luminell®
Light Matters



Maritime Products and Solutions

Premium Visibility Solutions

for demanding maritime and offshore use

Photo: Arthur Bruinen

Rev May 2020

Premium Visibility Solutions

for demanding maritime and offshore use

The Luminell Group is passionate about delivering critical light solutions for demanding use, creating the industry standard in marine lighting, and establishing supportive and lasting relationship with its customers, staff and the community at large.

The Luminell series of solutions offer powerful lighting, outstanding functionality, provide increased safety, and a longer than average lifetime of use despite the strain of extreme environments. Our LED light solutions also boast an average 80% decrease in energy output, decreasing your environmental footprint. It is clear why the Luminell range of lights have become the first choice for many shipyards, ship designers, government bodies, rigs and vessels carrying out hazardous and important work.

The Luminell Group has offices in Norway, Sweden and the USA, where all Luminell products are proudly Scandinavian designed and manufactured and sold globally. Challenging the established, pushing the known boundaries of design and technology, and a sincere desire to help its users has been, and is still the drive behind Luminell. Experience the Luminell difference today.

Our team are ready to assist in finding the best solution for you!



Photo: Redningsselskapet

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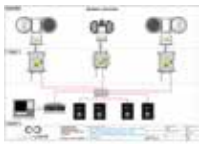
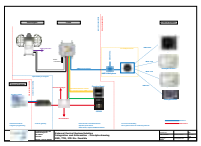






Photo: Olav Thokle


Rolls-Royce
KYMA

RLX™
FLOODLIGHT
Proven endurance

luminell®
Light Matters



Powerful LED floodlights for extreme environments

Photo: Seaonics

- Flicker Free
- Made to handle shocks and vibrations over time
- Seawater resistant and ”easy clean” design
- No maintenance
- Designed and produced in Scandinavia
- Dimmable
- Compact, robust and sealed
- Excellent EMC characteristics
- Encapsulated internal electronics
- No ballast required
- Available for hazardous areas
- Corrosion class C5m

5 YEAR WARRANTY

NEW PRODUCT



RLX™B FLOODLIGHT



RLX™C FLOODLIGHT



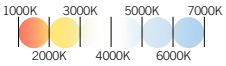
RLX™D FLOODLIGHT Gen2



RLX™D FLOODLIGHT Gen3

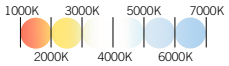
Design protected

100-277 VAC

	RLX™C FLOODLIGHT	RLX™D FLOODLIGHT Gen2	RLX™D FLOODLIGHT Gen3
Input Specifications			
Input voltage range	100 - 277 VAC	100 - 277 VAC	100 - 277 VAC
Frequency range	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
Rated power	80W	160W	240W
Alternative rated power	40W [1]	N/A	N/A
Current at 230VAC	0,35 A (80W)	0,75 A	1,04 A
Leakage current	<0,75 mA /227 VAC	<0,75 mA /227 VAC	0,5 mA /230 VAC
Inrush current (50% I-peak @ 230VAC)	~65A (445 µs)	~65A (445 N/A)	200A (150 µs)
Light Control / DIM	Optional: 0-100KΩ or 0-10V (5-100%)	N/A	0-100KΩ, 0-10V or 0-10VDC (0-100%)
Light Specifications			
Initial luminous flux @ Ta 25°C	10.776	21.552	30.684
Color rendering index (CRI)	min. 70	min. 70	min. 70
Color temperature 	5.000 K (+ - 500 K) [2]	5.000 K (+ - 500 K) [2]	5.000 K (+ - 500 K)
Beam angles	10° spot beam - 110° wide beam (see last page)		
General Specifications			
Startup time	1 sec.	1 sec.	1 sec.
Operating ambient temperature (Ta)	- 40°C to + 55°C	- 40°C to + 55°C	- 40°C to + 55°C
Storage temperature	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C
Weight (apx.)	6.5 kg	10.5 kg	14,5 kg
Cable gland	1xM20 (6-13mm)	1xM20 (6-13mm)	1xM20 (6-13mm)
Blind caps	1xM20	1xM20	1xM20, 2xM25
IP class	IP 66/67	IP 66/67	IP 66/67
Lifetime prediction (L70) @ Ta 45°C	110.000 hrs	110.000 hrs	110.000 hrs
Corrosion class	C5m ISO 9223/12944 (for offshore and maritime environments) For more information see document "Lifetime Prediction RLX™.." on our website.		
Materials			
Body / casing / chassis	Seawater resistant; casted, anodized, and powder coated aluminium		
Glass	Tempered glass (Polycarbonate on request)		
Bracket, bolts, nuts, etc.	Stainless steel AISI 316L (1.4404), A4		
Other Compliances			
Description	**Standard**		
LED modules for general lightning	IEC 62031		
Photobiological safety	IEC 62471: 2009 (Low risk - RG1)		
EMC radiated emmissions	DNVGL EMC Class A and B - IEC/EN 60945		
Radiated and conducted	MIL-STD461F/G CE102 and RE102 (Only RLX D with protection guard)		
EMC immunity	EN 61000-4-2,3,4,5,6,8,11 (Surge 4 kV)		
ETL / cETL certified	EANSI/UL1598, ANSI/UL1598A, ANSI/UL 8750 and CSA C22.2 No.250.0		

