

lichtwerk
inspired by light

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Table structure

The tabular structure enables an overview of the essential features.

Type
Designation of the luminaire

LED Specification
Luminous flux lumen (lm)
Colour rendering index RA
Colour temperature Kelvin (K)

NEW

Item-number → the last digit of the article number indicates the housing colour
543 3044 10... → ...1

Luminaire weight net (without packaging)

Type	LED Specification	P _{sys} (W)	Driver	Item-number	Colour	Colour	Colour	kg
Sample luminaire	LED 2400lm 840 LB	20	ED	543 3044 10...	■ ...5	□ ...1	■ ...4	3
	LED 4500lm 840 LB	41	DALI	543 3144 10...	■ ...5	□ ...1	■ ...4	3

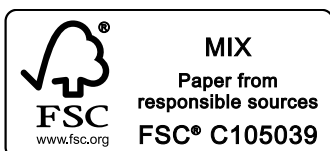
P_{sys} | Lighting system performance

Driver

- ED | Electronic Driver, non dimmable
- DALI | Electronic Driver, DALI, dimmable
- DALI DT8 | Electronic Driver, DALI, dimmable, adjustable light colour
- Tast dim | dimmable via push button
- NL-B | Emergency light battery powered

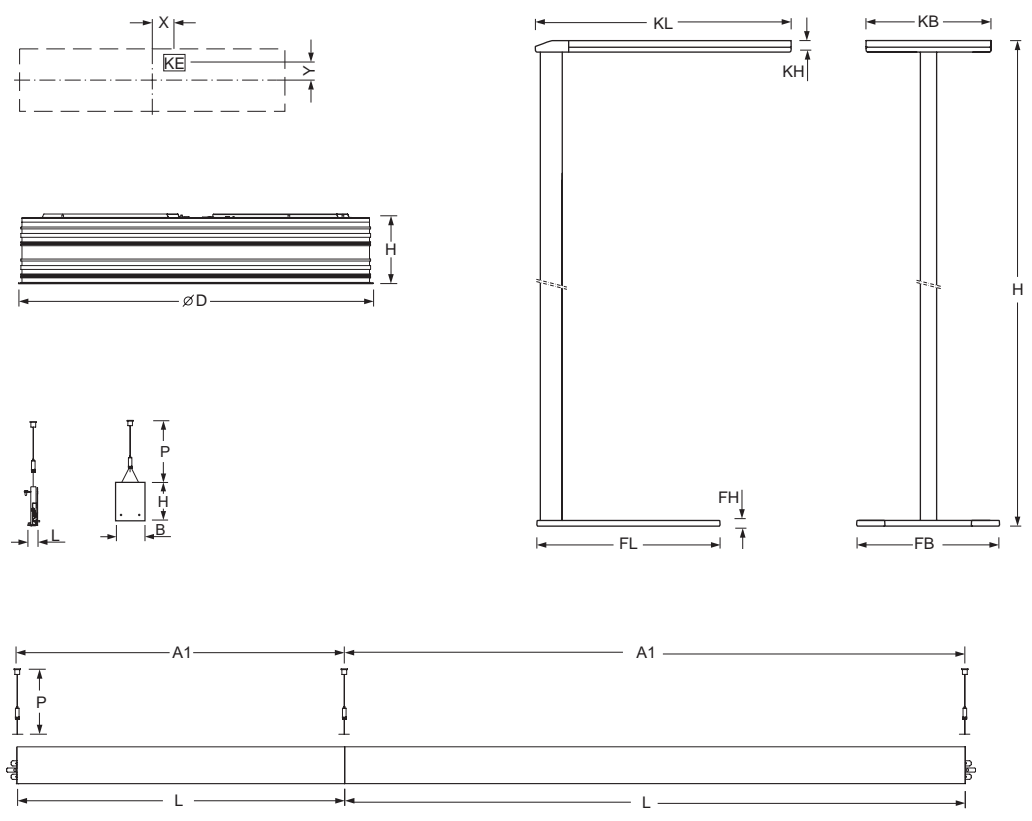
Colour code/colour

- | aluminium natural anodized
- | traffic white (similar RAL 9016)
- wa | withe-aluminium (similar RAL 9006)
- | deep black (similar RAL 9005)
- sg | silver grey
- | stainless steel
- cr | chrome
- si | silver
- tc | translucent
- cl | clear
- gr | grit grey















▶ Please refer to the current data for LED luminaires at www.lichtwerk.de

INDEX



Definition of measurement table variants

- L | Length
- L | Length/Width for square luminaires
- L2 | Additional length
- B | Width
- H | Height
- ∅D | Diameter
- FL | Length of luminaire base
- FB | Width of luminaire base
- FD | Diameter of luminaire base
- T | Depth
- KE | Cable infeed
- KL | Length of luminaire head or ballast box
- KB | Width of luminaire head or ballast box
- KH | Height of luminaire head or ballast box
- KD | Diameter of luminaire head or ballast box
- A1 | Fixing distance in case of single mounting
- A2 | Fixing distance between the luminaires in case of light run mounting
- X | Distance from centre of the luminaire to the electrical feed in (x direction = length)
- Y | Distance from centre of the luminaire to the electrical feed in (y direction = width)
- SL | Length of cut for recessed luminaires
- SB | Width of cut for recessed luminaires
- SD | Diameter of cut for recessed luminaires
- e | Minimum necessary depth for luminaire mounting
- ML | Modul (axis) Length
- MB | Modul (axis) Width
- P | Wire suspension
- P min/max | Min./Max. length wire suspension
- DS min/max | Min./Max. ceiling thickness in case of suspended ceiling
-  | for ceilings with visible T-rails
-  | for cut-out ceilings

- Recessed luminaires 
- Surface mounted luminaires 
- Pendant luminaires 
- Phase-track and luminaires 
- Lighting systems 
- Downlights 
- Wall luminaires Standing luminaires 
- Light furniture 
- Glass luminaires 
- Control Information 





