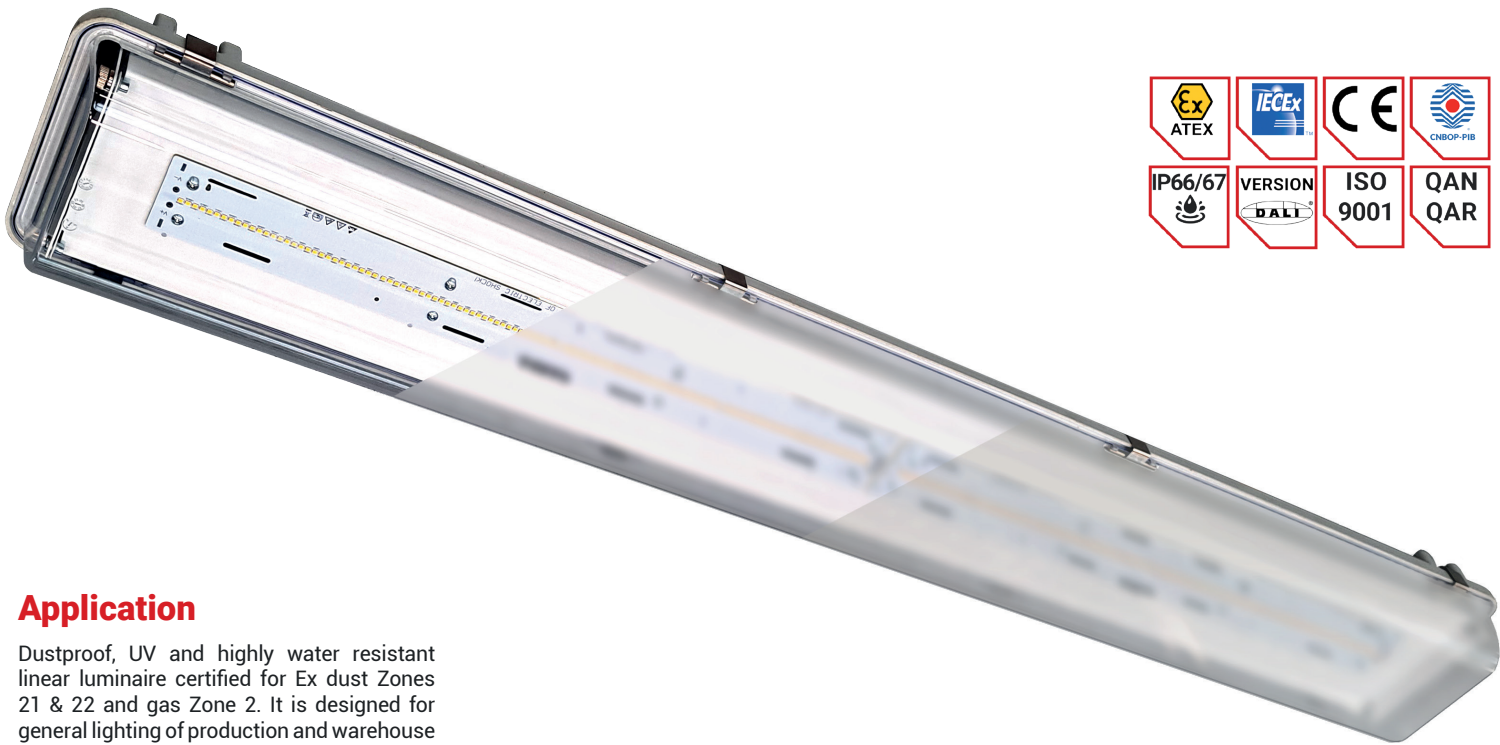


OptiLine

linear LED luminaires

for Zones 2, 21, 22

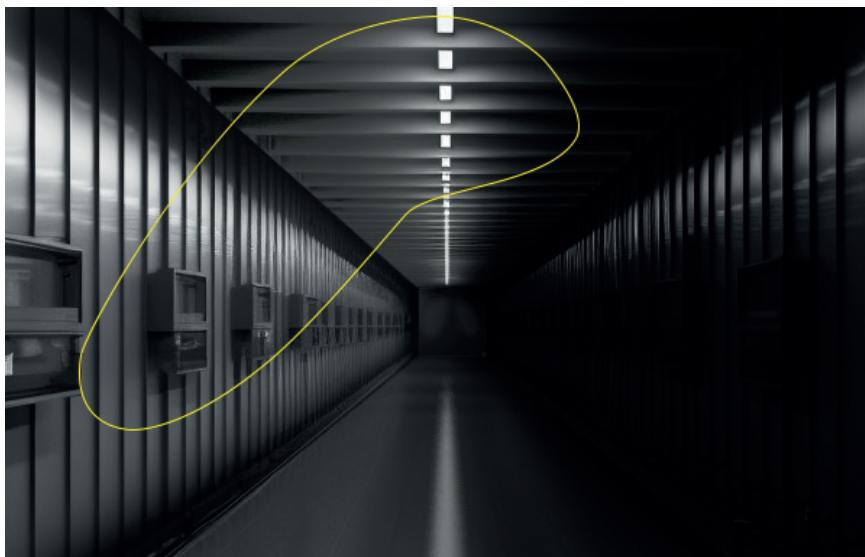


Application

Dustproof, UV and highly water resistant linear luminaire certified for Ex dust Zones 21 & 22 and gas Zone 2. It is designed for general lighting of production and warehouse halls considering special requirements of following industries: oil and gas, chemical, power generation, wood processing and food and beverage.

- ▶ It replaces 18W/36W/58W fluorescent fixtures and reduces energy consumption.
- ▶ The use of any additional junction boxes during installation is eliminated by flexible combination of cable entries at both ends of the luminaire.

- ▶ Designed for indoor and outdoor use
- ▶ Design of the interior is focused on ergonomics for the installer and serviceman: quick opening, lack of loose parts which can fall out when opened, precisely fitted components, safe locking.
- ▶ No need to buy a new luminaire in case a change of light distribution is required - use one of available lenses. Illustratio can be found below.



OptiLine Luminaire - numbers

- ▶ 3 possible applications (general lighting, self-contained emergency lighting and Central Battery System emergency lighting)
- ▶ 2 lengths
- ▶ 3 types of diffuser
- ▶ 3 versions of LED modules providing high efficacy (ranging from 137 lm/W to 181 lm/W)
- ▶ It provides a total of 54 combinations based on type of application, luminaire length, diffuser type and power output.
- ▶ + 22 lenses allowing light distribution change at any time

OptiLine **AA** **B** **XX** **YY** **ZZ** **CCC** **KK**

Code	Length of the luminaire	LED module type	Wiring