[1] On request

[2] Also available in 3.000 K (Warm White)

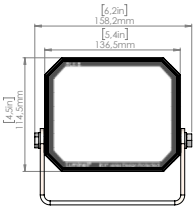
	12/24VDC	24VDC	
	RLX™B FLOODLIGHT	RLX™C FLOODLIGHT	RLX™D FLOODLIGHT Gen2
Input Specifications			
Input voltage range	9 - 36 VDC	19 - 30 VDC	19 - 30 VDC
Rated power	40W	80W / 120W	160W / 240W
Current at 24V	1,6A	3,33A / 5A	6,67A / 10A
Light Control / DIM	N/A	0-100KΩ or 0-10V (0-100%)	0-100KΩ or 0-10V (0-100%)
Light Specifications			
Initial luminous flux @ Ta 25°C	5.000	10.600 / 14.000	21.200 / 28.000
Color rendering index (CRI)	min. 70	min. 70	min. 70
Color temperature 	5.000 K (+ - 500 K)	5.000 K (+ - 500 K)	5.000 K (+ - 500 K)
Beam angles	40° + 60° beam	10° spot beam - 110° wide beam (see last page)	
General Specifications			
Startup time	1 sec.	1 sec.	1 sec.
Operating ambient temperature (Ta)	- 40°C to + 55°C	- 40°C to + 55°C	- 40°C to + 55°C
Storage temperature	- 40°C to + 80°C	- 40°C to + 80°C	- 40°C to + 80°C
Weight (apx.)	1,5 kg	6.5 kg	10.5 kg
Cable gland	3m 2x1,5mm² cable	1xM20 (6-13mm)	1xM20 (6-13mm)
Blind caps	N/A	1xM20	1xM20
IP class	IP 66/67/68	IP 66/67	IP 66/67
Lifetime prediction (L70) @ Ta 45°C	110.000 hrs	110.000 hrs	110.000 hrs
Corrosion class	C5m ISO 9223/12944 (for offshore and maritime environments) For more information see document "Lifetime Prediction RLX.." on our website.		
Materials			
Body / casing / chassis	Seawater resistant; casted, anodized, and powder coated aluminium		
Glass	Tempered glass (Polycorbonate on request)		
Bracket, bolts, nuts, etc.	Stainless steel AISI 316L (1.4404), A4		
Other Compliances			
Description	**Standard**		
LED modules for general lightning	IEC 62031		
Photobiological safety	IEC 62471: 2009 (Moderate risk - RG2) Do not stare at light source		
EMC radiated emmissions	DNVGL EMC Class A and B - IEC/EN 60945		
Radiated and conducted	MIL-STD461F/G CE102 and RE102 (Only RLX D with protection guard)		
EMC immunity	EN 61000-2,3,4,6,8 (Surge 2 kV)		
ETL / cETL certified	ANSI/UL1598, ANSI/UL1598A, ANSI/UL 8750 and CSA C22.2 No.250.0 (not RLX B)		

RLX™B FLOODLIGHT | RLX™C FLOODLIGHT | RLX™D FLOODLIGHT Gen2 | RLX™D FLOODLIGHT Gen3

Dimensions and Mounting

Front view	Fig.1	Fig.2	Fig.3	Fig.4
Side view	Fig.5	Fig.6	Fig.7	Fig.8
Bracket	Fig.9	Fig.10	Fig.11	Fig.12

1



2



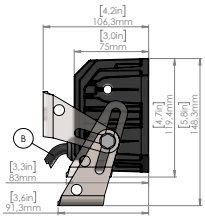
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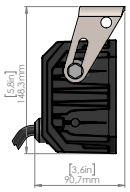
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*3m 2x1,5mm² fixed cable as standard