PHASE-TRACKS AND LUMINAIRES

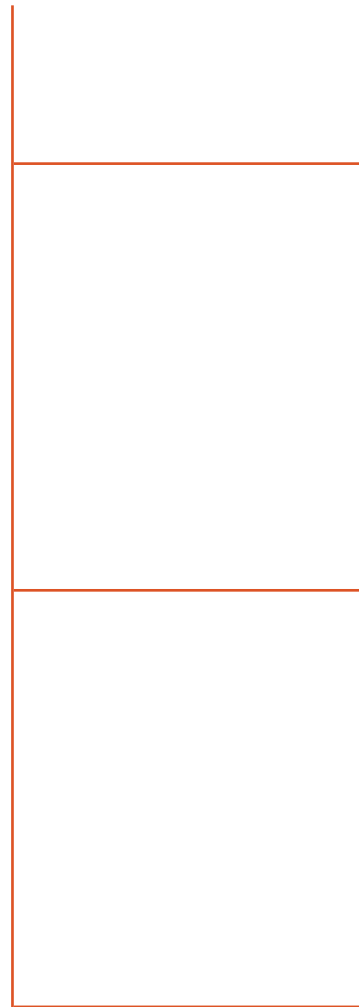
Phase-tracks and luminaires

3-phase-track + DALI



DPSN

P. 244



Phase-track-luminaires



clip-TTS-OTB P. 250
swivelling; narrow-wide light distribution



clip-TTS-OA P. 252
swivelling; asymmetrical distribution



clip-TT-OB P. 256
wide light distribution



clip-TT-OTB P. 260
narrow-wide light distribution



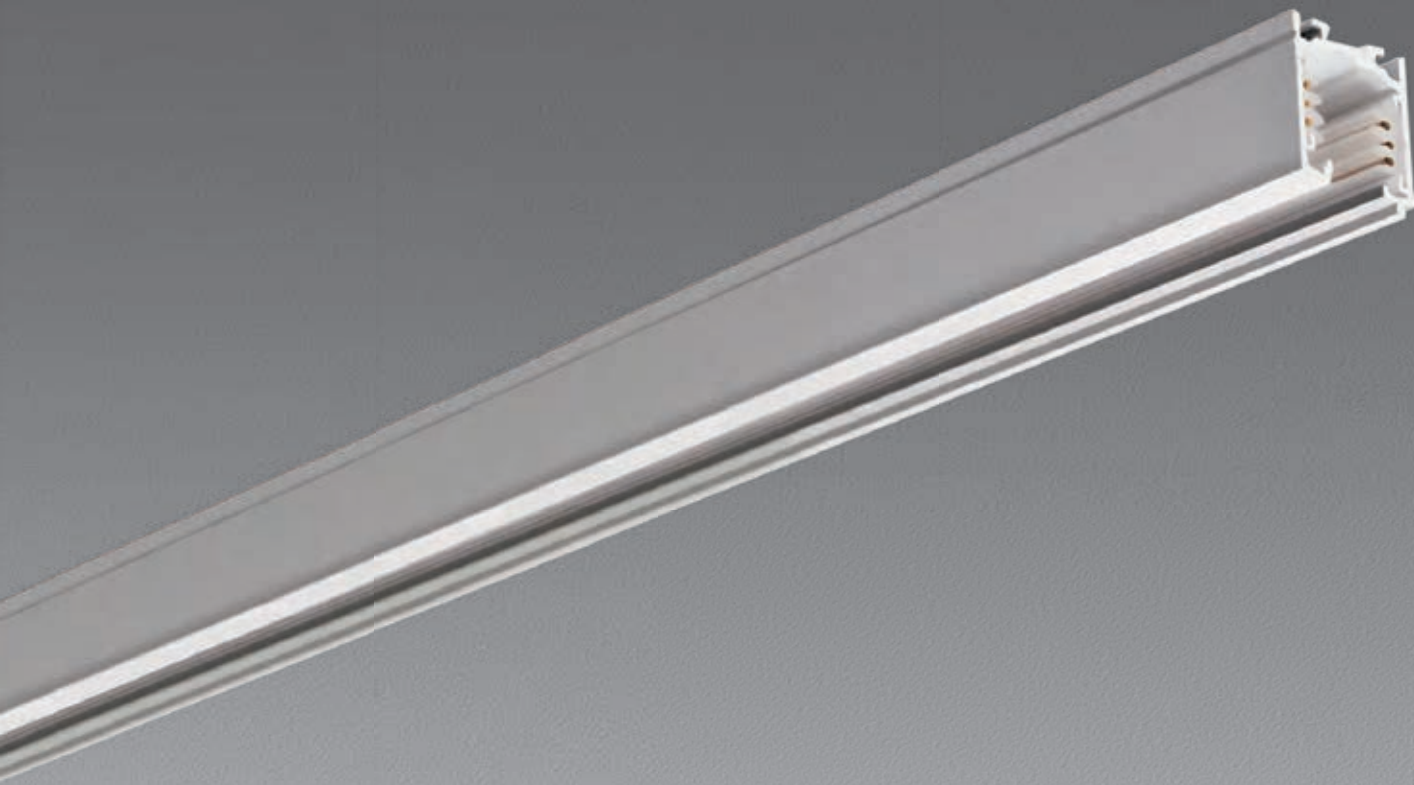
clip-TT-OG P. 264
diffus light distribution



emphara-EMTT P. 268



spotty-SYTT P. 272

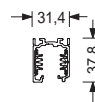


DPSN phase-track

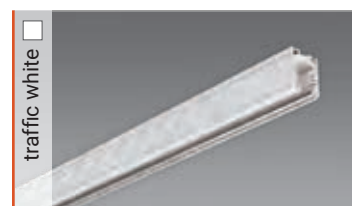
📶 📶 IP20 🏠 CE

3-phase track + DALI

Extruded aluminium profile natural anodized, traffic white (similar to RAL 9016) or deep black (similar to RAL 9005). Track can be shortened to any length by using suitable accessories. 7-pin track, 3x 16A/N/PE + DALI.

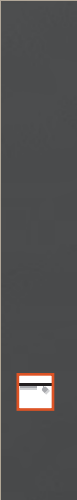


Accessories - P. 246



Type	Details	Item-number	Colour	Colour	Colour	kg
DPSN-1000	3x 16A + DALI, L=1000mm	324 4100 10...	■ ...5	□ ...0	■ ...4	1,1
DPSN-2000	3x 16A + DALI, L=2000mm	324 4200 10...	■ ...5	□ ...0	■ ...4	2,1
DPSN-3000	3x 16A + DALI, L=3000mm	324 4300 10...	■ ...5	□ ...0	■ ...4	3,4
DPSN-4000	3x 16A + DALI, L=4000mm	324 4400 10...	■ ...5	□ ...0	■ ...4	4,5

▶ Please refer to the current data for LED luminaires at www.lichtwerk.de





DPSN phase track

Accessoires

for 3-phase track + DALI for building various structures.
 All power supplies and connectors 7-pin; prepared for DALI wiring.
 Mounting material for ceiling or grid ceiling and pendant mounting.
 Adapter for connecting various luminaires to the DPSN track.
 DPSN LBW for adjusting the length of the copper conductor after shortening the track on site.

LC-canopies



LC-canopy SA-PS-FLEX

Bluetooth 4.0 canopy SA-PS-Flex 10x for pendant phase-tracks with integrated Casambi module and power supply for controlling max. 32 DALI luminaires. Different presets e.g. DT6 or DT8 selectable. Operation via free app and other system components such as switches or pushbutton couplers.

LC-canopy DPSN-PS-FLEX

Bluetooth 4.0 canopy with power rail adapter DPSN-PS-Flex 10x with integrated Casambi module and power supply to control max. 32 DALI luminaires. Different presets e.g. DT6 or DT8 selectable. Operation via free app and other system components such as switches or pushbutton couplers.