OptiLine	60 - 670 mm 12 - 1270 mm	1 - LED module HEX 5416/1 (one LED module for a 670mm fixture, two LED modules for a 1270mm fixture, estimated power of a single module 18W) 2 - LED module HEX 5416/2 (one LED module for a 670mm fixture, two LED modules for a 1270mm fixture, estimated power of a single module ~23W) 3 - LED module HEX 5416/3 (one LED module for a 670mm fixture, two LED modules for a 1270mm fixture, estimated power of a single module ~27W)	30 - 1 x terminal block, 3-pole 33 - 2 x terminal block, 3-pole 50 - 1 x terminal block, 5-pole 55 - 2 x terminal block, 5-pole 70 - 1 x terminal block, 7-pole 77 - 2 x terminal block, 7-pole

Cable glands (quantity)	Cable glands (size)	Emergency version
10 - 1 cable gland at one end of the fixture 11 - 1 cable gland at each end of the fixture 20 - 2 cable glands at one end of the fixture 21 - 2 cable glands at one end of the fixture and 1 cable gland at the opposite side of the fixture 22 - 2 cable glands at each end of the fixture	20 - M20 - clamping range 8-14mm 25 - M25 - clamping range 9-17mm	--- - basic version compatible with non monitored Central Battery Systems A1 - self-contained version 1,5h rated CBX - version featuring a V-CG-S addressing module dedicated for the use with Central Battery System CBY - version featuring a V-CG-S addressing/switching module dedicated for the use with Central Battery System



Diffuser type
KT - clear
KM - frosted
KO - opal

OptiLine fixtures 670 mm length

Technical data



Explosion safety	OptiLine 60-1*****	OptiLine 60-2*****	OptiLine 60-3*****
Ex marking (certificates KSCP 23ATEX0021X, KSCP 23ATEX0022X)	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc
IECEX marking (certificates IECEX KSCP 23.0045X, IECEX KSCP 23.0045X)	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc