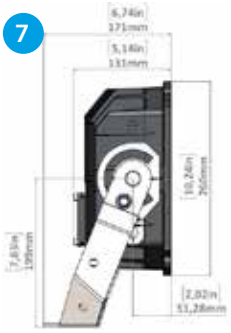


Alternative mounting position for mounting handing

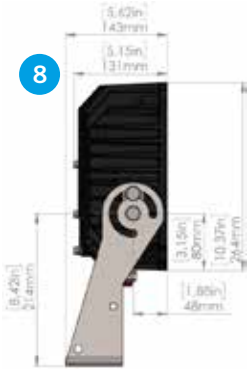
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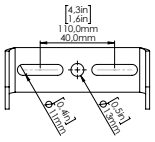
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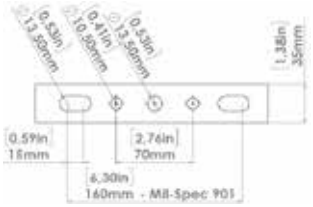
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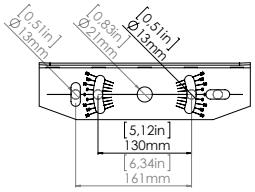
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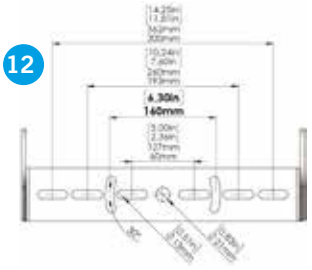
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11



12



Options and Accessories

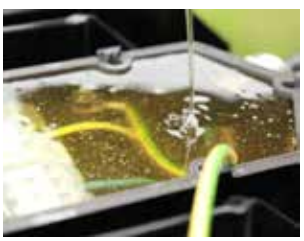
- Anti-Ice kit
- Specialized products on request
- RLX B available in 6 pack



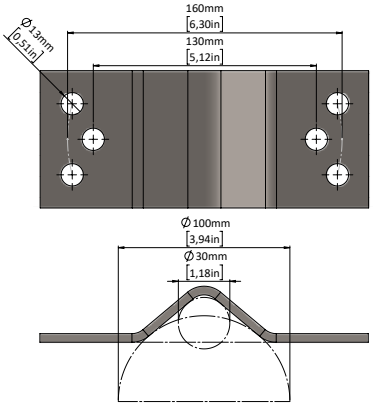
Protection grid



Damper
(Pendulum mounting)

