PLANNING NOTES

HEALTHCARE



DEU

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Lighting design according to standard DIN 5035-5

Wiring diagram

Notes on switch positioning

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Lighting design according to standard DIN 5035-3

Wiring diagram

Notes on switch positioning

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Healthy light for all rooms

Discover the versatile lighting solutions and put every room in the perfect light! Search for and find the right luminaire: choose between different luminaire types, designs and mounting options.



Office and meeting



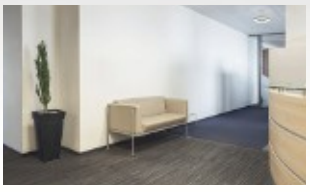
Corridors and stairs



Sanitary facilities (Bathroom / WC)



Entrance and waiting area





Nurses‘ room



Patient room



Care bath



Residents‘ room

Business and function rooms

Restaurant & lounge areas







PRODUCTS IN USE

Luminaire	Residents' room	Patient room	Entrance area	Waiting and lounge areas, restaurant, café	
Wall-Mounted Luminaires					
ZERA.bed	●	●			
VANERA.bed	●	○			
Recessed and Surface-Mounted Luminaires					
VIVAA.fit	○	○	●	●	
OBLO.fit	○		○		
DOTOO.fit					
DOTOO.line			○		
Suspended Luminaires					
VIVAA.pendant	○	○	●	●	
LAVIGO				○	
IDOO.line			○	●	
DOTOO.line			○	○	
Wall-Mounted Luminaires					
ZERA.wall	○	○	●	●	
ZERA.bath					
Free-Standing Luminaires					
VIVAA.free	●	○	●	●	
LAVIGO					
Task Luminaires					
PARA.MI	○	○			

● Ideally suited ○ Well suited
Further variants and technical information online at www.waldmann.com

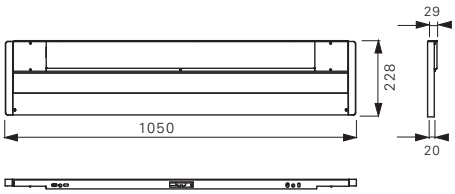
	Sanitary area	Corridors and stairs	Examination room	Utility and function rooms	Office and meeting rooms
		○	○		○
	○	●		●	
		○	○	●	○
		○			○
		●	●		●
		○	●		●
		○			●
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		●	●		○
	●				
					○
			○		●
			○		●

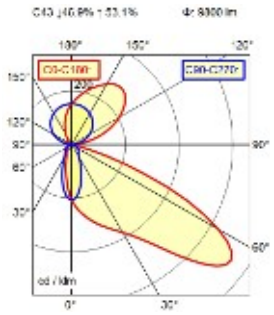
ZERA.bed

ZEW 11000 mit Examination light Intensive care (60W)



Power consumption	approx 116-128W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 10.700-11.090 lm
Mains connection	Connection clamp; 5-10-pole
Housing	Aluminium profile; anodised; aluminium-coloured (colourless anodised)
Light source cover	Acryl (PMMA), clear (direct) / opal white (indirect))
Glare control	Freeform optics
Weight	approx 6,9 kg
Protection class	I
Protection type	IP 20
Standards	EN60598-2-25; 2x MOPP according to standard EN 60601-1
Special features	1 000 lx Average illuminance at examination level "DALI variants (.../D): - for general lighting and reading light - Night light by programming a scene of the general light in 3000K or in the HCL curve possible"
Mounting	Wall mounting above a bed Mounting height (lower edge of Luminaire) approx 1.7 - 1.8 m above the floor





Special features	Technology	Model	Length	Order no.
ZEW 11000 mit Examination light Intensive care (60W)				
AL, UL, LL	Switchable	ZEW 11000/830	1050 mm	114487000-00813007
AL, UL, LL, NL	Switchable	ZEW 11000/830	1050 mm	114487000-00813006
AL, UL Switch left, LL , NL	Switchable	ZEW 11000/830	1050 mm	114487000-00813008
AL, UL Switch right, LL , NL	Switchable	ZEW 11000/830	1050 mm	114487000-00813009
AL, UL, LL DALI	DALI	ZEW 11000/830/D	1050 mm	114497000-00813012
AL VTL, UL, LL DALI	DALI	ZEW 11000/VTL/D	1050 mm	114498000-00813013
AL, UL Switch left, LL with LVC, NL	Switchable	ZEW 11000/830	1050 mm	114499000-00813010
AL, UL Switch right, LL with LVC, NL	Switchable	ZEW 11000/830	1050 mm	114499000-00813011

Legend
AL = General light | LL = Reading light | NL = Night light | UL = Examination light | LVC = Low-voltage protective relay/low-voltage controller
LVC (low-voltage controller): Switching relay for reading light and room light (2-channels) for integration in nurse call system
Left/right switch: Examination light switch on the side of the luminaire

Photometric properties

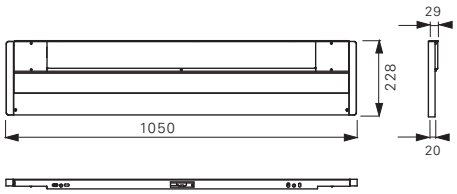
	Colour temperature	Colour rendering	Light distribution	Light yield
General light (AL)	3000 K	≥80	indirect	approx 110-121 lm/W
General light VTL/HCL (AL)	3000 - 6500K	≥80	indirect	approx 110-121 lm/W
Examination light (UL)	4000 K	≥95, R9≥50	direct	approx 70 lm/W
Night light (NL)	2700 K	≥80	indirect	approx 63 lm/W
Reading light (LL)	2700 K	≥90	direct	approx 90 lm/W

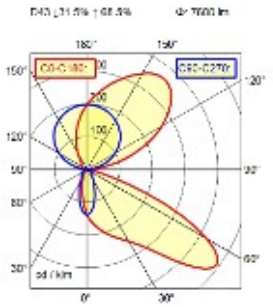
ZERA.bed

ZEW 9000 mit Examination light Normal care (33W)



Power consumption	approx 86-95W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 8.500-8.960 lm
Mains connection	Connection clamp; 5-10-pole
Housing	Aluminium profile; anodised; aluminium-coloured (colourless anodised)
Light source cover	Acryl (PMMA), clear (direct) / opal white (indirect))
Glare control	Freeform optics
Weight	approx 6,9 kg
Protection class	I
Protection type	IP 20
Standards	EN60598-2-25; 2x MOPP according to EN 60601-1
	"DALI variants (.../D): - Night light by programming a scene of the general light in 3000K or in the HCL curve possible"
Mounting	Wall mounting above a bed Mounting height (lower edge of Luminaire) approx 1.7 - 1.8 m above the floor





Special features	Technology	Model	Length	Order no.
ZEW 9000				
AL, UL, LL	Switchable	ZEW 9000/830	1050 mm	114475000-00812992
AL, UL, LL, NL	Switchable	ZEW 9000/830	1050 mm	114475000-00812991
AL, UL Switch left, LL , NL	Switchable	ZEW 9000/830	1050 mm	114475000-00812993
AL, UL Switch right, LL , NL	Switchable	ZEW 9000/830	1050 mm	114475000-00812994
AL, UL, LL DALI	DALI	ZEW 9000/830/D	1050 mm	114494000-00812997
AL VTL, UL, LL DALI	DALI	ZEW 9000/VTL/D	1050 mm	114492000-00812998
AL, UL Switch left, LL with LVC, NL	Switchable	ZEW 9000/830	1050 mm	114493000-00812995
AL, UL Switch right, LL with LVC, NL	Switchable	ZEW 9000/830	1050 mm	114493000-00812996

Legend
AL = General light | LL = Reading light | NL = Night light | UL = Examination light | LVC = Low-voltage protective relay/low-voltage controller
LVC (low-voltage controller): Switching relay for reading light and room light (2-channels) for integration in nurse call system
Left/right switch: Examination light switch on the side of the luminaireDALI: Dimmbares General light

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
General light (AL)	3000 K	≥80	indirect	approx 110-121 lm/W
General light VTL/HCL (AL)	3000 - 6500K	≥80	indirect	approx 110-121 lm/W
Examination light (UL)	4000 K	≥95, R9≥50	direct	approx 70 lm/W
Night light (NL)	2700 K	≥80	indirect	approx 63 lm/W
Reading light (LL)	2700 K	≥90	direct	approx 90 lm/W

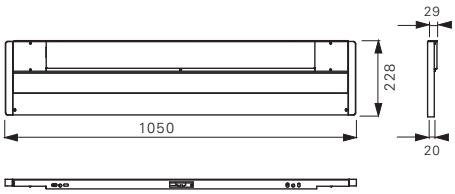
Accessories (to be considered at the time of project specification)
Wall mounting rail with widened support for drywall (227125049-00813536)