Lighting data			
Rated luminous flux [lm]*	Clear diffuser: 3485 Frosted diffuser: 3324 Opal diffuser: 2931	Clear diffuser: 4422 Frosted diffuser: 4218 Opal diffuser: 3719	Clear diffuser: 5182 Frosted diffuser: 4943 Opal diffuser: 4358
Light source type	1 x LED Module 18W	1 x LED Module 23W	1 x LED Module 27W
Color temperature [K]	3000** 4000 (standard) 5000**		
CRI	>70** >80 (standard) >90**		
Efficacy of the complete luminaire [lm / W]	146 - 173 depending on diffuser type	149 - 178 depending on diffuser type	147 - 175 depending on diffuser type
Lifetime [h]	L80B10 in ambient temperature 25°C : 80 000 LED driver lifetime in ambient temperature 25°C: 100 000 L89B10 in ambient temperature 50°C: 70 000 LED driver lifetime in ambient temperature 50°C: 70 000		

Electrical data			
Protection class	I		
Rated power [W]***	20,1	24,8	29,7
Power factor	up to 0,93		
Rated Voltage [V]	AC 230, 50Hz DC 230, 0Hz		
Rated current [A]	0,09	0,11	0,13
Cable terminals	min. 1,5 mm ² max. 4mm ²		

Mechanical data	
Degree of protection	IP66/67
Impact resistance	HIGH according to PN-EN IEC 60079-0; IK 09
Body	Glassfibre reinforced polyester (GRP)
Cover	Polycarbonate in three versions: clear, opal and frosted
Gasket	Silicon foam
Working temperature	-40°C ≤ Ta ≤ +50°C

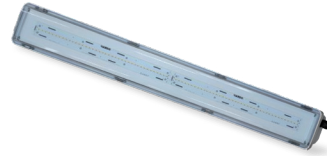
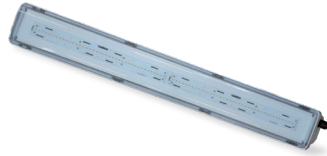
* - All data was measured at 25°C, color temperature of 4000K, CRI>60. Tolerance +/-5%

** - Other specifications of lighting fixtures are available as options

*** - Power tolerance +/-5%

OptiLine fixtures 1270 mm length

Technical data



Explosion safety	OptiLine 12-1*****	OptiLine 12-2*****	OptiLine 12-3*****
Ex marking (certificates KSCP 23ATEX0021X, KSCP 23ATEX0022X)	Dust: Ex II 2 D Ex tb IIIC T70 °C Db Gas: Ex II 3 G Ex ec IIC T4 Gc	Dust: Ex II 2 D Ex tb IIIC T70 °C Db Gas: Ex II 3 G Ex ec IIC T4 Gc	Dust: Ex II 2 D Ex tb IIIC T70 °C Db Gas: Ex II 3 G Ex ec IIC T4 Gc
IECEX marking (certificates IECEX KSCP 23.0045X, IECEX KSCP 23.0045X)	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc

Lighting data				
Rated luminous flux [lm]*	Clear diffuser: 6739 Frosted diffuser: 6504 Opal diffuser: 5700	Clear diffuser: 8665 Frosted diffuser: 8363 Opal diffuser: 7329	Clear diffuser: 10342 Frosted diffuser: 9981 Opal diffuser: 8747	
Light source type	2 x LED Module 18W		2 x LED Module 23W	
Color temperature [K]	3000** 4000 (standard) 5000**			
CRI	>70** >80 (standard) >90**			
Efficacy of the complete luminaire [lm / W]	149 - 176 depending on diffuser type		153 - 181 depending on diffuser type	
Lifetime [h]	L80B10 in ambient temperature 25°C: 80 000 LED driver lifetime in ambient temperature 25°C: 100 000 L89B10 in ambient temperature 50°C: 70 000 LED driver lifetime in ambient temperature 50°C: 70 000			

Electrical data				
Protection class	I			
Rated power [W]***	38,2		47,9	
Power factor	up to 0,97			
Rated Voltage [V]	AC 230, 50Hz DC 230, 0Hz			
Rated current [A]	0,17		0,21	
Cable terminals	min. 1,5 mm ² max. 4mm ²			

Mechanical data				
Degree of protection	IP66/67			
Impact resistance	HIGH according to PN-EN IEC 60079-0; IK 09			
Body	Glassfibre reinforced polyester (GRP)			
Cover	Polycarbonate in three versions: clear, opal and frosted			
Gasket	Silicon foam			
Working temperature	-40°C ≤ Ta ≤ +50°C			