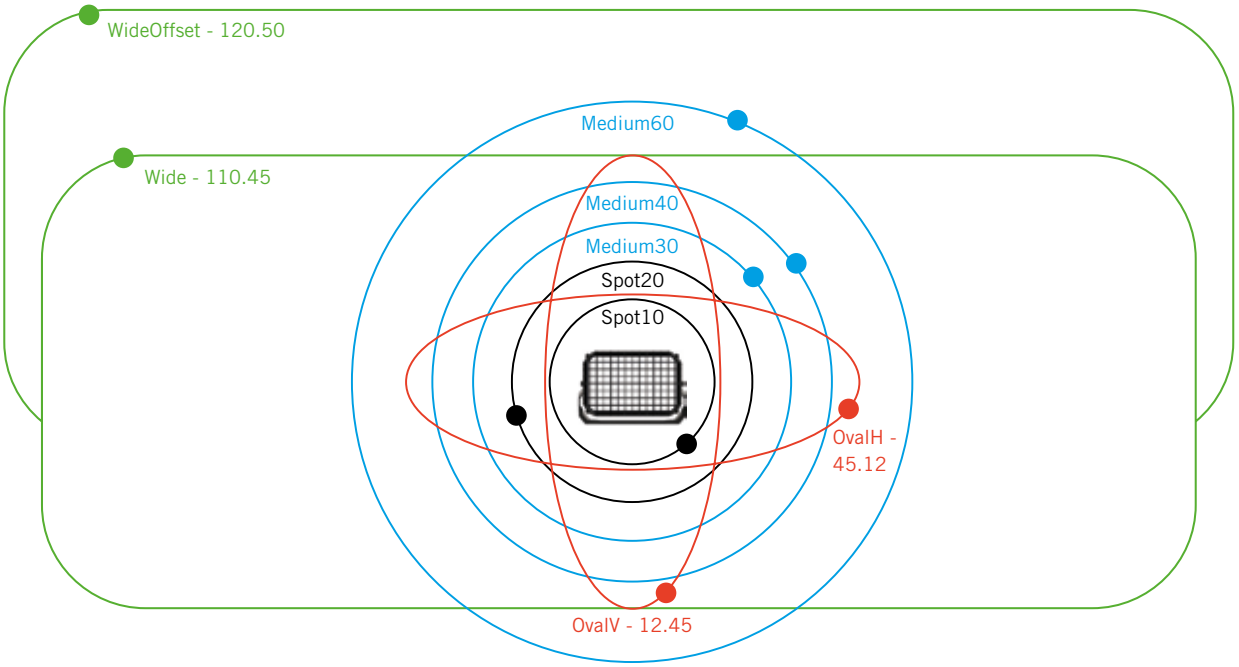


Connection Box Gel KIT
(Only RLX D gen3)



Pole mount bracket
Ø30-100mm

RLX™ Series, standard beam alternatives			
Beam group	**Beam code**	**Light projection – diameter, 10m distance**	**Color code**
Spot beams	Spot10	2m	●
	Spot20	3m	
Medium beams	Medium30	5,4m	●
	Medium40	7m	
	Medium60	10m	
Wide beams	Wide	28m	●
	WideOffset	34m	
Oval beams	OvalH	8,2 x 2m	●
	OvalV	2 x 8,2m	



Specifications are subject to change at any point without prior notice.

Zone 1 & 2 LED floodlights for extreme environments

luminell®
Light Matters



Photo: Geert-Jan van Hest

- ATEX and IECEx approved. Zone 1, 2, 21 and 22
- Powerful light performance
- Compact and low weight
- Designed to be appreciated by the installer and the end user
- Wide operating temperatures
- Temperature classes T6/T5/T4/T3
- Extreme lifetime
- Light efficiency up to 80% savings from conventional
- No flame path, no maintenance
- MIL-STD-461, remarkable EMC/EMI characteristics
- Crafted for demanding marine and offshore conditions

5 YEAR WARRANTY



Design protected

RLX™ Cx FLOODLIGHT Zone 1/21



Design protected

RLX™ Dx FLOODLIGHT Zone 1/21

Zone 1 and 21



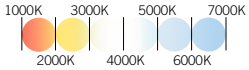
Design protected

RLX™ Dx FLOODLIGHT Zone 2/21

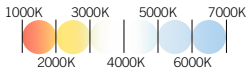
Zone 2 and 21

IEC IECEx Ex

RLX CxZ1.21

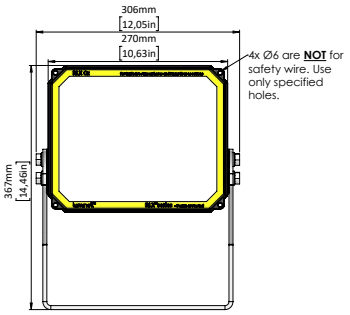
Electrical Specifications	40 W	80 W	120 W	160 W
Input voltage range	100 - 277 VAC, 100 - 300 VDC			
Frequency range	50 - 60 Hz			
Power factor @ 230 VAC	cos ϕ < 0.9			
Current @ 230 VAC	0,17 A	0,35 A	0,52 A	0,7 A
Leakage current	0,5 mA RMS @ 230 VAC 50 Hz			
Recommended fuse	MCB16 type C for up to 10 floodlights connected in parallel			
Inrush current	50A (duration of 600µs measured @ 50% I-peak) at 230VAC			
Dim control interface	(10-100%) 0 - 100 kΩ, 4 - 20 mA or 0 - 10 VDC			
Terminal dimensions	Mains: 0,2 - 6 mm², Grounds: 0,2 - 16 mm², Dim and batteries: 0,08 - 2,5 mm² – spring terminals with looping (sketch available under “Dimensions”)			
Light Specifications				
Initial luminous flux	6.589	11.290	15.342	19.021
Lumen per watt	165	141	128	119
100% light output		Ta < 55°C		Ta < 45°C
Color rendering index (CRI)	> 70			
Color temperature 	5.000 K (3.000 K on request)			
Beam angles (degrees)	Spot 15°, Medium 40°, Medium 60°, Medium 60° x 40°, Wide 80° x 60°, Oval 45° x 15°, See illustration on page 6 for more information. Photometric files available on request.			
Ex and Environmental				
Ambient temperature (Ta)	- 55°C to + 55°C			
Storage temperature	- 55°C to + 80°C			
Markings	Zone 1, 2, 21, 22			
ATEX classification	CE 2804 Ex II 2G II 2D			
IEC classification gas	Ex eb mb IIC T6 Gb	Ex eb mb IIC T4, T5** Gb	Ex eb mb IIC T4 Gb	Ex eb mb IIC T3, T4* Gb
IEC classification dust	Ex tb IIIC T85 Db	Ex tb IIIC T135, T100** Db	Ex tb IIIC T135 Db	Ex tb IIIC T200, T135* Db
Classification with alternative ambient temperature	*T4, T135 @Ta <40°C **T5, T100 @TA <50°C			
General Spesifications				
Startup time	1 second			
Weight	9,7 kg (approx.)			
Cable glands	2xM25 10-18mm Through Gland 2xM20 Blind Cap Other glands and blind caps on request.			
IP class	IP 66/67			
Predicted lifetime L70 (70% light output) Ta 25°C	>320k hours	>320k hours	>320k hours	175k hours
Predicted lifetime L70 (70% light output) Ta 45°C	>180k hours	>120k hours	>100k hours	80k hours
Corrosion class	C5 m ISO 9223/12944 (for offshore and maritime environments)			