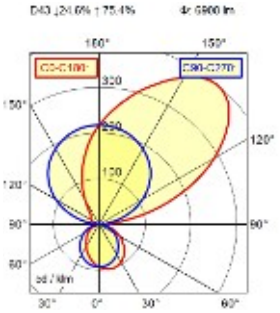
ZERA.bed

ZEW 7000



Power consumption	approx 61-64W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 6.900-7.090 lm
Mains connection	Connection clamp; 5-10-pole
Housing	Aluminium profile; anodised; aluminium-coloured (colourless anodised)
Light source cover	Acryl (PMMA), clear (direct) / opal white (indirect))
Glare control	PMMA opal, satinised
Weight	approx 6,9 kg
Protection class	I
Protection type	IP 20
Standards	EN60598-2-25; 2x MOPP according to EN 60601-1
	"DALI variants (.../D): - Night light possible by programming a scene of the general light in 3000K or in the HCL curve possible"
Mounting	Wall mounting above a bed Mounting height (lower edge of Luminaire) approx 1.7 - 1.8 m above the floor





Special features	Technology	Model	Length	Order no.
ZEW 7000				
AL, LL	Switchable	ZEW 7000/830	1050 mm	114488000-00813014
AL, LL, NL	Switchable	ZEW 7000/830	1050 mm	114488000-00813015
AL, LL DALI	DALI	ZEW 7000/830	1050 mm	114488000-00813017
AL, LL with LVC	Switchable	ZEW 7000/830	1050 mm	114488000-00813016

Legend
AL = General light | LL = Reading light | NL = Night light | LVC = Protective low-voltage relay/low-voltage controller
LVC (low-voltage controller): Switching relay for reading light and room light (2 channels) for integration in nurse call system
DALI: Dimmable general light

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
General light (AL)	3000 K	≥80	indirect	approx 110-121 lm/W
Night light (NL)	2700 K	≥80	indirect	approx 63 lm/W
Reading light (LL)	3000 K	≥80	direct	approx 90 lm/W

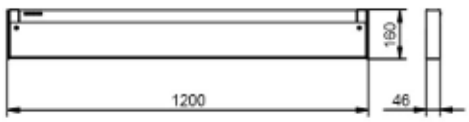
Accessories (to be considered at the time of project specification)
Wall mounting rail with widened support for drywall (227125049-00813536)

VANERA.bed

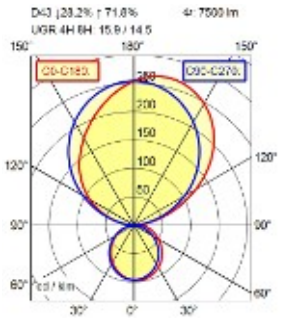
VAW 8000



Power consumption	approx 61-64W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 6.900-7.090 lm
Mains connection	Connection clamp; 3-5-pole
Housing	Aluminium profile; anodised; aluminium-coloured (colourless anodised)
Light source cover	Acryl (PMMA), opal white
Glare control	Freeform optics
Weight	approx 4 kg
Protection class	I
Protection type	IP 20
Standards	EN60598-2-25; 2x MOPP according to EN 60601-1
	"DALI variants (.../D): - Night light possible by programming a scene of the general light in 3000K or in the HCL curve possible"
Mounting	Wall mounting above a bed Mounting height (lower edge of Luminaire) approx 1.7 - 1.8 m above the floor







Special features	Technology	Model	Length	Order no.
VAW 8000 I warm white 3000 K				
AL, LL	Switchable	VAW 8000/830	1200 mm	114476000-00812226
AL, LL, NL	Switchable	VAW 8000/830	1200 mm	114476000-00812229
AL, LL DALI	DALI	VAW 8000/830/D	1200 mm	114476000-00812230
AL, LL , LVC	Switchable	VAW 8000/830	1200 mm	114476000-00812228

Legend
AL = General light | LL = Reading light | NL = Night light | LVC = Protective low-voltage relay/low-voltage controller
LVC (low-voltage controller): Switching relay for reading light and room light (2 channels) for integration in nurse call system
DALI: Dimmable general light

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
General light (AL)	3000 K	≥80	indirect	approx 98 lm/W
Night light (NL)	2700 K	≥80	indirect	approx 98 lm/W
Reading light (LL)	3000 K	≥80	direct	approx 127 lm/W

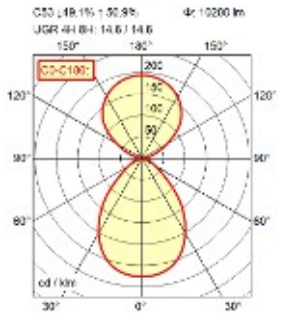
VIVAA.fit

VIA 6000 | VIP 7000 | VIP 10000



Power consumption	approx 53-91W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 6.400-10.200 lm
Mains connection	Connection clamp; 5-pole
Housing	Aluminium; lacquered; white (similar to RAL9016)
Light source cover	Acryl (PMMA), Satinised
Glare control	Cone prism aperture
Weight	approx 4,9-6,9 kg
Protection class	I
Protection type	IP 20
Standards	DIN EN 12464-1; EN 60598-2-25
Special features	Separate; individual adjustment of direct and indirect light Human Centric Lighting (HCL)
Mounting	Ceiling or wall mounting
Accessories	Adaptation plate for grid ceilings 625/600





Fitting	Technology	Model	Diameter	Order no.
warm white 3000 K				
	DALI	VIA 6000/930/D	Ø 450 mm	114489000-00813053
	DALI	VIA 10000/930/D	Ø 600 mm	114495000-00813145
neutral white 4000 K				
	DALI	VIA 6000/940/D	Ø 450 mm	114489000-00813052
	DALI	VIA 10000/940/D	Ø 600 mm	114495000-00813146
HCL ready (2700 K - 6500 K)				
	DALI (DT6)	VIA 7000/VTL/D	Ø 450 mm	114490000-00813055
	DALI (DT6)	VIA 10000/VTL/D	Ø 600 mm	114496000-00813148

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
	3000 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 120 lm/W
	4000 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 120 lm/W
	2700-6500 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 109-112 lm/W

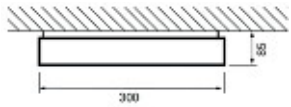
Adaptation plate for VIVAA.pendant

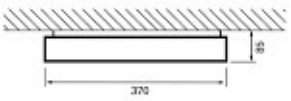
	Designation	Feature	Order no.
	Adaptation plate	For grid ceilings 625x625 mm	On request
	Adaptation plate	For grid ceilings 600x600 mm	On request

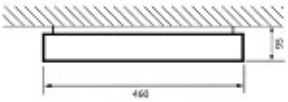
OBLO.fit

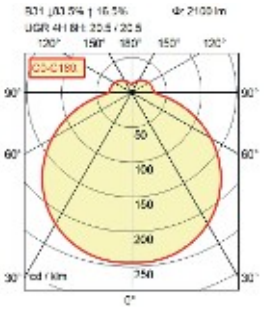
OBA











Power consumption	approx 11 W (ø300 mm) approx 22 W (ø370 mm) approx 44 W (ø460 mm)
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 1.500 lm (ø300 mm) approx 2.100 lm (ø370 mm) approx 4.300 lm (ø460 mm)
Mains connection	Fixed connection
Housing	Sheet steel; lacquered, white (similar to RAL9016)
Light source cover	Acryl (PMMA); Opal white
Weight	approx 0,8 kg (ø300 mm) approx 1,2 kg (ø370 mm) approx 1,9 kg (ø460 mm)
Protection class	I
Protection type	IP 20
Mounting	Ceiling mounting
Accessories	"Decorative ring for ø370 mm and ø460 mm; aluminium; RAL of your choice

Fitting	Technology	Model	Diameter	Order no.
OBA I warm white 3000 K				
	Switchable	OBA 1000/830	300 mm	114503000-00813344
	DALI	OBA 1000/830/D	300 mm	114503000-00813346
	Switchable	OBA 2000/830	370 mm	114503000-00813348
	DALI	OBA 2000/830/D	370 mm	114503000-00813350
	Switchable	OBA 4000/830	460 mm	114503000-00813352
	DALI	OBA 4000/830/D	460 mm	114503000-00813354
OBA I neutral white 4000 K				
	Switchable	OBA 1000/840	300 mm	114503000-00813345
	DALI	OBA 1000/840/D	300 mm	114503000-00813347
	Switchable	OBA 2000/840	370 mm	114503000-00813349
	DALI	OBA 2000/840/D	370 mm	114503000-00813351
	Switchable	OBA 4000/840	460 mm	114503000-00813353
	DALI	OBA 4000/840/D	460 mm	114503000-00813355