* - All data was measured at 25°C, color temperature of 4000K, CRI>60. Tolerance +/-5%

** - Other specifications of lighting fixtures are available as options

*** - Power tolerance +/-5%

OptiLine fixtures 670 mm length

Technical data



Explosion safety	OptiLine 60-1*****A1	OptiLine 60-2*****A1	OptiLine 60-3*****A1
Ex marking (certificates KSCP 23ATEX0021X, KSCP 23ATEX0022X)	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc
IECEx marking (certificates IECEx KSCP 23.0045X, IECEx KSCP 23.0045X)	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc
CNBOP approval	Yes	Yes	Yes

Lighting data	OptiLine 60-1*****A1	OptiLine 60-2*****A1	OptiLine 60-3*****A1
Rated luminous flux [lm]*	Clear diffuser: 3485 Frosted diffuser: 3324 Opal diffuser: 2931	Clear diffuser: 4422 Frosted diffuser: 4218 Opal diffuser: 3719	Clear diffuser: 5182 Frosted diffuser: 4943 Opal diffuser: 4358
Rated luminous flux emergency power [lm]*		Clear diffuser: 800 Frosted diffuser: 750 Opal diffuser: 650	
Light source type	1 x LED Module 18W	1 x LED Module 23W	1 x LED Module 27W
Color temperature [K]		3000** 4000 (standard) 5000**	
CRI		>70** >80 (standard) >90**	
Efficacy of the complete luminaire [lm / W]	141 - 168 depending on diffuser type	145 - 173 depending on diffuser type	142 - 169 depending on diffuser type
Lifetime [h]	L80B10 in ambient temperature 25°C: 80 000 LED driver lifetime in ambient temperature 25°C: 100 000 L89B10 in ambient temperature 50°C: 70 000 LED driver lifetime in ambient temperature 50°C: 70 000		

Electrical data	OptiLine 60-1*****A1	OptiLine 60-2*****A1	OptiLine 60-3*****A1
Protection class	I		
Rated power [W]***	20,8	25,6	30,6
Power factor	up to 0,93		
Rated Voltage [V]	AC 230, 50Hz		
Rated current [A]	0,11	0,13	0,15
Cable terminals	min. 1,5 mm ² max. 4mm ²		

Mechanical data	OptiLine 60-1*****A1	OptiLine 60-2*****A1	OptiLine 60-3*****A1
Degree of protection	IP66/67		
Impact resistance	HIGH according to PN-EN IEC 60079-0; IK 09		
Body	Glassfibre reinforced polyester (GRP)		
Cover	Polycarbonate in three versions: clear, opal and frosted		
Gasket	Silicon foam		
Working temperature	-40°C ≤ Ta ≤ +50°C		

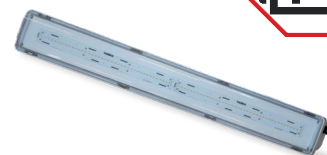
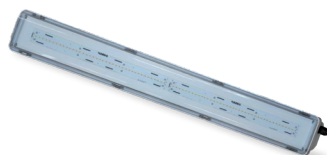
* - All data was measured at 25°C, color temperature of 4000K, CRI>60. Tolerance +/-5%

** - Other specifications of lighting fixtures are available as options

*** - Power tolerance +/-5%

OptiLine fixtures 1270 mm length

Technical data



Explosion safety	OptiLine 12-1*****A1	OptiLine 12-2*****A1	OptiLine 12-3*****A1
Ex marking (certificates KSCP 23ATEX0021X, KSCP 23ATEX0022X)	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC T4 Gc
IECEX marking (certificates IECEX KSCP 23.0045X, IECEX KSCP 23.0045X)	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec IIC T4 Gc
CNBOP approval	Yes	Yes	Yes