DPSN ESL/ESR



DPSN ESM



DPSN KE



DPSN KM



DPSN KF



DPSN KTIR/KTIL



DPSN KWI/KWA



DPSN KX



DPSN AET



DPSN ADA



DPSN EK



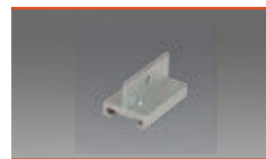
DPSN TSB



DPSN DH



DPSN CS



DPSN AK



DPSN DB



DPSN SV



DPSN LBW



SA-PS-Flex



SA-PS-Flex



SA-PS-Flex



DPSN-PS-Flex

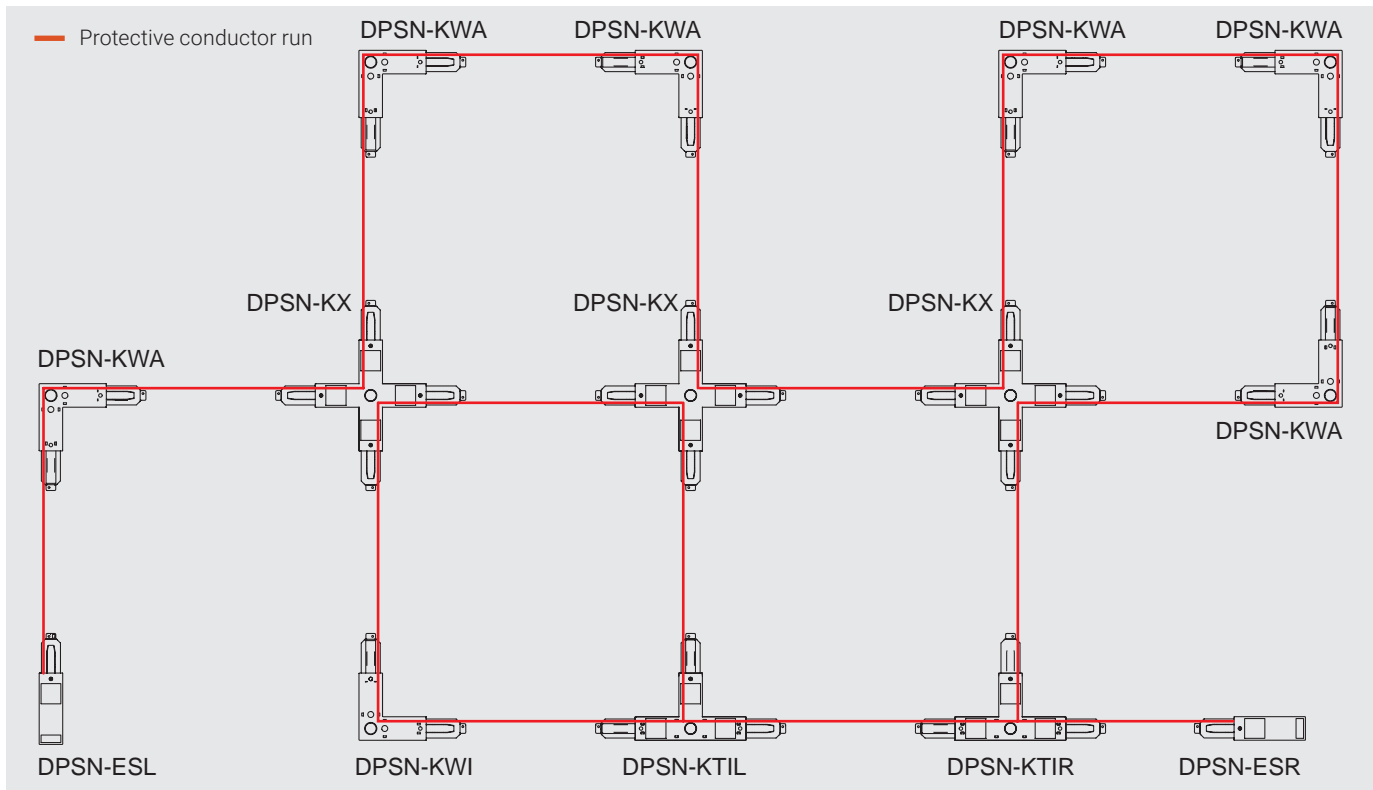


DPSN-PS-Flex



DPSN-PS-Flex

DPSN connection scheme top view



Accessories	Type	Material	Details	Item-number	Colour	Colour	Colour	kg
Feed in	DPSN ESL	PA	Feed in for DPSN, left	324 4002 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,1
	DPSN ESR	PA	Feed in for DPSN, right	324 4001 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,1
Feed in center	DPSN ESM	PA	Feed in for DPSN, center	324 4003 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,19
Rail connector	DPSN KE	PA	Rail connector for DPSN, electrical	324 4004 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,05
Rail connector	DPSN KM	PA	Rail connector for DPSN, mechanical	324 4005 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,05
Rail connector multiflex	DPSN KF	PA	Multiflex connector for DPSN, 0°-360°; horizontal and vertical	324 4006 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,24
T-rail connector right	DPSN KTIR	Mix	Rail connector for DPSN, right inside	324 4015 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,29
T-rail connector left	DPSN KTIL	Mix	Rail connector for DPSN, left inside	324 4018 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,29
Angle connector right	DPSN KWI	Mix	Angle connector for DPSN, right inside	324 4014 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,19
Angle connector left	DPSN KWA	Mix	Angle connector for DPSN, left outside	324 4017 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,19
Cross connector	DPSN KX	Mix	Cross connector for DPSN	324 4019 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,38
Adapter	DPSN AET	PC	DPSN-ED-adapter	324 4023 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,04
	DPSN ADA	PC	DPSN-DALI-Adapter	324 4022 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,04
End cap	DPSN EK	PA	End cap for DPSN	324 4007 10...	<input type="checkbox"/> ...0	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...4	0,01
Mounting 24mm t-rail	DPSN TSB	Mix	24mm t-rail mounting for DPSN	324 4020 100				0,01
Hook to attach deco elements	DPSN DH	Mix	Deco hook for DPSN	324 4021 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...5	<input type="checkbox"/> ...4	0,01
Wire suspension (set)	DPSN CS	Mix	Wire suspension set 5200mm	324 4009 115				0,04
Suspension clamp	DPSN AK	Al	Suspension clamp for DPSN	324 4011 105				0,02
Ceiling mounting	DPSN DB	Al	Ceiling mounting for DPSN	324 4008 105				0,02
Rail connector	DPSN SV	Al	Stabilisation connector for DPSN	324 4012 105				0,03
Cutting tool	DPSN LBW		for adjusting the length of the copper conductors	324 4010 100				0,1

LC-canopies



System components	Type	Details	Item-Nr.	Colour	Colour	Colour	kg
LC-canopy	SA-PS-FLEX	SA-PS-FLEX 10x; 2000mm	910 1120 10...	<input type="checkbox"/> ...1	<input checked="" type="checkbox"/> ...5	<input checked="" type="checkbox"/> ...4	0,6
LC-canopy	DPSN-PS-FLEX	DPSN-PS-FLEX 10x, for DPSN-phase-track	324 4500 10...	<input type="checkbox"/> ...1	<input checked="" type="checkbox"/> ...5	<input checked="" type="checkbox"/> ...4	0,6

► More Control modules see chapter control  Page 456.

clip-OTB

for VDU workplaces!

narrow-wide
distribution

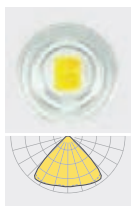
3000 $\frac{lm}{W}$ **9**

The narrow-wide single lens optic convinces with it's first class lighting technology.

UGR < 19, light density 65° < 3.000cd/m².