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
	3000 K	Ra ≥ 80	direct/indirect	approx 95 - 136 lm/W
	4000 K	Ra ≥ 80	direct/indirect	approx 95 - 136 lm/W

Decorative ring OBLO.fit

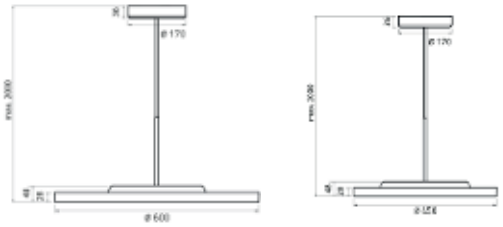


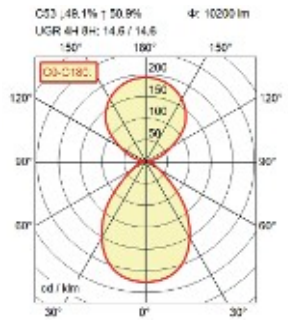
	Designation	Feature		Order no.
	Decorative ring OBA 370	RAL of choice		337161010-00802183
	Decorative ring OBA 460	RAL of choice		337161020-00802188

VIVAA.pendant

VIP 6000 | VIP 7000 | VIP 10000







Power consumption	approx 53-91W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 6.400-10.200 lm
Mains connection	Connection clamp; 5-pole
Housing	Aluminium; lacquered; white (similar to RAL9016)
Light source cover	Acryl (PMMA), Satinised
Glare control	Cone prism aperture
Weight	approx 5,5-7,5 kg
Protection class	I
Protection type	IP 20
Standards	DIN EN 12464-1; EN 60598-2-25
Special features	Separate; individual adjustment of direct and indirect light Textile cable pendant (red or white) Optionally controllable and retrofittable with CASAMBI Human Centric Lighting (HCL)
Mounting	Ceiling mounting incl. canopy Mains connection line 2 m Room height 2.5-4.2 m, ceiling clearance 0.3-2 m, Lower edge of luminaires min. 2.2 m üfF
Accessories	CASAMBI module (accessory kit) Luminairen shade (beige/anthracite/special colour)

	Technology	Model	Diameter	Order no. White cable	Order no. Red cable
warm white 3000 K					
	DALI	VIP 6000/930/D	Ø 450 mm	114455000-00812686	114455000-00812684
	DALI	VIP 10000/930/D	Ø 600 mm	114484000-00812833	114484000-00812832
neutral white 4000 K					
	DALI	VIP 6000/940/D	Ø 450 mm	114455000-00812685	114455000-00812683
	DALI	VIP 10000/940/D	Ø 600 mm	114484000-00812834	114484000-00812831
HCL ready (2700 K - 6500 K)					
	DALI (DT6)	VIP 7000/VTL/D	Ø 450 mm	114485000-00812836	114485000-00812835
	DALI (DT6)	VIP 10000/VTL/D	Ø 600 mm	114486000-00812838	114486000-00812837

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
	3000 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 120 lm/W
	4000 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 120 lm/W
	2700-6500 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 109-112 lm/W

Luminairen screen VIVAA.pendant



	Designation	Maße	Order no. Shantung Beige	Order no. Shantung Anthracite
	Luminairen screen	Ø 450 mm	338457020-00810025	338457030-00810024
	Luminairen screen	Ø 600 mm	338458020-00810027	338458030-00810026

Casambi Modul VIVAA.pendant

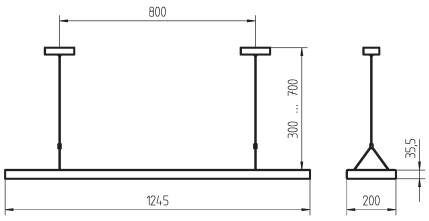
	Designation	Feature	Order no.
	Casambi Modul (Accessories-Kit)	For VIVAA.pendant	338565010-00813238

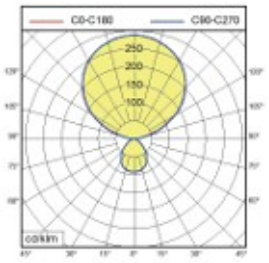
LAVIGO

DPP 9000/16000



Power consumption	approx 65 W (DPP 9000) approx 112 W (DPP 16000)
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 9.350 lm (DPP 9000) approx 16.450 lm (DPP 16000)
Mains connectionleitung	approx 1 m; with free stranded wire/cable ends
Housing	Steel/plastic; powder-coated; white or silver
Light source cover	Polycarbonate (PC); Clear (colourless)
Weight	approx 7,5 kg
Protection class	I
Protection type	IP 20
Standards	DIN EN 12464-1
Special features	Cradle to Cradle Certified™ Optionally with integrated motion and daylight sensor PIR Separate, individual adjustment of direct and indirect light Can be retrofitted with TALK module
Accessories	TMENO 868 MHz/EnOcean/G1 (546319) TMBLE 2,4 GHz/Bluetooth/G1 (762506)





	Technology	Model	Order no.
	DALI	DPP 9000/840/D/G2	121816000-00800465
	PIR-Sensor	DPP 9000/840/R/G2	121817000-00800468
	DALI	DPP 16000/840/D/G2	121799000-00750545
	PIR-Sensor	DPP 16000/840/R/G2	121821000-00801372

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
	4000 K	Ra ≥ 80	direct/indirect	approx 145 lm/W

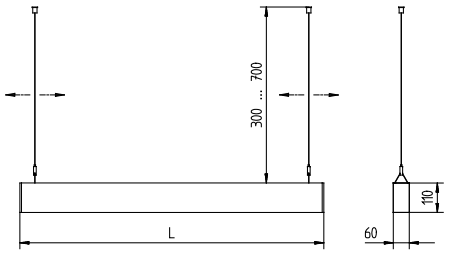
TALK module retrofittable radio module for Luminair communication

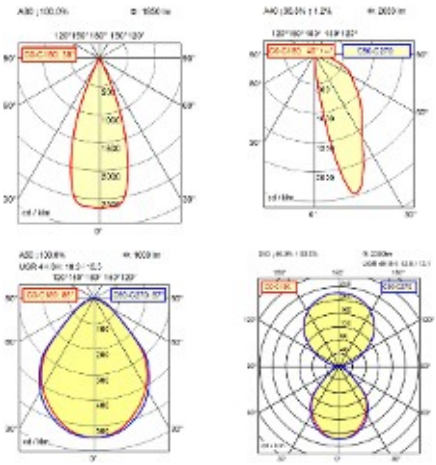
	Model	Radio frequency	Technology	Special feature	Order no.
	TMENO 868/ EnOcean/G1	868 MHz	EnOcean	Compatible with LAVIGO PIR-Sensor-Variants	209781019-00546319
	TMBLE 2,4/ Bluetooth/G1	VIP 6000/940/D	Ø 450 mm	Compatible with LAVIGO PIR-Sensor-Variants	226987029-00762506

IDOO.line // DOTOO.line



Light yield	approx 105 lm/W (DOTOO.line) approx 138 lm/W (IDOO.line)
Colour rendering	Ra ≥ 80 (3.000 K / 4.000 K) Ra ≥ 90 (HCL/VTL 2.700 – 6.500 K)
Configuration	Individual luminaires and linkable elements up to 18 m
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Mains connectionleitung	approx 2 m; with free stranded wire/cable ends (pendant) Connection clamp (attachment and wall)
Housing	Aluminium profile; white (similar to RAL9016); silver (similar to RAL9006)
Light source cover	Acryl (PMMA), clear (colourless)
Glare control	Cone prism aperture or reflector technology
Protection class	I
Protection type	IP 40
Standards	DIN EN 12464-1
Special features	Tool-free mechanical and electrical connection Flexible mounting system with movable cable pendants and variably adjustable pendant length Wide range of adaptation types (recessed, surface-mounted, pendant and wall-mounted Luminaire) and optics





Adaptation types	Mounting	Installation	Pendulum	Wall
Light distribution				
Direct (DOTOO)	●	●	●	
Indirect/Direct (IDOO)			●	●
Light technology				
CDP	●	●	●	●
MD 35°	●	●	●	
MD 55°	●	●	●	
MD 75°	●	●	●	
WW	●	●	●	
Light colour				
warm white, 3000 K	●	●	●	●
neutral white, 4000 K	●	●	●	●
HCL ready, 2700-6500 K			●	
Outer dimension				
mm (BxH)	60x112	70x130	60x110	73x110