Lighting data	OptiLine 12-1*****A1	OptiLine 12-2*****A1	OptiLine 12-3*****A1
Rated luminous flux [lm]*	Clear diffuser: 6739 Frosted diffuser: 6504 Opal diffuser: 5700	Clear diffuser: 8665 Frosted diffuser: 8363 Opal diffuser: 7329	Clear diffuser: 10342 Frosted diffuser: 9981 Opal diffuser: 8747
Rated luminous flux emergency power [lm]*		Clear diffuser: 1250 Frosted diffuser: 1200 Opal diffuser: 1050	
Light source type	2 x LED Module 18W	2 x LED Module 23W	2 x LED Module 27W
Color temperature [K]		3000** 4000 (standard) 5000**	
CRI		>70** >80 (standard) >90**	
Efficacy of the complete luminaire [lm / W]	144 - 170 depending on diffuser type	149 - 176 depending on diffuser type	149 - 176 depending on diffuser type
Lifetime [h]		L80B10 in ambient temperature 25°C: 80 000 LED driver lifetime in ambient temperature 25°C: 100 000 L89B10 in ambient temperature 50°C: 70 000 LED driver lifetime in ambient temperature 50°C: 70 000	

Electrical data	OptiLine 12-1*****A1	OptiLine 12-2*****A1	OptiLine 12-3*****A1
Protection class	I		
Rated power [W]**	39,6	49,2	58,9
Power factor	up to 0,97		
Rated Voltage [V]	AC 230, 50Hz		
Rated current [A]	0,17	0,22	0,26
Cable terminals	min. 1,5 mm² max. 4mm²		

Mechanical data	OptiLine 12-1*****A1	OptiLine 12-2*****A1	OptiLine 12-3*****A1
Degree of protection	IP66/67		
Impact resistance	HIGH according to PN-EN IEC 60079-0; IK 09		
Body	Glassfibre reinforced polyester (GRP)		
Cover	Polycarbonate in three versions: clear, opal and frosted		
Gasket	Silicon foam		
Working temperature	0°C ≤ Ta ≤ +45°C		

* - All data was measured at 25°C, color temperature of 4000K, CRI>60. Tolerance +/-5%

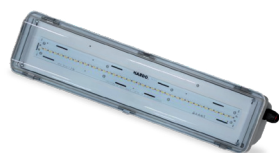
** - Other specifications of lighting fixtures are available as options

*** - Power tolerance +/-5%

OptiLine fixtures 670 mm length



Technical data



Explosion safety	OptiLine 60-1*****CBX/CBY	OptiLine 60-2*****CBX/CBY	OptiLine 60-3*****CBX/CBY
Ex marking (certificates KSCP 23ATEX0021X, KSCP 23ATEX0022X)	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec mc IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec mc IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec IIC mc T4 Gc
IECEx marking (certificates IECEx KSCP 23.0045X, IECEx KSCP 23.0045X)	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec mc IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec mc IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec mc IIC T4 Gc
CNBOP approval	Yes	Yes	Yes

Lighting data	OptiLine 60-1*****CBX/CBY	OptiLine 60-2*****CBX/CBY	OptiLine 60-3*****CBX/CBY
Rated luminous flux [lm]*	Clear diffuser: 3485 Frosted diffuser: 3324 Opal diffuser: 2931	Clear diffuser: 4422 Frosted diffuser: 4218 Opal diffuser: 3719	Clear diffuser: 5182 Frosted diffuser: 4943 Opal diffuser: 4358
Rated luminous flux emergency power [lm]* (Standard) (Other specifications are available as options)	Clear diffuser: 1650 Frosted diffuser: 1560 Opal diffuser: 1400	Clear diffuser: 2150 Frosted diffuser: 2040 Opal diffuser: 1820	Clear diffuser: 2650 Frosted diffuser: 2540 Opal diffuser: 2200
Light source type	1 x LED Module 18W	1 x LED Module 23W	1 x LED Module 27W
Color temperature [K]	3000** 4000 (standard) 5000**		
CRI	>70** >80 (standard) >90**		
Efficacy of the complete luminaire [lm / W]	137 - 163 depending on diffuser type	142 - 169 depending on diffuser type	141 - 168 depending on diffuser type
Lifetime [h]	L80B10 in ambient temperature 25°C : 80 000 LED driver lifetime in ambient temperature 25°C: 100 000 L89B10 in ambient temperature 50°C: 70 000 LED driver lifetime in ambient temperature 50°C: 70 000		

Electrical data	OptiLine 60-1*****CBX/CBY	OptiLine 60-2*****CBX/CBY	OptiLine 60-3*****CBX/CBY
Protection class	I		
Rated power [W]***	21,4	26,1	30,9
Power factor	up to 0,93		
Rated Voltage [V]	AC 230, 50Hz DC 230, 0Hz		
Rated current [A]	0,09	0,12	0,14
Cable terminals	min. 1,5 mm ² max. 4mm ²		