4 lighting technologies for your applications



-OB

Lens optic
wide distribution



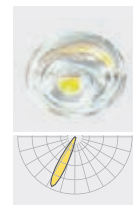
-OTB

Lens optic
narrow-wide distribution



-OG

Lens optic
diffuse



-OA

Lens optic
asymmetrical



clip-TTS

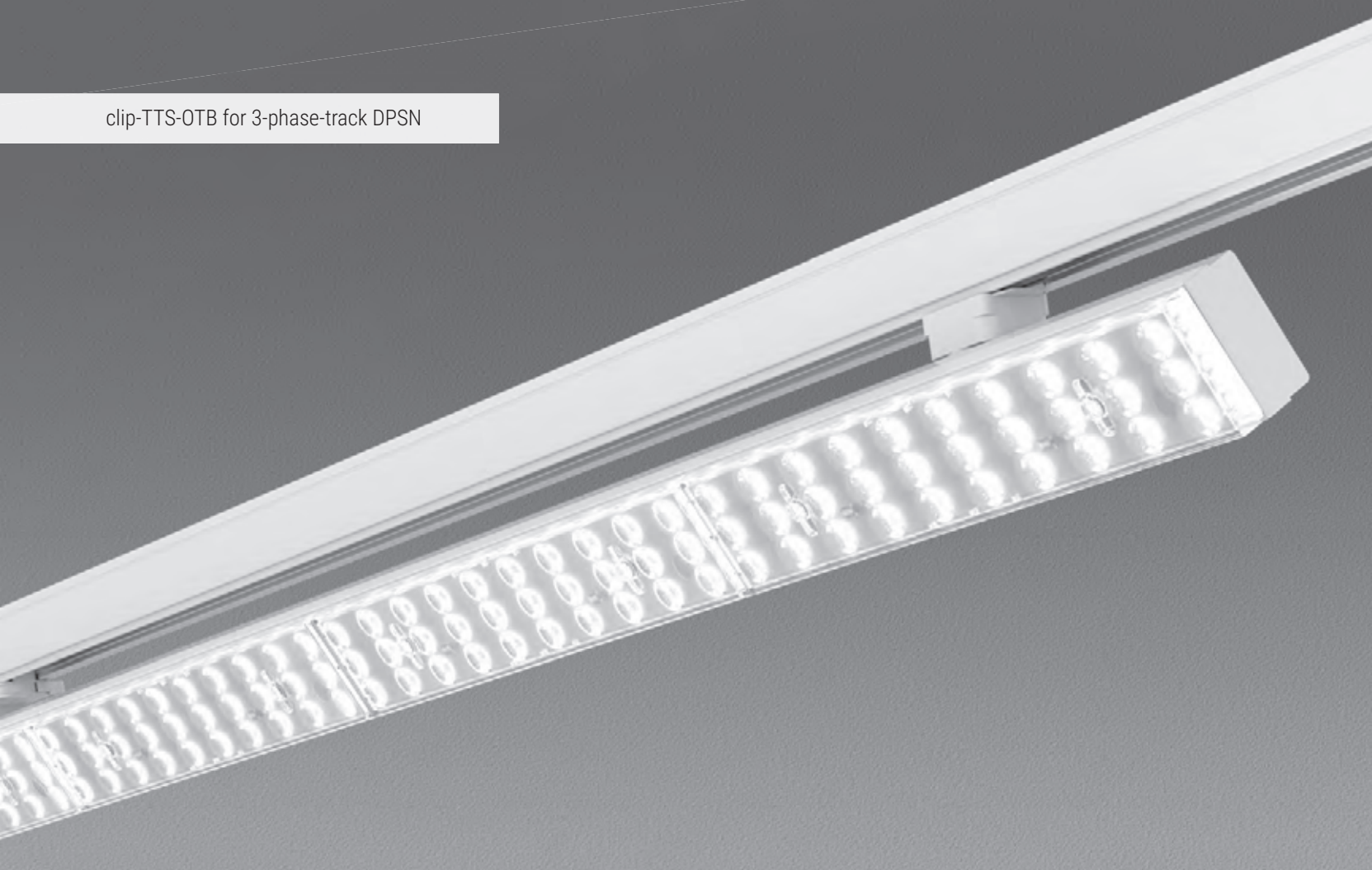
NEW

perfect shop
illumination



housing can be swiveled up to 60°





clip-TTS-OTB

☎️ ⚡ IP20   ⚡ ⚡ ⚡ ⚡ ⚡

Housing

Sheet steel, powder-coated traffic white (similar to RAL 9016), painted white aluminium (similar to RAL 9006) or deep black (similar to RAL 9005). Further RAL-colours on request. Perfect vertical illumination thanks to housing which can be swiveled up to 60°.

Lighting technology -OTB

Direct narrow-wide light distribution.
Translucent lens optics made of acrylic with additional lateral transmission.
For VDU workstations $65^\circ < 3000\text{cd/m}^2$ according to DIN EN 12464-1.
Rated life time = L80 B10 50.000h.
Light colour 830 available on request.

Miscellaneous

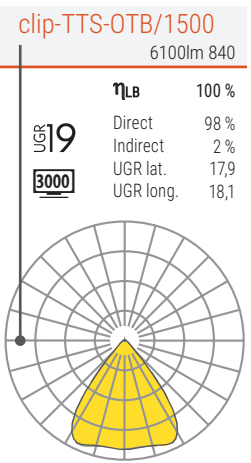
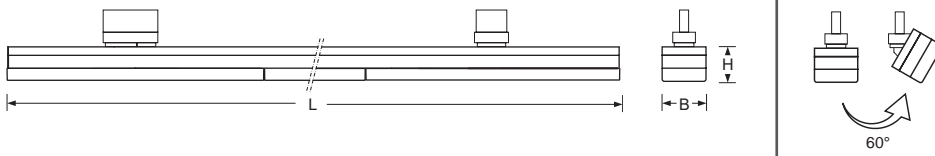
Electrical connection via 3-phase + DALI track adaption type DPSN (dimnable) or universal adaption for ED (switchable).

Accessories

Tool clip-TT ERW to unlock luminaire from phase-track must be ordered separately.



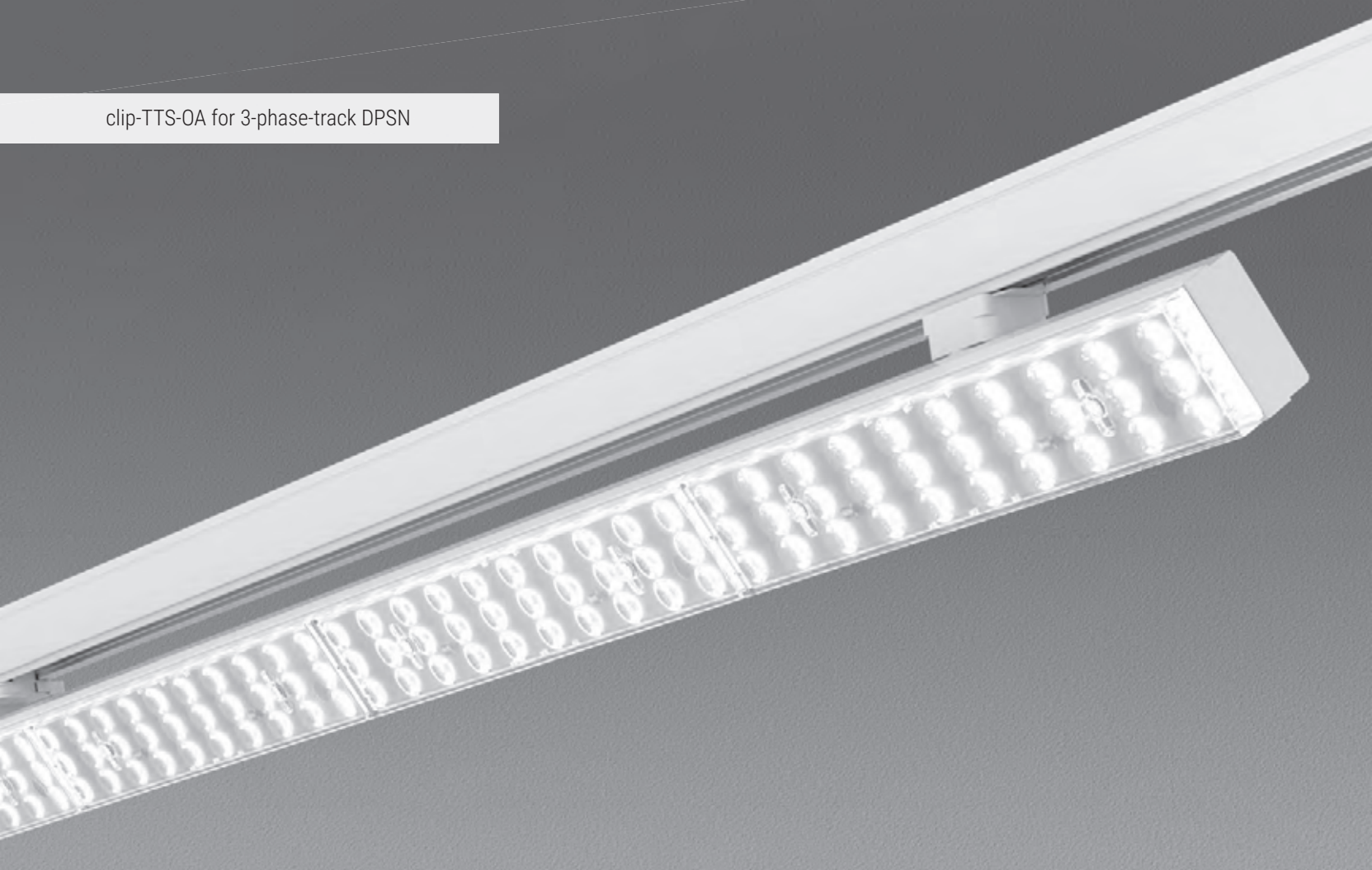
Type	L	B	H
clip-TTS/900	915	55	40
clip-TTS/1200	1220	55	40
clip-TTS/1500	1525	55	40