RLX™ DxZ FLOODLIGHT Zone 1/21 RLX™ DxZ FLOODLIGHT Zone 2/21

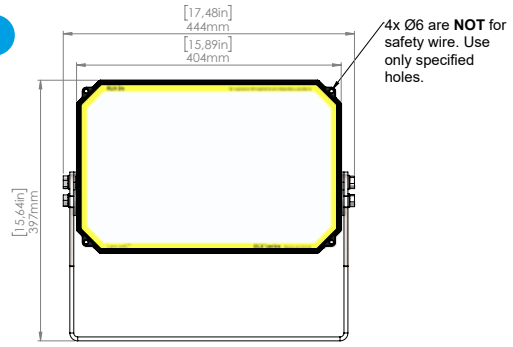
	RLX DxZ1.21			RLX DxZ2.21
Electrical Specifications	**80 W**	**160 W**	**240 W**	**240 W**
Input voltage range	100 - 277 VAC, 100 - 300 VDC			
Frequency range	50 - 60 Hz			
Power factor @ 230VAC	cos ϕ < 0.98			
Current @ 230VAC	0,35 A	0,7 A	1,04 A	1,04 A
Leakage current	0,5 mA RMS @ 230 VAC 50 Hz			
Inrush current	200A (duration of 150µs measured @ 50% I-peak) at 230VAC			
Recommended fuse	MCB16 type C for up to 10 floodlights connected in parallel			
Dim control interface	(0-100%) 0 - 100 kΩ, 4 - 20 mA or 0 - 10 VDC			
Terminal dimensions	Mains: 0,2 - 6 mm², Grounds: 0,2 - 16 mm2, Dim and batteries: 0,08 - 2,5 mm² – spring terminals with looping (sketch available under “Dimensions”)			
Light Specifications				
Initial luminous flux	13.178	22.580	30.684	30.684
Lumen per watt	165	141	128	128
100% light output	Ta < 55°C			
Color rendering index (CRI)	> 70			
Color temperature 	5.000 K (3.000 K on request)			
Beam angles (degrees)	Spot 15°, Medium 40°, Medium 60°, Medium 60° x 40°, Wide 80° x 60°, Oval 45° x 15°,See illustration on page 6 for more information. Photometric files available on request.			
Ex and Environmental				
Ambient temperature (Ta)	- 55°C to + 55°C			
Storage temperature	- 55°C to + 80°C			
Markings	Zone 1, 2, 21, 22			Zone 2, 21, 22
ATEX classification	CE 2804 Ex II 2G II 2D			CE 2804 Ex II 3G II 2D
IEC classification gas	Ex eb mb IIC T6 Gb	Ex eb mb IIC T5 Gb	Ex eb mb IIC T4 Gb	Ex ec mc IIC T4 Gc
IEC classification dust	Ex tb IIIC T85 Db	Ex tb IIIC T100 Db	Ex tb IIIC T135 Db	Ex tb IIIC T135 Db
Classification with alternative ambient temperature	N/A	N/A	N/A	N/A
General Spesifications				
Startup time	1 second			
Weight	15,2 kg			14,8 kg
Cable glands	2xM25 10-18mm Through Gland 2xM20 Blind Cap Other glands and blind caps on request.			
IP class	IP 66/67			
Predicted lifetime L70 (70% light output) **Ta 25°C**	>320k hours	>320k hours	>320k hours	>320k hours
Predicted lifetime L70 (70% light output) **Ta 45°C**	>180k hours	>120k hours	>100k hours	>100k hours
Corrosion class	C5 m ISO 9223/12944 (for offshore and maritime environments)			