Mechanical data	OptiLine 60-1*****CBX/CBY	OptiLine 60-2*****CBX/CBY	OptiLine 60-3*****CBX/CBY
Degree of protection	IP66/67		
Impact resistance	HIGH according to PN-EN IEC 60079-0; IK 09		
Body	Glassfibre reinforced polyester (GRP)		
Cover	Polycarbonate in three versions: clear, opal and frosted		
Gasket	Silicon foam		
Working temperature	-30°C ≤ Ta ≤ +50°C		

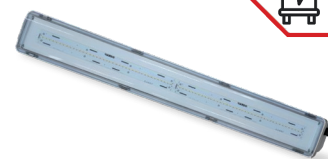
* - All data was measured at 25°C, color temperature of 4000K, CRI>60. Tolerance +/-5%

** - Other specifications of lighting fixtures are available as options

*** - Power tolerance +/-5%

OptiLine fixtures 1270 mm length

Technical data



Explosion safety	OptiLine 12-1*****CBX/CBY	OptiLine 12-2*****CBX/CBY	OptiLine 12-3*****CBX/CBY
Ex marking (certificates KSCP 23ATEX0021X, KSCP 23ATEX0022X)	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec mc IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec mc IIC T4 Gc	Dust: Ⓜ II 2 D Ex tb IIIC T70 °C Db Gas: Ⓜ II 3 G Ex ec mc IIC T4 Gc
IECEX marking (certificates IECEX KSCP 23.0045X, IECEX KSCP 23.0045X)	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec mc IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec mc IIC T4 Gc	Dust: Ex tb IIIC T70 °C Db Gas: Ex ec mc IIC T4 Gc
CNBOP approval	Yes	Yes	Yes

Lighting data	OptiLine 12-1*****CBX/CBY	OptiLine 12-2*****CBX/CBY	OptiLine 12-3*****CBX/CBY
Rated luminous flux [lm]*	Clear diffuser: 6739 Frosted diffuser: 6504 Opal diffuser: 5700	Clear diffuser: 8665 Frosted diffuser: 8363 Opal diffuser: 7329	Clear diffuser: 10342 Frosted diffuser: 9981 Opal diffuser: 8747
Rated luminous flux emergency power [lm]* (Standard) (Other specifications are available as options)	Clear diffuser: 3270 Frosted diffuser: 3100 Opal diffuser: 2770	Clear diffuser: 4100 Frosted diffuser: 3890 Opal diffuser: 3480	Clear diffuser: 5150 Frosted diffuser: 4950 Opal diffuser: 4350
Light source type	2 x LED Module 18W	2 x LED Module 23W	2 x LED Module 27W
Color temperature [K]	3000** 4000 (standard) 5000**		
CRI	>70** >80 (standard) >90**		
Efficacy of the complete luminaire [lm / W]	144 - 170 depending on diffuser type	148 - 175 depending on diffuser type	148 - 175 depending on diffuser type
Lifetime [h]	L80B10 in ambient temperature 25°C : 80 000 LED driver lifetime in ambient temperature 25°C: 100 000 L89B10 in ambient temperature 50°C: 70 000 LED driver lifetime in ambient temperature 50°C: 70 000		

Electrical data	OptiLine 12-1*****CBX/CBY	OptiLine 12-2*****CBX/CBY	OptiLine 12-3*****CBX/CBY
Protection class	I		
Rated power [W]**	39,5	49,5	59,0
Power factor	up to 0,97		
Rated Voltage [V]	AC 230, 50Hz DC 230, 0Hz		
Rated current [A]	0,19	0,23	0,27
Cable terminals	min. 1,5 mm ² max. 4mm ²		