Type	LED Specification	P _{sys} (W)	Driver	Item-number	Colour	Colour	Colour	kg
clip-TTS-OTB/900	LED 3300lm 840	20	ED	773 3344 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	1,6
	LED 3300lm 840	20	DALI	773 3346 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	1,6
clip-TTS-OTB/1200	LED 4400lm 840	27	ED	773 3444 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,2
	LED 4400lm 840	27	DALI	773 3446 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,2
clip-TTS-OTB/1500	LED 5500lm 840	33	ED	773 3544 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
	LED 5500lm 840	33	DALI	773 3546 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8

► Please refer to the current data for LED luminaires at www.lichtwerk.de

Accessories	Type	Details	Item-number	kg
Unlocking tool	clip-TT ERW	Unlocking tool to release luminaire	722 9000 100	0,2



clip-TTS-OA

☎️ ⚡ IP20 ⚡ ⚡ ⚡ ⚡ ⚡

Housing

Sheet steel, powder-coated traffic white (similar to RAL 9016), painted white aluminium (similar to RAL 9006) or deep black (similar to RAL 9005). Further RAL-colours on request. Perfect vertical illumination thanks to housing which can be swiveled up to 60°.

Lighting technology -OA

Direct asymmetrical distribution.
Translucent lens optics made of acrylic with additional lateral transmission.
Rated life time = L80 B10 50.000h.
Light colour 830 available on request.

Miscellaneous

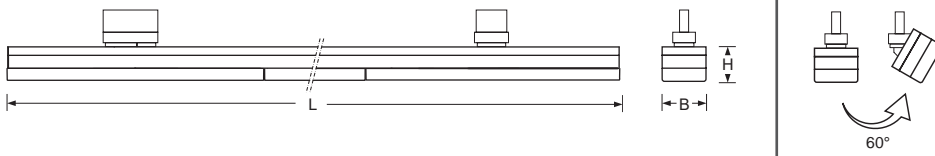
Electrical connection via 3-phase + DALI track adaption type DPSN (dimnable) or universal adaption for ED (switchable).

Accessories

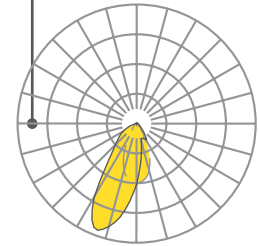
Tool clip-TT ERW to unlock luminaire from phase-track must be ordered separately.



Type	L	B	H
clip-TTS/900	915	55	40
clip-TTS/1200	1220	55	40
clip-TTS/1500	1525	55	40



clip-TTS-OA/1500	
6000lm 840	
η_{LB}	100 %
Direct	98 %
Indirect	2 %
UGR lat.	17,1
UGR long.	20,4



Type	LED Specification	P _{sys} (W)	Driver	Item-number	Colour	Colour	Colour	kg
clip-TTS-OA/900	LED 3300lm 840	20	ED	773 5344 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	1,6
	LED 3300lm 840	20	DALI	773 5346 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	1,6
clip-TTS-OA/1200	LED4400lm 840	27	ED	773 5444 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,2
	LED 4400lm 840	27	DALI	773 5446 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,2
clip-TTS-OA/1500	LED 5500lm 840	33	ED	773 5544 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
	LED 5500lm 840	33	DALI	773 5546 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8

► Please refer to the current data for LED luminaires at www.lichtwerk.de

Accessories	Type	Details	Item-number	kg
Unlocking tool	clip-TT ERW	Unlocking tool to release luminaire	722 9000 100	0,2







clip-TT-OB

  IP20    

Housing

Sheet steel, powder-coated traffic white (similar to RAL 9016), painted white aluminium (similar to 9006) or deep black (similar to RAL 9005). Further RAL-colours on request.

Lighting technology -OB

Direct wide light distribution.
Translucent lens optics made of acrylic with additional lateral transmission.
Rated life time = L80 B10 50.000h.
Light colour: 4000K. Optional: 3000K. Other light colours on request.

Miscellaneous

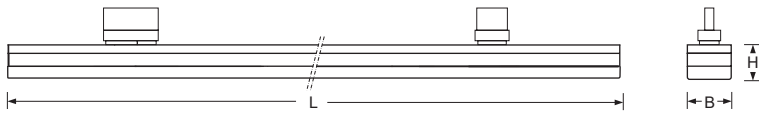
Electrical connection via 3-phase + DALI track adaption type DPSN (dimnable) or universal adaption for ED (switchable).

Accessories

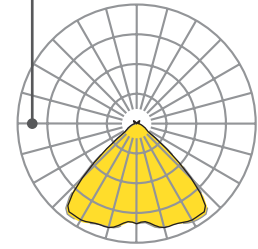
Tool clip-TT ERW to release luminaire from track must be ordered separately.



Type	L	B	H
clip-TT/1200	1220	55	40
clip-TT/1500	1525	55	40
clip-TT/1800	1830	55	40



clip-TT-OB/1500	
5500lm 840	
η_{LB}	100 %
Direct	98 %
Indirect	2 %
UGR lat.	19,7
UGR long.	20,1



Type	LED Specification	P _{sys} (W)	Driver	Item-number	Colour	Colour	Colour	kg
clip-TT-OB/1200	LED 4400lm 840	27	ED	772 1444 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,1
	LED 4400lm 840	27	DALI	772 1446 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,1
clip-TT-OB/1500	LED 5500lm 840	33	ED	772 1544 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
	LED 5500lm 840	33	DALI	772 1546 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
clip-TT-OB/1800	LED 6600lm 840	40	ED	772 1644 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	3,3
	LED 6600lm 840	40	DALI	772 1646 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	3,3

► Please refer to the current data for LED luminaires at www.lichtwerk.de

Accessories	Type	Details	Item-number	kg
Unlocking tool	clip-TT ERW	Unlocking tool to release luminaire	722 9000 100	0,2







clip-TT-OTB

IP20 3000 519

Housing

Sheet steel, powder-coated traffic white (similar to RAL 9016), painted white aluminium (similar to 9006) or deep black (similar to RAL 9005). Further RAL-colours on request.

Lighting technology -OTB

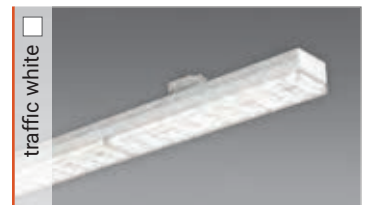
Direct narrow-wide light distribution.
Translucent lens optics made of acrylic with additional lateral transmission.
For VDU workstations $65^\circ < 3000\text{cd/m}^2$, $\text{UGR} \leq 19$ according to DIN EN 12464-1.
Rated life time = L80 B10 100.000h.
Light colour: 4000K. Optional: 3000K. Other light colours on request.