Dimensions and Installation

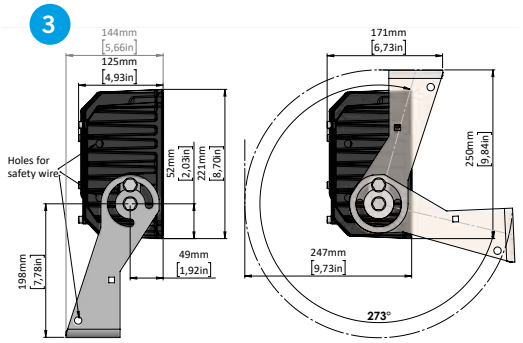
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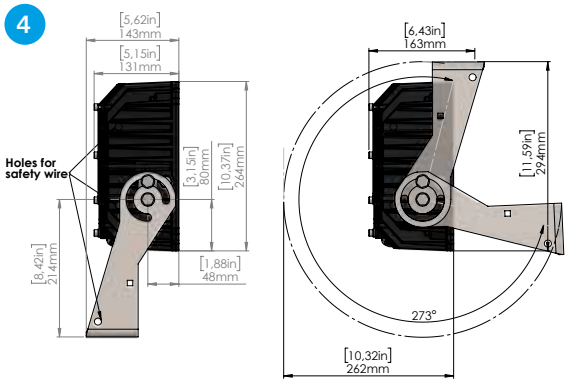
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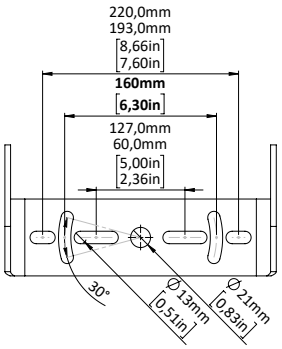
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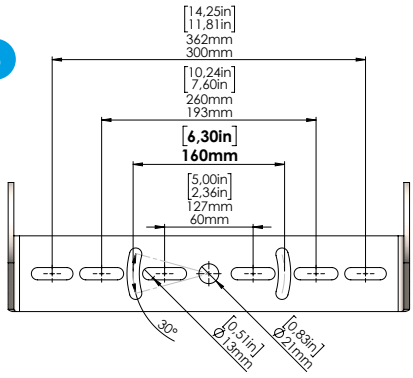
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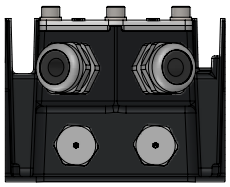
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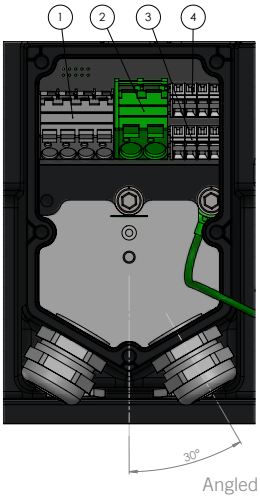
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7



8



Angled to reduce cable bend

Dimensions and Mounting	RLX Cx FLOODLIGHT Zone 1/21	RLX Dx FLOODLIGHT Zone 1/21	RLX Dx FLOODLIGHT Zone 2/21
Front view	Fig.1	Fig.2	Fig.2
Side view	Fig.3	Fig.4	Fig.4
Bracket	Fig.5	Fig.6	Fig.6
Cable glands	Fig.7	Fig.7	Fig.7
Terminal box	Fig.8	Fig.8	Fig.8

Mounting positions:

RLX CxZ1.21
With two M12 bolts the pattern fits 90-220 mm holes with full +/-15° adjustments at 160 mm.

RLX DxZ1.21 and DxZ2.21
With two M12 bolts the pattern fits 60-362mm holes with full +/-15° adjustment at 160 mm.

