039 |
| | 4000 K | ↓ 7220 / ↑ 8350 lm | | |
| 106 W (3 × DALI) | 3000 K | ↓ 5930 lm | 3400 | 074-60D95 |
| | 2700–6500 K | ↑ 6870 lm | | |
| 106 W (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 (1 × DALI) | 3000 K | 5020 lm | 1700 | 074-7706 |
| | 4000 K | 5120 lm | | |
| 71 W (2 × DALI) | 3000 K | 7530 lm | 3400 | 074-7719 |
| | 4000 K | 7680 lm | | |
| 93 W (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 (2 × DALI) | 3000 K | ↓ 5020 / ↑ 3710 lm | 1700 | 074-7736 |
| | 4000 K | ↓ 5120 / ↑ 4220 lm | | |
| 122 W (3 × DALI) | 3000 K | ↓ 7530 / ↑ 7590 lm | 3400 | 074-7749 |
| | 4000 K | ↓ 7680 / ↑ 8640 lm | | |
| 144 W (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 |

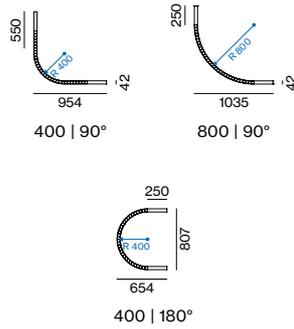
LIGHT OPTIC COVER

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

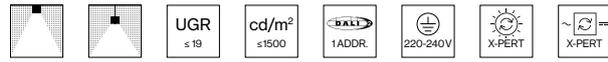
Options on request

COLOUR RENDERING INDEX

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



BETO curve ceiling/suspended system



DIRECT

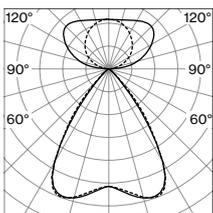
| SYS. POWER | COLOUR TEMP. | LUM. FLUX | R (mm) | ORDER CODE |
|------------|--------------|-----------|------------|-------------|
| 22.6 W | 3000 K | 3170 lm | 400 90° | 074-7101::3 |
| | 4000 K | 3610 lm | | |
| 22.6 W | 3000 K | 3170 lm | 800 90° | 074-7103::3 |
| | 4000 K | 3610 lm | | |
| 22.6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



DIRECT/INDIRECT POWER

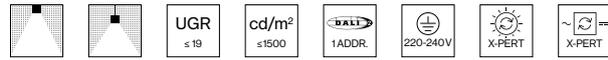
| S. POWER | COLOUR TEMP. | LUM. FLUX | R (mm) | ORDER CODE |
|----------|--------------|--------------------|------------|-------------|
| 53 W | 3000 K | ↓ 3170 / ↑ 3960 lm | 400 90° | 074-7131::3 |
| | 4000 K | ↓ 3610 / ↑ 4510 lm | | |
| 53 W | 3000 K | ↓ 3170 / ↑ 3960 lm | 800 90° | 074-7133::3 |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

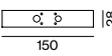
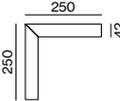
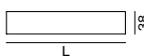
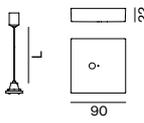
| S. POWER | COLOUR TEMP. | LUM. FLUX | TYPE | ORDER CODE |
|----------|--------------|--------------------|-------|-------------|
| 53 W | 3000 K | ↓ 3170 / ↑ 3960 lm | 225 L | 074-7231::3 |
| | 4000 K | ↓ 3610 / ↑ 4510 lm | | |
| 53 W | 3000 K | ↓ 3170 / ↑ 3960 lm | 225 R | 074-7232::3 |
| | 4000 K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

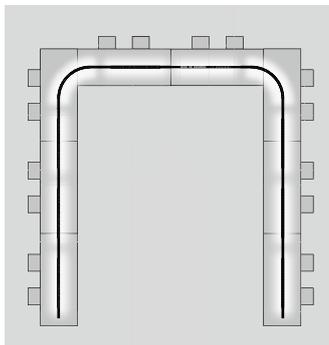
Order options

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

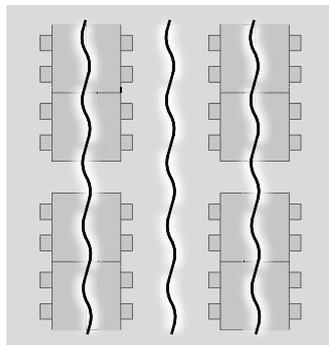
Accessories

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

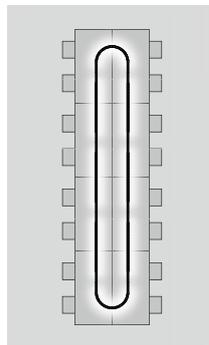
Arrangement examples (top view)



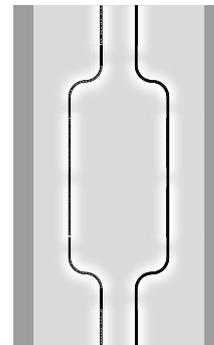
BETO curve 90
conference/seminar



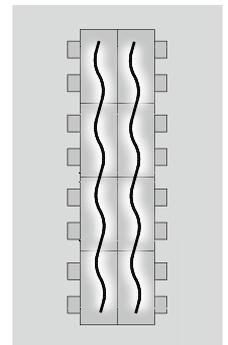
BETO s-line 445
office



BETO curve 180
conference/seminar

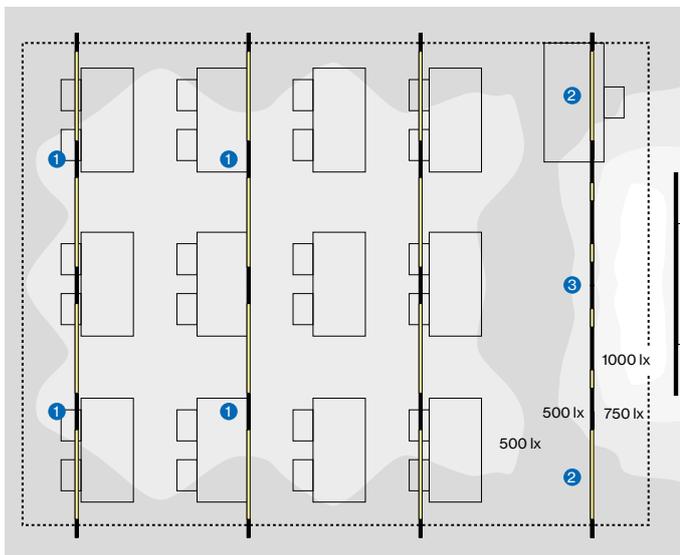


BETO s-line 760
corridor



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 _m) | > 500 lx |
| Mounting height | 3 m | Uniformity (U ₀) | > 0.6 |

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