Adaptation types	Mounting	Installation	Pendulum	Wall
Configuration				
Single luminaire 854 mm		●	●	●
Single luminaire 1134 mm		●	●	●
Single luminaire 1414 mm		●	●	
Single luminaire 2256 mm		●	●	
Modular: Start/Middle/End	●		●	
Weight kg/m				
Single luminaire 854 mm		approx 3,1	approx 3,3	approx 3,9
Single luminaire 1134 mm		approx 3,9	approx 4,1	approx 4,7
Single luminaire 1414 mm		approx 4,7	approx 4,9	
Single luminaire 2256 mm		approx 7,3	approx 7,6	
Modular: Start/Middle/End	approx 3,5		approx 4,9	



» To the brochure



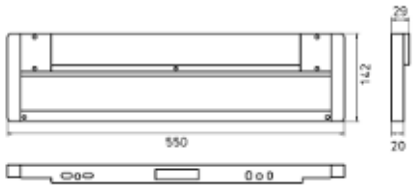
» Link to the overview page

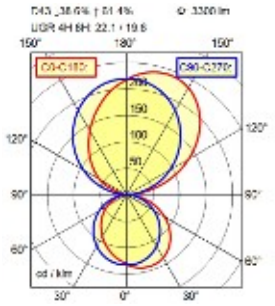
ZERA.bath

ZEW 3000



Power consumption	approx 27W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 3.300lm
Mains connection	Connection clamp; 2-pole
Housing	Aluminium profile; anodised; aluminium-coloured (colourless anodised)
Light source cover	Acryl (PMMA), clear (direct) / opal white (indirect))
Weight	approx 1,9 kg
Protection class	I
Protection type	IP 44
Standards	EN60598-2-25
Special features	Can also serve as room lighting
Mounting	Wall mounting above a resident's mirror Mounting height (lower edge of Luminaire) approx 1.8 m





Fitting	Special features	Technology	Model	Length	Order no.
warm white 3000 K					
3300 lm	IP 44	Switchable	ZEW 3000/830	600 mm	114473000-00812053
neutral white 4000 K					
3300 lm	IP 44	Switchable	ZEW 3000/840	600 mm	114473000-00812052

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
	4000 K	Ra ≥ 80	direct/indirect	approx 122 lm/W

ZERA.wall

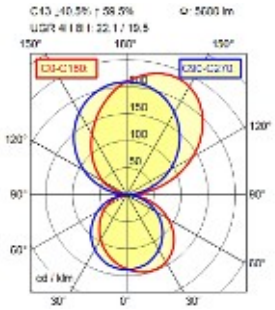
ZEW 3000 | ZEW 6000 | ZEW 7000



Power consumption	approx 18-40W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 2.800-6.600 lm
Mains connection	Connection clamp; 5-pole
Housing	Aluminium profile; anodised; aluminium-coloured
Light source cover	Acryl (PMMA), clear (direct) / opal white (indirect))
Glare control	Freeform optics
Weight	approx 3,3-6,9 kg
Protection class	I
Protection type	IP 20
Standards	EN60598-2-25
Special features	Asymmetrical radiation Indirect component
Mounting	Wall mounting along the corridor Mounting height (lower edge of luminaire) approx 2 m







Fitting	Technology	Model	Length	Order no.
warm white 3000 K				
2800 lm	DALI	ZEW 3000/830/D	550 mm	114481000-00812327
5600 lm	DALI	ZEW 6000/830/D	1050 mm	114474000-00812393
neutral white 4000 K				
5600 lm	DALI	ZEW 6000/840/D	1050 mm	114474000-00812395
HCL ready (3000-6500 K)				
3300 lm	DALI	ZEW 3000/VTL	550 mm	114481000-00812524
6600 lm	DALI	ZEW 7000/VTL	1050 mm	114474000-00812458

Photometric properties

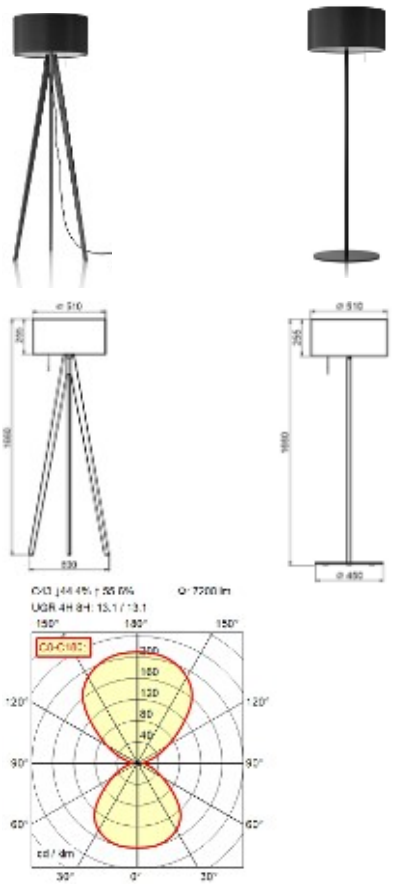
	Colour temperature	Colour rendering	Light distribution	Light yield
	4000 K	Ra ≥ 80	direct/indirect	approx 140-155 lm/W
	3000-6500 K	Ra ≥ 80	direct/indirect	approx 132-165 lm/W

Free Standing Luminaire

VIVAA.free

VFS 7000

Power consumption	approx 79 W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 7.200 lm
Mains connection line	approx 3,4 m; Mains plug; CEE 7/VII (Wooden tripod) approx 2,2 m; Mains plug; CEE 7/VII (Metal base)
Housing Luminair head	Polycarbonate (PE); untreated; anthracite
Light source cover	Polycarbonat (PC); satined
Linkage	Wood; stained; straight; dark ash Tubular steel; lacquered; straight; anthracite grey
Weight	approx 6,4 kg (Wooden tripod) approx 12,3 kg (Metal base)
Protection class	I
Protection type	IP 20
Special features	Dimmable pull cord switch 7x more light than E27 solution APP control (HCL) Translucent B-1 film Luminairen screen Special colours of the Luminairen screen available Various wood colours and types available



Material	Colour	Luminairen screen	Technology	Order no.	
				CEE 7/VII	Typ 12
warm white 3000 K I VFS 7000/930/D					
Wooden tripod Ash	Ash dark	Anthracite	Infinitely dimmable	121859000-00812659	121859000-00812660
Metal base	Anthracite grey RAL 7016	Anthracite	Infinitely dimmable	121859000-00812661	121859000 -00812662
neutral white 4000 K I VFS 7000/940/D					
Wooden tripod Ash	Ash dark	Anthracite	Infinitely dimmable	121860000-00812669	121860000-00812670
Metal base	Anthracite grey RAL 7016	Anthracite	Infinitely dimmable	121860000-00812671	121860000-00812672
HCL 2700 K - 6500 K I VFS 7000/VTL/D					
Wooden tripod Ash	Ash dark	Anthracite	Infinitely dimmable	121861000-00812675	121861000-00812676
Metal base	Anthracite grey RAL 7016	Anthracite	Infinitely dimmable	121861000-00812677	121861000-00812678

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
	3000 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 91 lm/W
	4000 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 91 lm/W
	2700-6500 K	Ra ≥ 90; R9 ≥ 50	direct/indirect	approx 91 lm/W

VIVAA.free I VFS 7000 Ergänzungskomponenten

Fitting	Material	Colour	Plug	Technology	Model	Order no.
Luminair head						
7200 lm				Infinitely dimmable	Luminair head/VFS 7000/940/D	227129039-00812632
7200 lm				Infinitely dimmable	Luminair head/VFS 7000/930/D	227129019-00812221
7200 lm				Infinitely dimmable	Luminair head/VFS 7000/927/D	227129049-00812633
7200 lm				Infinitely dimmable	Luminair head/VFS 7000/VTL/D	227129029-00812273
Stand						
	Metal	Anthracite grey RAL 7016, matt	Schuko		Standpipe/ANTGR/CEE7/VII*	227124019-00812114
	Metal	Anthracite grey RAL 7016, matt	Schuko		Stand/ANTGR*	201416019-00812026
	Metal	Anthracite grey RAL 7016, matt	Typ 12		Standpipe/ANTGR/T12	227124019-00812116
	Metal	Pure white RAL 9010	Schuko		Standpipe/RWS/CEE7/VII*	227124019-00812115
	Metal	Pure white RAL 9010	Schuko		Stand/RWS*	201416019-00812027
	Metal	Pure white RAL 9010	Typ 12		Standpipe/RWS/T12	227124019-00812117
	Ash	Dark stained	Schuko		Stand Tripod Ash dark CEE7/VII	227126019-00812150
	Ash	Bianco oiled	Schuko		Stand Tripod Ash bianco CEE7/VII	227126019-00812152
	Walnut	Oiled	Schuko		Stand Tripod Walnut CEE7/VII	227126019-00812153
	Oak	Oiled	Schuko		Stand Tripod Oak CEE7/VII	227126019-00812154
	Ash	Dark stained	Typ 12		Stand Tripod Ash dark T12	227126019-00812155
	Ash	Bianco oiled	Typ 12		Stand Tripod Ash bianco T12	227126019-00812156
	Walnut	Oiled	Typ 12		Stand Tripod Walnut T12	227126019-00812157
	Oak	Oiled	Typ 12		Stand Tripod Oak T12	227126019 -00812158
Luminairen screen						
	Translucent B-1 film	DT1110 Beige			Luminairen screen/BG	338539020-00812209
	Translucent B-1 film	DT8261 Anthracite			Luminairen screen/ANT	338539010-00812208