RLX™ Cx FLOODLIGHT Zone 1/21 RLX™ Dx FLOODLIGHT Zone 1/21 RLX™ Dx FLOODLIGHT Zone 2/21

Materials

Body / casing / chassis	Seawater resistant; casted, anodized and powder coated aluminium
Glass	Tempered glass
Bracket, bolts, nuts etc.	Stainless steel AISI 316L (1.4404), A4

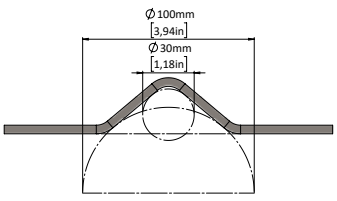
Approvals and Declarations

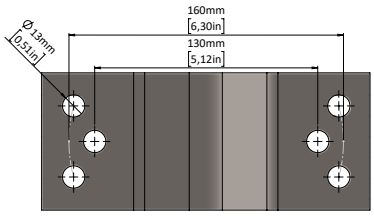
Low Voltage Directive (LVD) 014/35/EU	EN 62031:2008/A1:2013/A2:2015 – LED Modules for general lighting
Photobiological safety	EN 62471:2008 – Photobiological safety of lamps and lamp systems
EMC and immunity	EN 55015:2013 – Radiated and conducted emissions
	EN 60945:2002 – Marine Equipment. EMC Immunity, Radiated and Conducted Emissions
	MIL-STD461F CE101, CE102 and RE102 - Navy Top Deck
	MIL-STD461F CE101, CE102 and RE102 - Navy Mobile & Army
Explosion proof standards	IEC/EN 60079-0:2018 – Equipment General Requirements
	IEC/EN 60079-7:2015+A1:2018 – Equipment protection by increased safety “e”
	IEC/EN 60079-18:2015+A1:2017 – Equipment protection by type of protection “m”
	IEC/EN 60079-31:2014 – Equipment dust ignition protection by enclosure “t”

Options and Accessories

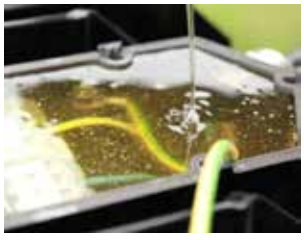
1. Pole mount bracket Ø30-Ø100
2. Protection Guard Set
3. Retrofit bracket 130, 160 to 225-260, 350-380
4. Connection Box Gel KIT (Only RLX DxZ1.21 and DxZ2.21)