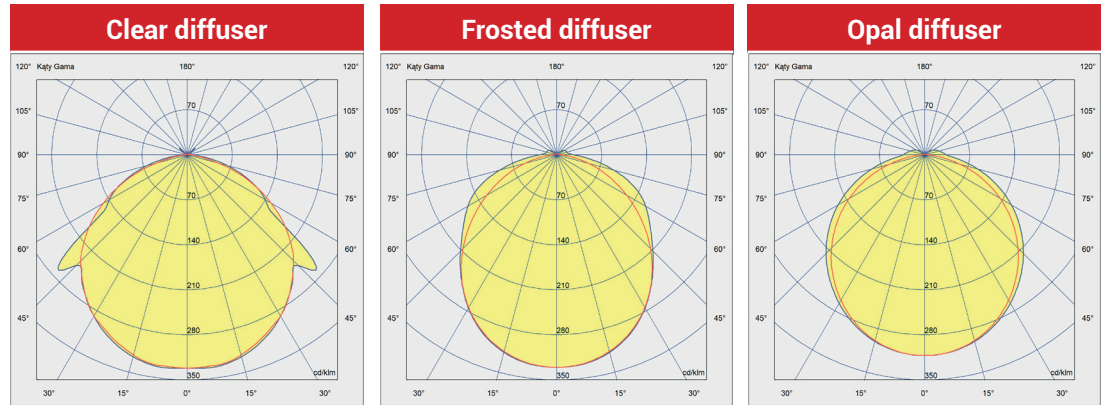
Mechanical data	OptiLine 12-1*****CBX/CBY	OptiLine 12-2*****CBX/CBY	OptiLine 12-3*****CBX/CBY
Degree of protection	IP66/67		
Impact resistance	HIGH according to PN-EN IEC 60079-0; IK 09		
Body	Glassfibre reinforced polyester (GRP)		
Cover	Polycarbonate in three versions: clear, opal and frosted		
Gasket	Silicon foam		
Working temperature	-30°C ≤ Ta ≤ +50°C		

* - All data was measured at 25°C, color temperature of 4000K, CRI>60. Tolerance +/-5%

** - Other specifications of lighting fixtures are available as options

*** - Power tolerance +/-5%

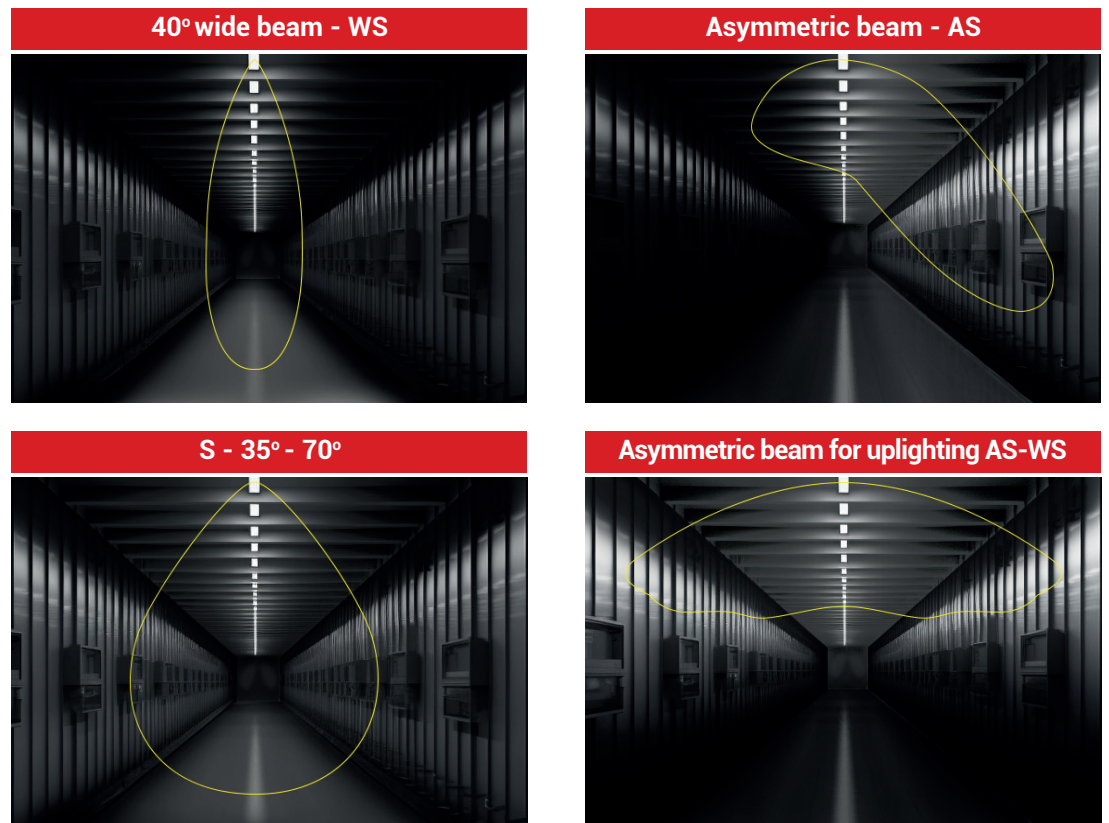
Polar curves



Directional lenses

Possibility to adjust light distribution of already installed luminaire by using of accessory directional lenses. 4 basic lenses:

- ▶ 40° wide beam - WS
- ▶ asymmetric beam - AS
- ▶ S-35°-70°
- ▶ asymmetric beam for uplighting AS-WS



Other directional lens configurations are available as needed - 22 types in all.