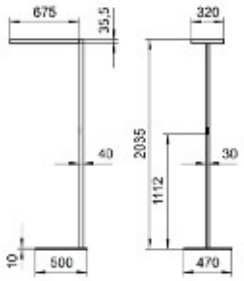
* Metal base: A standpipe must be combined with a stand

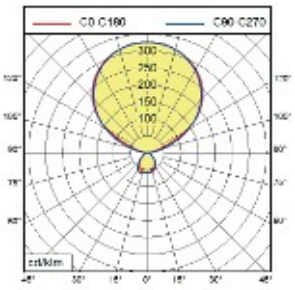
LAVIGO

DPS 14000

Power consumption	approx 93W
Connected loads	220-240 V; AC; 50 Hz; 60 Hz
Rated luminous flux	approx 14.050 lm
Mains connection	approx 3 m; Mains plug; CEE 7/VII, Typ 12
Housing	Steel/plastic; lacquered; white (N4)
Light source cover	Acryl (PMMA); Satined
Weight	approx 19,7 kg
Fuß	C-shaped (flat)
Protection class	I
Protection type	IP 20
Standards	DIN EN 12464-1
Special features	Cradle to Cradle Certified™ Integrated PIR motion and daylight sensor Separate, individual adjustment of direct and indirect light Can be retrofitted with TALK module Light management for biodynamic light HCL/VTL
Accessories	TMENO 868 MHz/EnOcean/G1 (546319) TMBLE 2,4 GHz/Bluetooth/G1 (762506)







Model	Technology	Housing	Order no.	
			CEE 7/VII	Typ 12
DPS 14000/840/R/G2	PIR-Sensor	White	121771000-00725995	121771000-00726009
DPS 14000/VTL/R/G2	PIR-Sensor K	White	121814000-00800395	121814000-00800397

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield
	4000 K	Ra ≥ 80	direct/indirect	approx 151 lm/W
	4000 K		direct (HCL/VTL)	approx 142 lm/W
	3000-6500 K		indirect (HCL/VTL)	approx 142 lm/W

TALK module retrofittable radio module for Luminair communication

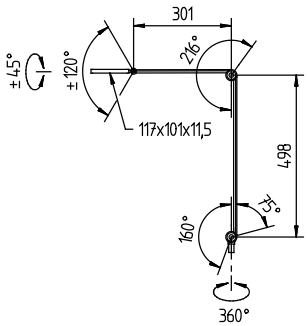
	Model	Radio frequency	Technology	Special feature	Order no.
	TMENO 868/ EnOcean/G1	868 MHz	EnOcean	Compatible with LAVIGO	209781019-00546319
	TMBLE 2,4/ Bluetooth/G1	VIP 6000/940/D	Ø 450 mm	Compatible with LAVIGO	226987029-00762506

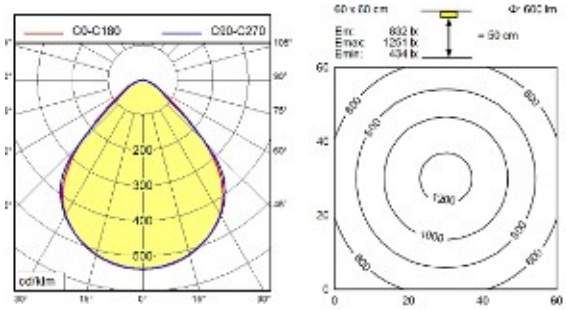
PARA.mi

FTL 180 R



Power consumption	approx 7W
Connected loads	100-240 V; AC; 50/60 HZ w 24 V Secondary voltage
Rated luminous flux	approx 580-600 lm
Housing	Aluminium; lacquered; White (N4)
Light source cover	clear (colourless); plastic
Linkage	White (N4)
Mains connectionleitung	approx 3 m; Mains plug; CEE 7/XVI; BS 1363; NEMA 1-15P
Weight	approx 1 kg (Luminaire weight approx. 3.8 kg)
Stand	Square; lacquered; White (N4); approx 2.8 kg
Protection class	II with plug-in power supply, III without plug-in power supply
Protection type	IP 20
Standards	DIN EN 12464-1
Special features	Adjustable automatic switch-off Switch-on behaviour on mains recovery adjustable Control button in the Luminair head
Accessories	Table base 200 x 200 x 10 mm (640379); Vertical adapter (647782); Horizontal adapter (647772); Vertical table clamp (639639); Horizontal table clamp (634907)





Special features	Model	Technology	Housing	Order no.
neutral white 4000 K (Ra 90 | R9 > 50)				
	FTL 108 R/WS/ QUAD/4000K	2-part Linkage	White	113148000-00638510
warm white 3000 K (Ra 90 | R9 > 50)				
	FTL 108 R/WS/ QUAD/3000K	2-part Linkage	White	113148000-00632662

Photometric properties

	Colour temperature	Colour rendering	Light distribution	Light yield (incl. control gear)
	4000 K	Ra ≥ 90 | R9 ≥ 50	direct	approx 85 lm/W
	3000 K	Ra ≥ 90 | R9 ≥ 50	direct	approx 82 lm/W

2-BED ROOM

I. Lighting design according to standard DIN 5035-3

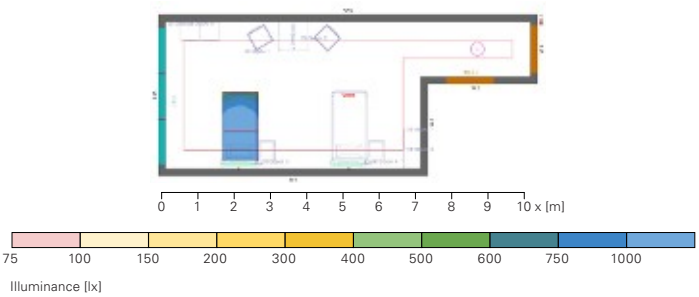
Luminaires used:

ZERA.bed ZEW 11000 (e.g. 813007) General light + Examination light

OBLO.fit OBA 2000 (813348)

Wall-mounted luminaires at a height of 1.80 m (upper edge of luminaires)

Result examination level bed
General light + Examination light



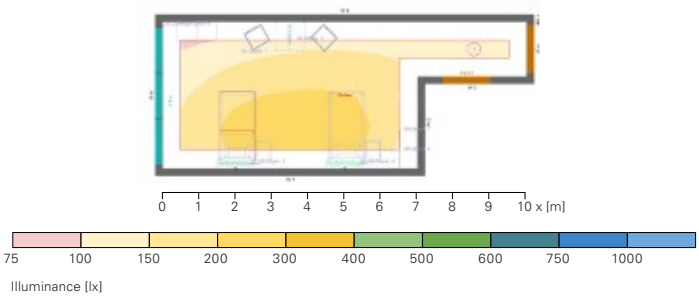
General

Calculation algorithm used	High indirect share
Height of the valuation area	0.85 m
Maintenance factor	0.80
Total luminous flux	21700 lm
Overall performance	240 W
Overall performance per area (32.50 m²)	7.36 W/m²

Illuminance

Medium Illuminance	Em	1380 lx
Minimum Illuminance	Emin	694 lx
Maximum Illuminance	Emax	1990 lx
Uniformity Uo	Emin/Em	1:1.99 (0.5)
Unevenness Ud	Emin/Emax	1:2.87 (0.35)