Miscellaneous

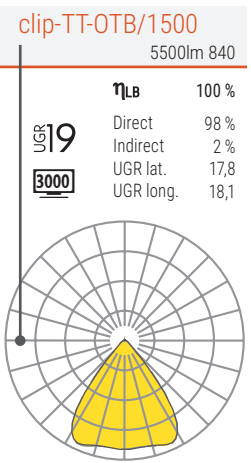
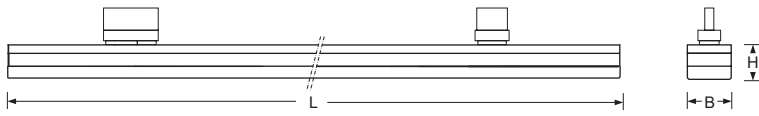
Electrical connection via 3-phase + DALI track adaption type DPSN (dimmable) or universal adaption for ED (switchable).

Accessories

Tool clip-TT ERW to release luminaire from track must be ordered separately.



Type	L	B	H
clip-TT/1200	1220	55	40
clip-TT/1500	1525	55	40
clip-TT/1800	1830	55	40



Type	LED Specification	P _{sys} (W)	Driver	Item-number	Colour	Colour	Colour	kg
clip-TT-OTB/1200	LED 4400lm 840	27	ED	772 3444 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,1
	LED 4400lm 840	27	DALI	772 3446 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,1
clip-TT-OTB/1500	LED 5500lm 840	33	ED	772 3544 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
	LED 5500lm 840	33	DALI	772 3546 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
clip-TT-OTB/1800	LED 6600lm 840	40	ED	772 3644 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	3,3
	LED 6600lm 840	40	DALI	772 3646 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	3,3

► Please refer to the current data for LED luminaires at www.lichtwerk.de

Accessories	Type	Details	Item-number	kg
Unlocking tool	clip-TT ERW	Unlocking tool to release luminaire	722 9000 100	0,2





Handmade Furniture
100% Natural
€149,95



clip-TT-OG

📶 📶 IP20 ⚡ ⚠️ 📦 CE

Housing

Sheet steel, powder-coated traffic white (similar to RAL 9016), painted white aluminium (similar to 9006) or deep black (similar to RAL 9005). Further RAL-colours on request.

Lighting technology -OG

Direct diffuse light distribution.
Ice-finish Individual Lens Optic made of acrylic with lateral beam.
Rated life time = L80 B10 100.000h.
Light colour: 4000K. Optional: 3000K. Other light colours on request.

Miscellaneous

Electrical connection via 3-phase + DALI track adaption type DPSN (dimnable) or universal adaption for ED (switchable).

Accessories

Tool clip-TT ERW to release luminaire from track must be ordered separately.



traffic white

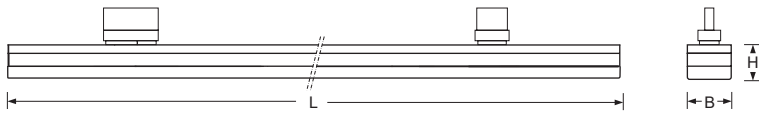


white aluminium W3



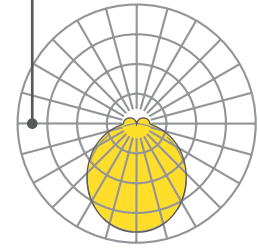
deep black

Type	L	B	H
clip-TT/1200	1220	55	40
clip-TT/1500	1525	55	40
clip-TT/1800	1830	55	40



clip-TT-OG/1500
5700lm 840

η_{LB}	100 %
Direct	90 %
Indirect	10 %
UGR lat.	25,5
UGR long.	24,8



Type	LED Specification	P _{sys} (W)	Driver	Item-number	Colour	Colour	Colour	kg
clip-TT-OG/1200	LED 4100lm 840	27	ED	772 7444 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,1
	LED 4100lm 840	27	DALI	772 7446 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,1
clip-TT-OG/1500	LED 5200lm 840	33	ED	772 7544 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
	LED 5200lm 840	33	DALI	772 7546 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	2,8
clip-TT-OG/1800	LED 6200lm 840	40	ED	772 7644 10...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	3,3
	LED 6200lm 840	40	DALI	772 7646 60...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> wa ...6	<input checked="" type="checkbox"/> ...4	3,3

► Please refer to the current data for LED luminaires at www.lichtwerk.de

Accessories	Type	Details	Item-number	kg
Unlocking tool	clip-TT ERW	Unlocking tool to release luminaire	722 9000 100	0,2







emphara-EMTT

📶 📶 IP20 ⚡ ⚠️ 📦 CE

Housing

Phase-track spotlight, can be turned 350° and swiveled 90°. Compact spotlight unit made of die-cast aluminium with driver integrated into hinged arm. Painted traffic white, silvergrey or black.

Lighting technology -EMTT

Direct narrow distribution.
Highly specular faceted reflector made of efficient MIRO-SILVER aluminium with reflection coefficient of 99.8%; beam angle 30°; clear safety glass;
Rated life time = L80 B10 50.000h.
Light colour: 4000K or 3000K. Other light colours on request.

Miscellaneous

Integrated electronic LED driver; connection via universal 3-phase-track adapter, or for dimmable luminaires via 3-phase DALI adapter for DPSN.

Accessories

Replacement reflector 40° highly specular faceted or 60° matt segmented must be ordered separately.



traffic white

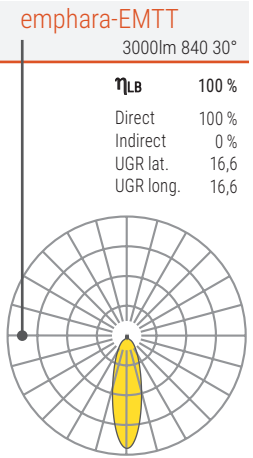
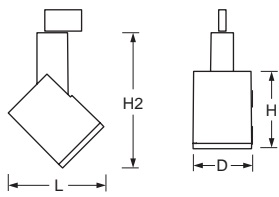


silvergrey



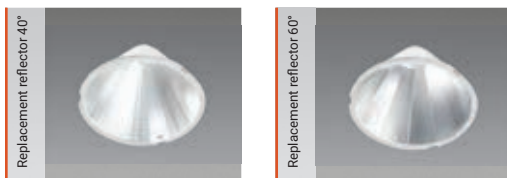
black

Type	L	H	H2	D
emphara-EMTT	180	145	254	110



Type	LED Specification	P _{sys} (W)	α	Driver	Item-number	Colour	Colour	Colour	kg
emphara-EMTT/110	LED 2900lm 830	25	30°	ED	351 1014 13...	□...0	sg...5	■...4	1,2
	LED 2900lm 830	25	30°	DALI	351 1016 63...	□...0	sg...5	■...4	1,2
	LED 3900lm 830	30	30°	ED	351 2014 13...	□...0	sg...5	■...4	1,2
	LED 3900lm 830	30	30°	DALI	351 2016 63...	□...0	sg...5	■...4	1,2
	LED 3000lm 840	25	30°	ED	351 1024 13...	□...0	sg...5	■...4	1,2
	LED 3000lm 840	25	30°	DALI	351 1026 63...	□...0	sg...5	■...4	1,2
	LED 4100lm 840	36	30°	ED	351 2024 13...	□...0	sg...5	■...4	1,2
	LED 4100lm 840	36	30°	DALI	351 2026 63...	□...0	sg...5	■...4	1,2

► Please refer to the current data for LED luminaires at www.lichtwerk.de



Accessories	Type	Details	Item-number	kg
Replacement reflector	40°/D=110	beam angle 40°, highly specular faceted	350 4014 140	0,1
	60°/D=110	beam angle 60°, matt segmented	350 0004 160	0,1







spotty-SYTT

📶 📶 IP20 ⚡ ⚠️ 📦 CE

Housing

Phase-track spotlight, can be turned 350° and swiveled 90°. Increased CRI90. Compact spotlight unit made of die-cast aluminium with thermal separated technology housing. Painted traffic white, silvergrey or black.