Emergency pictograms: codification

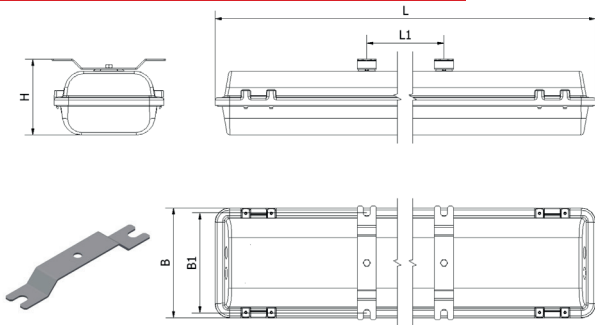


P-0h 	P-1,5h 	P-3h 	P-4,5h
P-EM 	P-6h 	P-7,5h 	P-9h
	P-10,5h 		

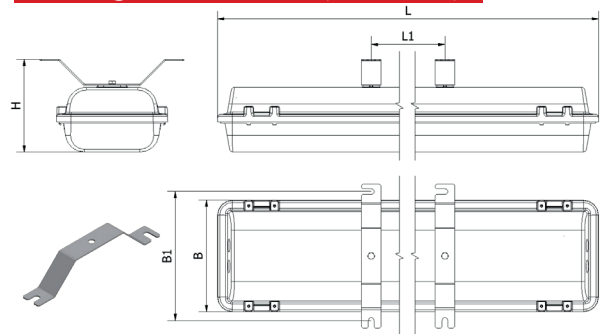
Fixture type	L	L1	B
OptiLine 60-*****	670	400	173
OptiLine 12-*****	1276	800	173

Dimensions depend on mounting type	H	B1
Eyelet hanger R20	136,0	---
Pole mount bracket R50	156,2	---
Ceiling bracket D18	119,0	157
Ceiling bracket D40	143,7	200
Ceiling bracket C	153,4	---
Wall bracket K45	184,7	---

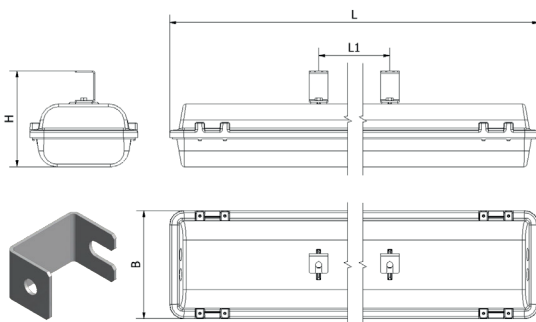
Ceiling bracket D18 (code M1)



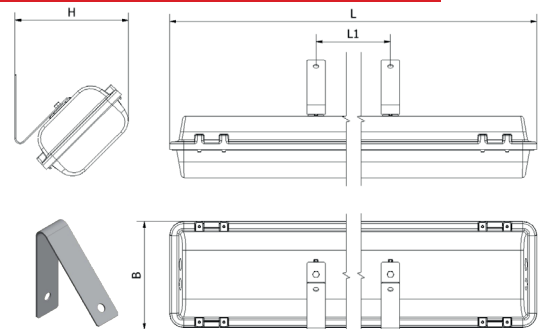
Ceiling bracket D40 (code M2)



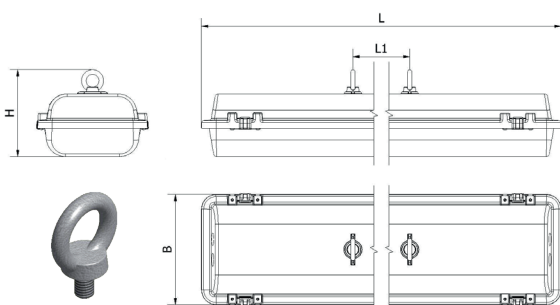
Ceiling bracket C (code M4)



Wall bracket K45 (code M3)



Eyelet hanger R20 (kod M5)



Pole mount bracket R50 (code M6)