Result Assessment area Soil
General light



General

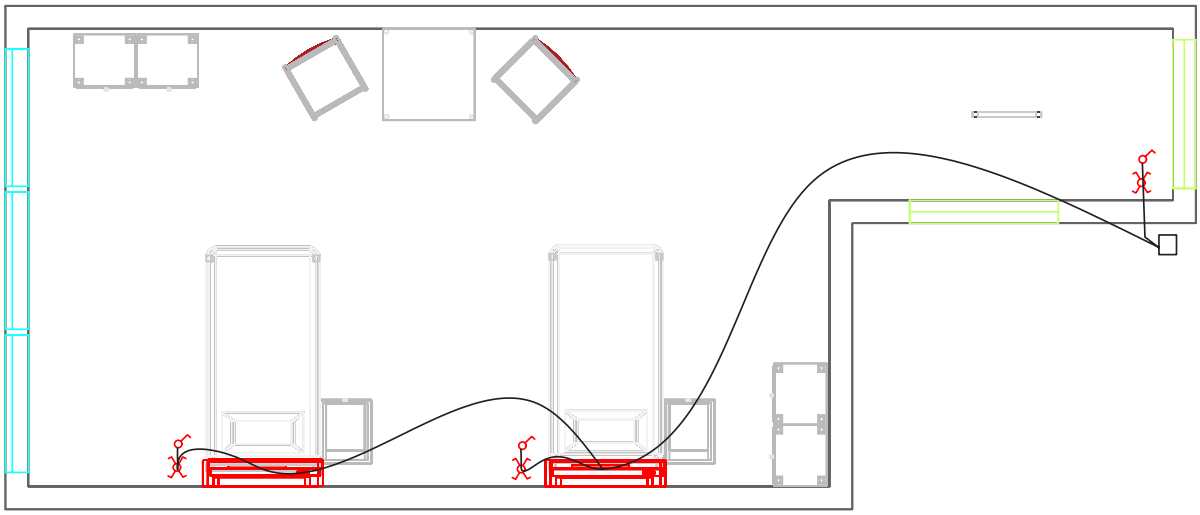
Calculation algorithm used	
High indirect Maintenance factor	0.80
Total luminous flux	12500.00 lm
Overall performance	108.0 W
Overall performance per area (32.50 m²)	3.32 W/m² (1.87 W/m²/100lx)

Assessment area 1	**Floor**
	Horizontal
Em	178 lx
Emin	100 lx
Emin/Em (Uo)	0.56
Emin/Emax (Ud)	0.43
Position	0.00 m





II. Wiring diagram



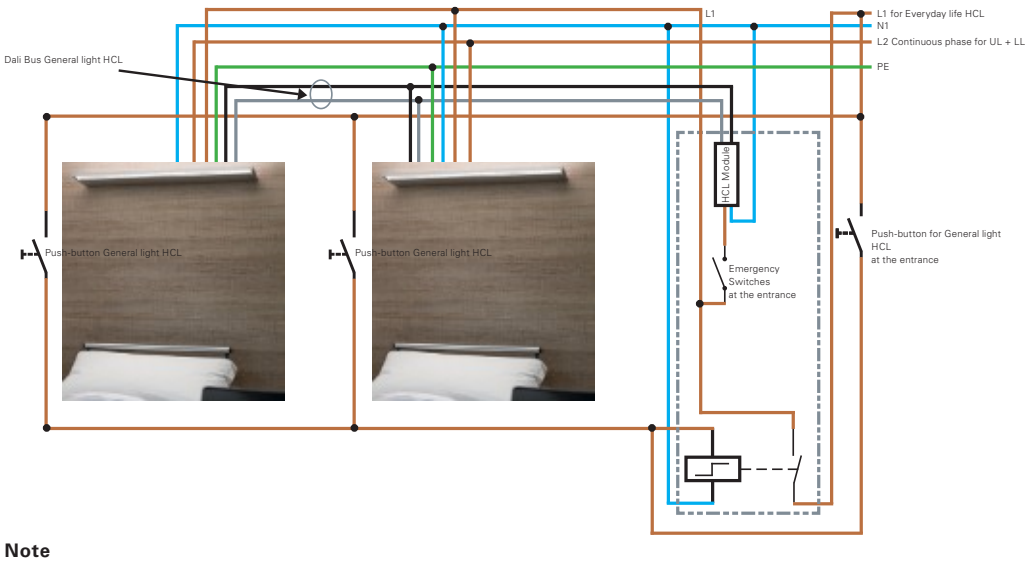
Legend

Switches | Junction box | Cross switch

III. Notes on switch positioning

Light function	Placement
Room light (AL)	Changeover/cross switch on the door (e.g. at a height of 1 m) and on the BedWallPage (e.g. at a height of 1 m) Push-button on the nurse call system (relay/LVC in the Luminaire)
Night light (NL)	Switchable via switches on the door (e.g. at a height of 1.60 m) or centrally in the duty room
Examination light (UL)	Switchable right/left on Luminaire (integrated switches) or via switches on the BettWallPage
Reading light (LL)	Switchable via buttons/switches on the BettWallPage (e.g. at a height of 1 m) Push-button on nurse call system (impulse relay/LVC in the Luminaire)

IV. Wiring diagram for HCL/VTL Variants



usable products:
ZERA.bed: ZEW 11000/VTL/D
114498000-813214
114498000-813213
114498000-813215
114498000-813013

ZERA.bed: ZEW 9000/VTL/D
114492000-813318
114492000-813319
114492000-812998

HCL-Modul: 309580010-803145

Note
The Reading light can be switched via the nurse call system or via an additional switch.
There is a toggle switch (right/left) on the side of the Luminaire for the Examination light. When using an NotSwitchess in conjunction with HCL/VTL variants, we recommend using a luminaire switch on the door with a mounting height of 1.80 metres.

1-BETT-PFLEGEZIMMER

I. Lighting design according to standard DIN 5035-3

Luminairs used:

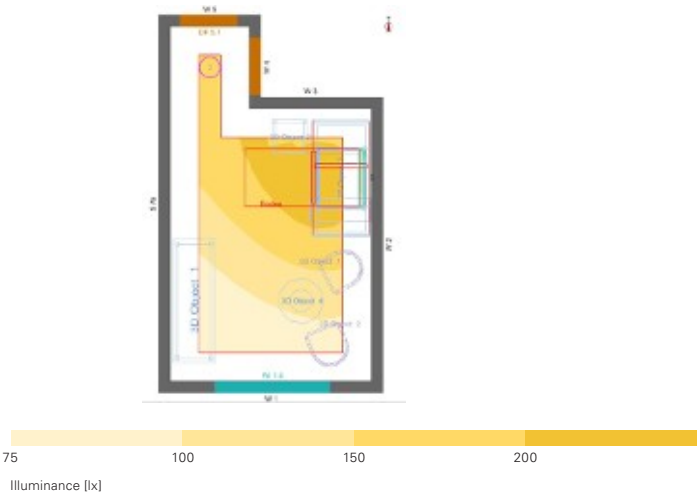
ZERA.bed ZEW 7000 (813014) General light

OBLO.fit OBA 2000 (813348)

Wall-Mounted Luminaires at a height of 1.80 m (upper edge of luminaires)

Result Assessment area floor with ≥100 lx (Em)

General light



General

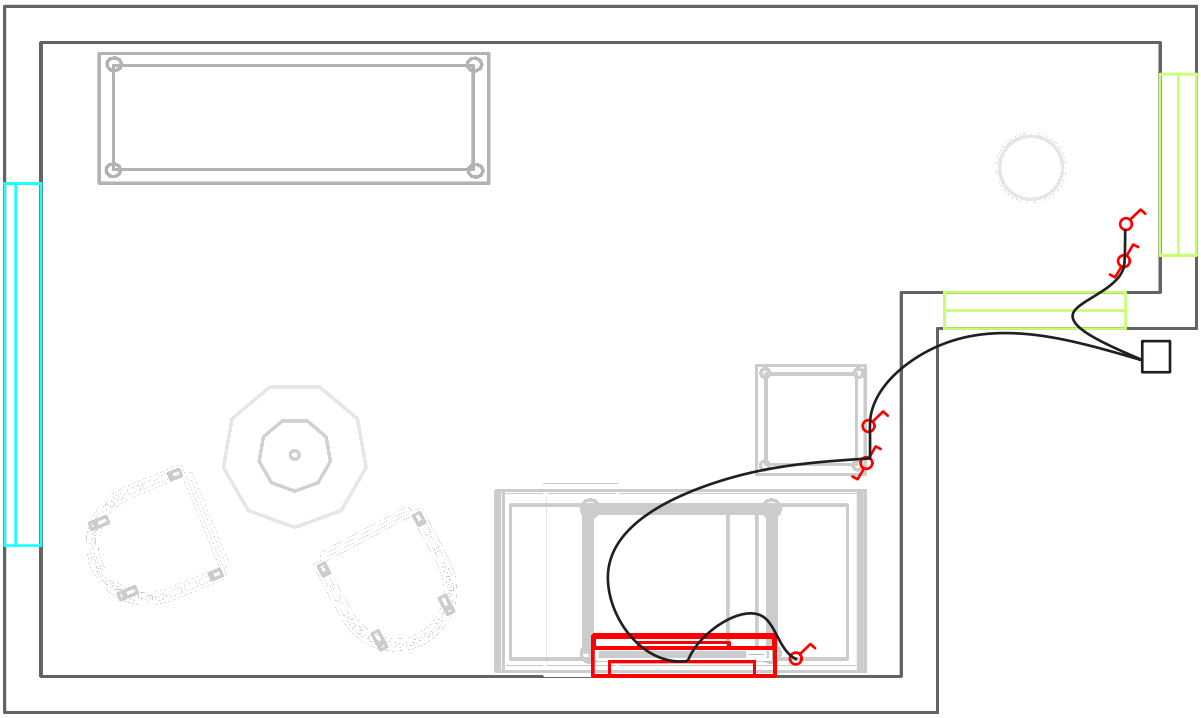
Calculation algorithm used High indirect shareMaintenance factor	0.80
Total luminous flux	7300.00 lm
Overall performance	65.0 W
Overall performance per area (16.60 m²)	3.49 W/m² (2.36 W/m²/100lx)