Lighting technology -SYTT

Direct narrow light distribution. Light distribution using matt segmented reflector made of highly efficient MIRO-SILVER aluminium with reflection coefficient of 99.8%; Beam angle 36°; clear safety glass; Rated life time = L80 B50 50.000h. Light colour: 4000K or 3000K. Other light colours on request.

Miscellaneous

Integrated electronic LED driver; connection via universal 3-phase-track adapter, or for dimmable luminaires via 3-phase DALI adapter for DPSN.



traffic white

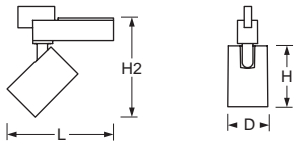


silvergrey



black

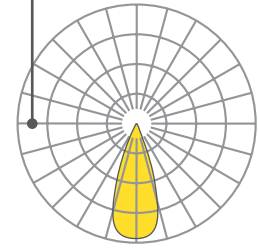
Type	L	H	H2	D
spotty-SYTT	201	114	182	75



spotty-SYTT

2700lm 940 36°

η_{LB}	100 %
Direct	100 %
Indirect	0 %
UGR lat.	15,8
UGR long.	15,8



Type	LED Specification	P _{sys} (W)	α	Driver	Item-number	Colour	Colour	Colour	kg
spotty-SYTT	LED 2600lm 930	24	36°	ED	359 1014 13...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...5	<input checked="" type="checkbox"/> ...4	0,9
	LED 2600lm 930	24	36°	DALI	359 1016 63...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...5	<input checked="" type="checkbox"/> ...4	0,9
	LED 2700lm 940	24	36°	ED	359 1024 13...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...5	<input checked="" type="checkbox"/> ...4	0,9
	LED 2700lm 940	24	36°	DALI	359 1026 63...	<input type="checkbox"/> ...0	<input checked="" type="checkbox"/> ...5	<input checked="" type="checkbox"/> ...4	0,9

► Please refer to the current data for LED luminaires at www.lichtwerk.de





Photo index

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GTC - Sales and delivery conditions

1. General

1.1 These conditions of sale apply exclusively to companies, legal persons under public law or public-law special assets in the sense of § 310 paragraph 1 BGB (German Civil Code). The following conditions of sale apply exclusively for all offers and contracts regarding the delivery of goods by lichtwerk GmbH. They also apply for all future transactions with the Orderer when dealing with legal transactions of the related kind. The Orderer recognises the conditions as binding for him for all of the business relations. Modifications and amendments must be in written form. Conflicting or deviating terms and conditions of the Orderer are not terms of the contract, even if we do not expressly object to them. This will only be content of the respective contract in cases where we expressly approve the conflicting or deviating terms and conditions in writing.

1.2 We reserve our own rights of ownership, copyright and other intellectual property rights for all cost estimates, drawings and documents that are handed over to the Orderer during the contract negotiations. They may only be disclosed to third parties with our prior written permission. If an order is not issued, all transferred documents shall be returned immediately at our request. The Orderer does not have the right to use, retain or disseminate these documents.

2. Conclusion of the contract and scope of services

2.1 Our offers are not-binding and without obligation. In terms of the nature and scope of delivery, they will first be binding upon our written order confirmation. If an order is to be regarded as an offer according to § 145 BGB, we can accept this within two weeks by sending an order confirmation.

2.2 Verbal agreements, in particular supplementary agreements and commitments made by our employees, require our written confirmation to be effective.

2.3 For the delivery, we reserve the right to deviations of goods compared to the documents belonging to the offers, such as catalogues, illustrations, descriptions, drawings as well as weight and dimension information, provided they are commercial and reasonable for the Orderer and in particular do not impair quality and function.

3. Prices, deliveries and terms of payment

3.1 Prices and delivery

3.1.1 The prices are calculated in Euro exclusive of the legal VAT, which is invoiced separately according to the valid rate. The prices are calculated according to the prices valid at date of contract conclusion; if the delivery is made more than 4 months after contract conclusion, the prices valid at date of delivery can be invoiced.

3.1.2 Principally, prices shall be ex works excluding VAT, packaging, freight costs and insurance.

3.1.3 For a net order value of €1,500.00 or more, we deliver to the delivery location free of charge within Germany, whereby we provide the goods at the delivery location ready for unloading. Starting at € 750.00, we charge half of the transportation charges for a delivery location within Germany. For a net order value below € 250.00, we charge an additional small-volume surcharge of €25.00.

3.2 Terms of payment

3.2.1 Our invoices are to be paid within 30 days from the date of the invoice. For payment within eight days from the invoice date, we grant a 2 % discount. A payment is considered effected if we are able to access the funds. In the case of payment by cheque, payment is only considered effected when the cheque is redeemed by us.

3.2.2 The acceptance of cheques shall only be accepted on account of performance.

3.2.3 The Orderer's right of retention, as far as it is not based on the same contractual relationship, and the offsetting with contested and not legally determined claims is excluded.

3.2.4 If the Orderer is in default of payment as a whole or a part, he is bound - notwithstanding all other rights of the supplier - to pay from that point of time on default interests to the amount of 8 % annually above the base lending rate.

3.2.5 If the Orderer ceases payments or if bankruptcy is filed or mature checks or bills of exchange are not redeemed, all claims made by the supplier are immediately due.

4. Delivery times and acceptance obligations

4.1 The delivery period begins with the date of written agreement about the order between Orderer and supplier.

4.2 Hindrances beyond our responsibility, in particular acts of God, war, insurrection, strikes, transport disruptions, business disruptions, lack of material, official orders and other inevitable events that delay the delivery in whole or in part automatically lengthen the delivery period by the duration of such conditions. In such cases the parties have the right to withdraw from the contract in whole or in part.

4.3 In the event of a delayed delivery for which we are responsible, the Orderer can only assert his rights arising from the delay if the grace period he granted us has passed without result. If the Orderer proves in this case that he has incurred damages caused by the delay, he can claim a delay compensation for each completed week of the delay in the amount of 0.5% for the entire duration of the delay, but not to exceed 5% of the value of the goods not delivered on time. The right of the Orderer for exercising the right of withdrawal shall remain unaffected. Further-reaching claims shall only apply in cases of intent or gross negligence where liability is mandatory.

4.4 We are entitled to make reasonable installment deliveries.

4.5 If the Orderer causes a delay of dispatch or delivery of the goods or if the Orderer is otherwise in default in accepting the delivery of goods or should the Orderer intentionally violate other obligations to co-operate, we then have the right to claim compensation for any incurred damages in this respect, including any possible additional expenditure. Rights remain reserved for more extensive claims. Insofar as such aforesaid conditions apply, the risk of accidental loss or accidental deterioration of the purchased goods passes over to the Orderer at the precise point of time in which he is in default of acceptance or payment.

5. Dispatch, transfer of risk, returns

5.1 The risk is passed on to the Orderer when the goods leave the factory or a warehouse. Shipping takes place uninsured at the Orderer's risk. This also applies even if free delivery is agreed and also for deliveries by our transport staff. If the shipment is delayed as a result of circumstances for which the Orderer is responsible, the risk is transferred with our notification of readiness for shipment. If the shipment is delayed at the Orderer's request or at the fault of the Orderer, then we will store the goods at the Orderer's expense. The Orderer is required to check without delay whether the goods have been damaged during transportation and to immediately inform the carrier and deliverer of any damage or loss. Shipping takes place on behalf of the Orderer.