Assessment area 1	**Floor**
	Horizontal
Em	148 lx
Emin	54 lx
Emin/Em (Uo)	0.36
Emin/Emax (Ud)	0.23
Position	0.00 m
RUG (2.8H 4.9H)	<=18.6

Luminaire:
(OBLO.fit - OBA 2000/830, 114503000-00813348)



II. Wiring diagram



Legend

Switches Junction box Cross switch

III. Notes on switch positioning

Light function	Placement
Room light (AL)	Changeover switches on the door (e.g. at a height of 1 m) and on the BedWallPage (e.g. at a height of 1 m) Push-button on the nurse call system (relay/LVC in the Luminaire)
Night light (NL)	Switchable durch Push-button/Switches at the door (e.g. at the height of 1,60 m)
Examination light (UL)	Simultaneous switching on of the room and reading lights
Reading light (LL)	Switchable via buttons/switches on the side of the bed wall (e.g. at a height of 1 m) Push-button on nurse call system (relay/LVC in the Luminaire)

Example planning

LOUNGE/HALLWAY

I. Lighting design according to standard DIN 5035-3

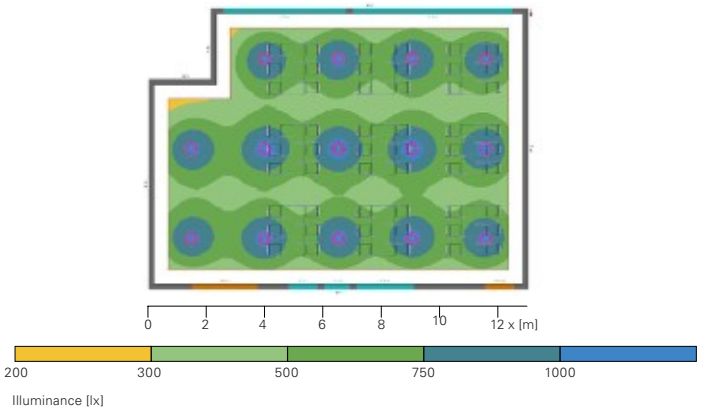
Luminaires used:

VIVAA.pendant VIP 7000 /VTL/D (812835)

Suspended luminaires at 2.5 m (lower edge of luminaires), approx. 50 cm ceiling distance

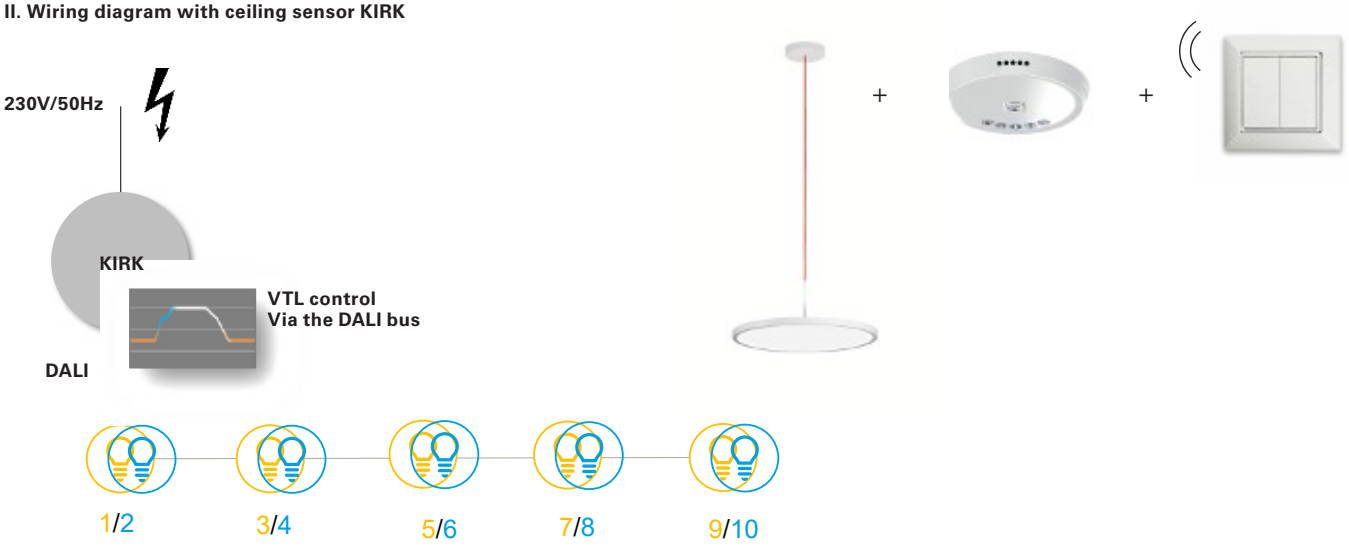
Result Assessment area Floor with ≥500 lx (Em)

10.00 - 13.15 and 15.00 - 17.00 within the recommended HCL sequence



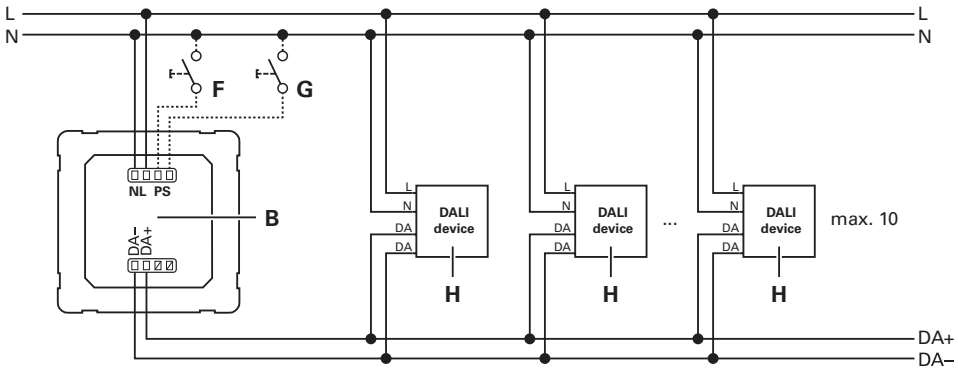
Time of day	10.00 - 13.15 und 15.00 - 17.00 h
Em	626 lx
Emin	284 lx
Emin/Em (Uo)	0.45
Emin/Emax (Ud)	0.31
Position	0.75 m horizontal
Area	118 m²
Overall performances/Area	7.59 W/m²

II. Wiring diagram with ceiling sensor KIRK

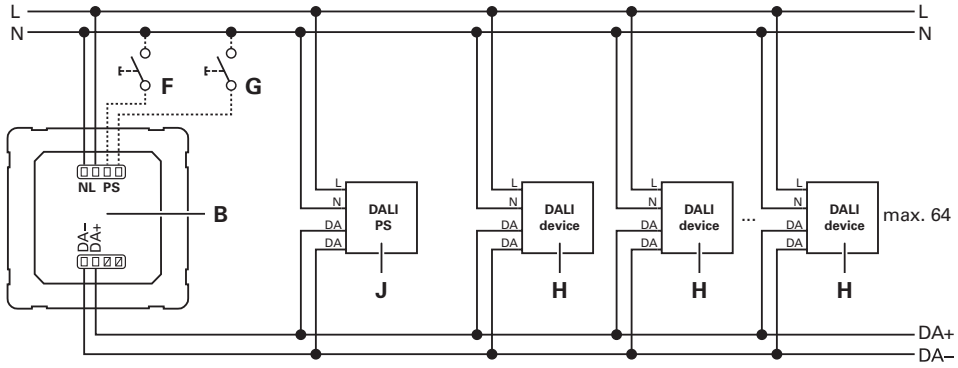


The exact KIRK configuration variant (DT6/DT8; broadcast; internal power supply on/off; HCL/constant colour temperature) must be determined in the project.