5.2 If the supplier has no statutory obligation to accept returned goods, the Orderer may only return goods with our express written consent and provided that they are undamaged and returned in the original packaging. 30% of the invoiced amount will be deducted from the credit note to cover processing costs. All reprocessing, freight, insurance and packaging costs are charged to the Orderer. Principally, it is not possible to return custom-made products.

6. Retention of Title

6.1 The goods remain our property until the fulfilment of all our entitled claims against the Orderer (goods subject to retention of title), even if the individual goods have been paid for. A pledge or chattel mortgage of the reserved goods is not permissible.

6.2 In the case of the permissible resale of the reserved goods within the ordinary course of business, the Orderer assigns us already now, until payment of all our claims, as collateral for its future claims towards his customers resulting of such resale without requiring any specific further explanations. This assignment also covers balance claims resulting from existing current account relationships or at their termination of the Orderer with his customers. If the reserved goods are sold together with other goods without agreeing upon an individual price for the reserved goods, the Orderer assigns us the priority over the other claims for such part of the total price claimed which corresponds to the value invoiced by us. Until revoked, the Orderer is authorized to collect the assigned demands from the resale, he is not entitled to dispose of them otherwise, e.g. by assignment. Upon our request, the Orderer must inform his customer about the assignment and to furnish us the necessary documents for the assertion of his rights towards the customer, e.g. to deliver invoices and to provide the required details.

6.3 If the purchaser does not meet all or a part of his payment obligations within 10 days after due date, if he does not cash due checks or if an application for insolvency is filed, we have the right to withdraw from the contract and to require the return of the goods. The purchaser is obliged to procure us with the possession of the goods. The Orderer grants us or any of our authorized representatives the access to all business premises during business hours. We are entitled to use the reserved goods with the diligence of a prudent businessman and to satisfy ourselves with the offsetting of open claims with their proceeds.

6.4 As long as the ownership has not been transferred, the Orderer is to inform us in writing immediately if the supplied item is seized or is exposed to other interventions by third parties. If the third party is unable to indemnify us for the costs of legal or out-of-court costs of a claim according to par.

771 ZPO (German Code of Civil Procedure), the Orderer is liable for our amount outstanding.

7. Warranty

7.1 We are liable for the defects of the goods (in the first instance under the exclusion of the Orderer's rights to back out of the contract or to reduce the purchase price) through rectification of the defect or replacement delivery at our choice. The Orderer shall grant us a reasonable time period to provide the rectification. If the supplementary performance does not work, the Orderer may basically according to his choice demand a cut of the compensation (decrease) or a cancellation of the contract. The improvement is considered failed after the second unsuccessful attempt, provided further improvement attempts are not appropriate due to the subject matter of the contract and are not reasonable to the Orderer. In case of a minor breach of contract, especially minor defects, the Orderer, however, does not have a right of cancellation.

7.2 Warranty rights of the Orderer require that the Orderer's obligations to make inspection and give notice of defects according to par. 377 HGB (German Commercial Code) have been properly fulfilled.

7.3 The Orderer must notify us concerning obvious defects within a period of 10 days after receipt of goods, otherwise the assertion of the warranty claim is excluded. Non-obvious defects must be claimed immediately when they are discovered or determined, otherwise they are deemed to be approved. For all presuppositions for claims he full burden of proof forlies with the Orderer, especially for the deficit itself, for the time period of the determination of the defect, and for the timeliness of the notice of defect.

7.4 If the Orderer, due to a deficiency in title or a material defect after failed subsequent performance, chooses to cancel the contract, he shall not be entitled to additional claims for damages due to the defect.

7.5 The warranty period amounts to one year from date of delivery of our goods to the Orderer.

7.6 The warranty obligation is void if the goods have suffered from improper handling or storage or if improper changes were made to them without the supplier's approval. We are not liable for subsequent changes to the lights, their internal circuitry, equipment or the lamps.

7.7 The condition of the goods only the product description of the manufacturer applies as agreed upon. Additional public statements or advertisements of the manufacturer do not represent a contractual statement on the nature of the goods.

7.8 In the event that the article of sale cannot be used by the Orderer as stipulated in the contract of sale as a result of negligent violation of collateral contractual duties, especially with regard to operating and maintenance instructions, we shall also be liable in accordance with paragraph 7.6.

In case of consulting we can only be held responsible if special payment was agreed in writing.

7.9 Claims made by the Customer against the Supplier for installation and disassembly costs, unless they serve to detect errors, costs of disposal and costs for hoisting devices and scaffolding shall be excluded. The Customer shall bear the costs of the necessary recommissioning, software reinstallation or software updates. Where the Supplier meets its cost absorption obligation pursuant to Article 478 of the German Civil Code with respect to other expenses necessary for supplementary performance, the Supplier shall be entitled to pay such expenses by means of a credit note for goods. A right to compensation for damages to the goods themselves shall be excluded. This does not apply, as far as compelling liability is given in cases of intent, gross negligence, lack of guaranteed product properties or the Product Liability Act.

8. Limitation on Liability

8.1 As far as it is not expressly stipulated otherwise in these conditions, the claims against us, our legal representatives and any person employed by us in the performance of our obligation and any vicarious agent resulting from damages, including consequential damages, which occur to the Orderer or a third party, in particular such damages resulting from fault at contract conclusion, culpable breach of an obligation and negligent and impermissible actions are excluded.

8.2 The aforesaid limitations of liability shall not affect the Orderer's product liability claims. In addition, we are liable for loss of life, physical injury and damage to health (regardless of existing limitation of liability according to the statutory provisions) that are caused by a negligent or wilful breach of duty on our part, our legal representatives or our assistants. We are liable under statutory provisions for damages that are not covered by clause 1 and that are based on fraudulent intent by us, our legal representatives or our assistants.

8.3 The Orderer's claim for damages for defect becomes time-barred after one year from date of delivery of the goods to the Orderer. This shall not apply if we can be accused of malice. In these cases, the statutory provisions apply.

9. Applicable law, place of jurisdiction

For these business relationships and all legal relationships between us and the Orderer, - including export contracts - the governing law of the Federal Republic of Germany applies exclusively. The application of the UN jurisdiction, concerning sales and purchase procedure, is excluded. If legally permissible, the place of jurisdiction for all disputes directly or indirectly resulting from a contractual relationship is, by our choosing, either Haßfurt or the court responsible for the Orderer's registered office. The place of fulfilment for deliveries and payments is also Haßfurt. If individual conditions of the contract including these GTC are partially ineffective or will be, the validity of the other conditions are not affected by it. The whole or partial ineffective condition should be replaced by conditions, whose economic purpose comes as close as possible to the ineffective one.



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EXCLUSION OF LIABILITY

Illustrations, dimensions and weights in our catalogues, price lists and quotations are non-binding. Subject to technical changes, errors and color deviations. All luminaires have been designed for 230V 50Hz mains connection and ambient conditions according to DIN EN 60598 unless otherwise stated, and are supplied without lamps unless otherwise stated. Most of the indications with regard to certifications are presented in our catalogue in a general form. Verification with regard to products can be easily carried out on our website.

Because of the dynamics in the technical development especially in the field of LED modules and their drivers, the information in this paper can only be a snapshot of the current state and are therefore legally not binding. Please refer to our web site for current product specifications.

We point out that the orderer recognises our delivery and payment conditions unless he/she objects in writing when sending his/her order.

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