Wiring diagram KIRK



Wiring diagram KIRK >10 DALI-Lasten

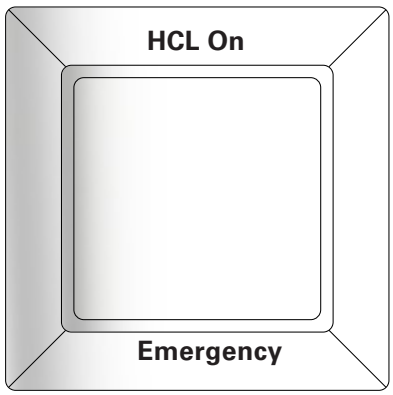


Additional external power supply required for >10 DALI loads.
The number of loads per luminaires can vary.

III. Notes on switch positioning

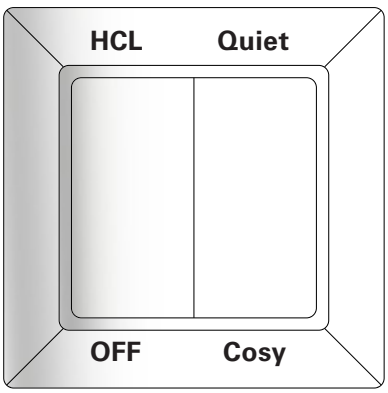
It is advisable to place the buttons either at the entrance door to the lounge or centrally in the duty room. If required, additional buttons can be connected to the Kirk.

Example of button assignment for a single radio wall transmitter for duty room/corridor area



Emergency situation - All ON (100%)

Example of the button assignment of a double radio wall transmitter for a common area:



HCL ON
OFF - Light OFF
Quiet - e.g. approx 60% warm tone only
Cosy - e.g. 100% warm tone only

Example of the button assignment of a quadruple radio wall transmitter for an occupied zone:

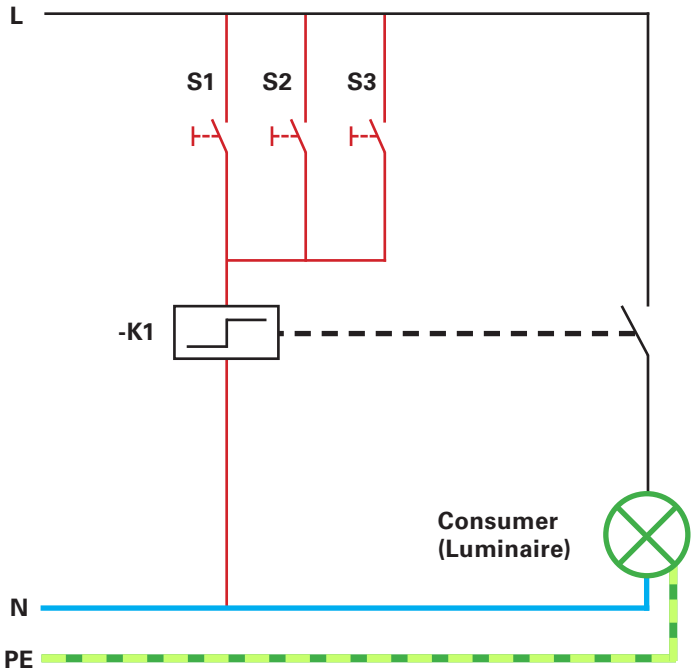


We recommend installing the scene switches in the service area or in an area that is not accessible to residents. Several scenes must be taken into account

Electrotechnical supply in hospitals
The electrical supply of a hospital places special demands on the structure of the main supply systems. In order to ensure the electrical supply in the event of a power failure, two separate supply systems are required, which must be „connected“ despite their separation. Suitable luminaires on request.

General (AV) and safety power supply (SV)
The AV system is supplied from the grid operator’s medium-voltage network. An emergency power unit is on standby for the SV system. This genset takes over the supply of the SV system if the public medium-voltage grid fails. Suitable luminaires on request.

Functionality of LVC (impulse relay)
Pressing a push-button once closes the circuit until a second press of the push-button interrupts the circuit again. When pressed, the impulse switch (impulse relay) receives a current pulse that changes the switching state of the load - it is switched on or off. A dimming function can be realised in conjunction with special LVCs (e.g. EFE GmbH) if the push-button is held for a long time.



Herbert Waldmann GmbH & Co. KG uses its own 2-channel impulse relay (814511) in the wall-mounted luminaires ZERA.bed. Impulse relays from EFE GmbH are integrated into luminaires with a dimmable function.

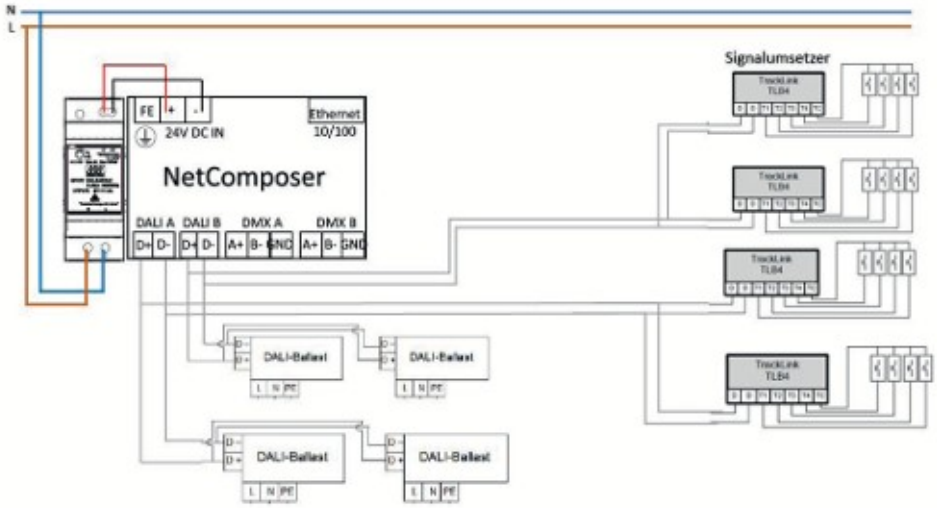
The LVCs used fulfil the requirements for SELV safety extra-low voltage in accordance with EN 60669-2-2 and the 2x MOPP safety requirement in accordance with EN 60601-1.

Light management components

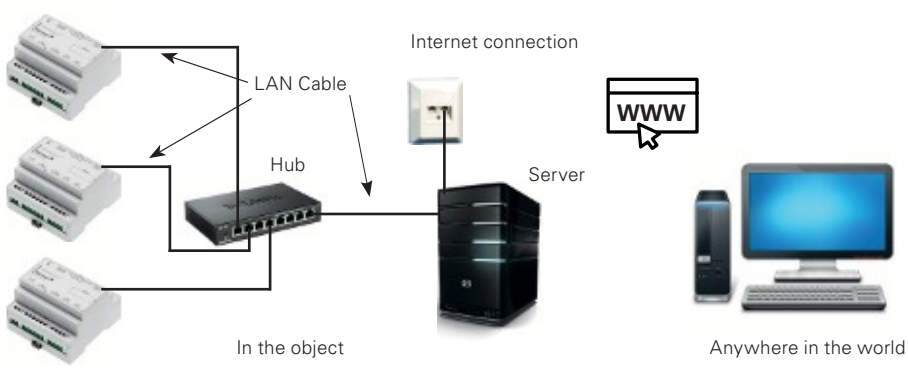
Model	Special feature	Order no.
NCR NetComposer	Up to 128 DALI devices (mounting on top hat rail)	336673010-00533603
Power supply for 1x control unit	Mounting on top-hat rail	336391020-00808293
Signal converter for flush-mounted installation	Scenes and sequence module (up to 4 commands)	336388010-00485696
DALI PS	DALI power supply e.g. for KIRK	336200010-0092385

Wiring diagram NCR DALI control

For more complex HCL systems, we recommend our NCR DALI control. A wiring diagram with NCR control can look like this:



System architecture „NetComposer communication with server“ for remote maintenance



Stock up on inspiration and recharge with brilliant ideas! Our EMIL 28 showroom radiates the spirit of company founder Emil Waldmann.

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A LIGHT

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(1 of 1000)

Here, we like to train the spotlight on the people at Waldmann who give their all to create the best possible lighting solutions. Thank you, OLIVER!

ENGINEERS OF LIGHT: OLIVER

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