1





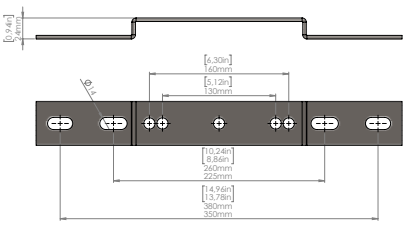
4



2

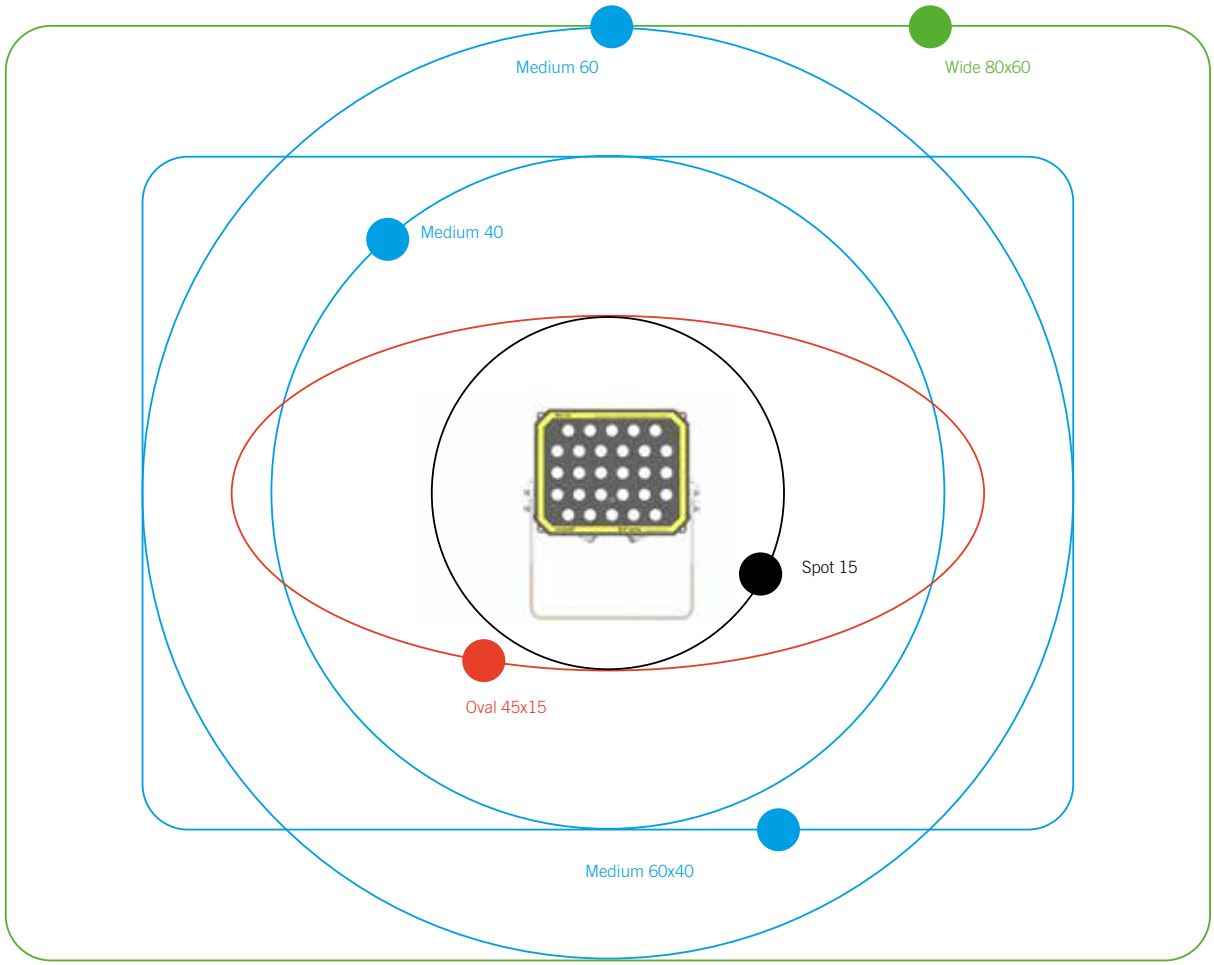


3



Beam Alternatives

Beam group	Beam code	Light projection – diameter @ 10m distance	Color code
Spot beams	Spot 15	2,6 m	●
Medium beams	Medium 40	7 m	
	Medium 60	10 m	●
	Medium 60 x 40	10 x 7 m	
Wide beams	Wide 80 x 60	14 x 10,5 m	●
Oval beams	Oval 45 x 15	8 x 2,6 m	●





BLX™ BOWLIGHT

- the new standard

luminell®
Light Matters



Design protected

"This is the best bowlight I've ever seen. I see waves and objects in the water on very long distance – it's simply amazing!"

Capt. Eldar Giske, M/S Ekspressen – Norled AS

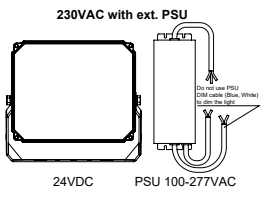
The new BLX™ Bowlight is designed to improve the ability to see during navigation and maneuvering at night. By combining the proven technology of the RLX Series with the practical testing of the optical features, the end result is a powerful bowlight that will increase safety and endure in very harsh environments.

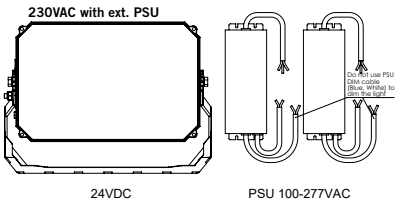
Key Features

- Detects bouy reflex on 1 NM
- Dimmable
- BLX™ design – compact, sealed and highly resistant to shock and vibrations
- Proven endurance
- Available in 24VDC and 100-277VAC
- Maintenance free
- Instant light
- Easy clean design

5 YEAR WARRANTY

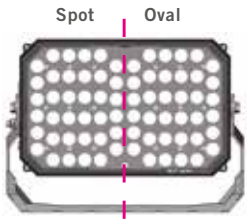
Input Specifications	BLX™ C	BLX™ D
Input voltage range	22 – 30 VDC	22 – 30 VDC
Alternative voltage range	100 – 277 VAC (external PSU)	100 – 277 VAC (external PSU)
Frequency range 230VAC	50 – 60 Hz	50 – 60 Hz
Rated power	250W @ 24VDC	500W @ 24VDC
Current @ 24VDC	10,5 A	2x 10,5 A
Current @ 230VAC	1,1 A (external PSU)	2,2 A (2x 1,1A for each external PSU)
DIM	0-100% using 0-100 kΩ or 0-10VDC.	0-100% using 0-100 kΩ or 0-10VDC. Spot/ Oval can be controlled separately.
Light Specifications		
Initial luminous flux @ Ta 25°C	23.800	48.800 (23.800 + 25.000)
Beam angles	Spot 8 Oval H Combination of Spot 8 and Oval H	Spot 8 Oval H Spot 8 / Oval H
Candela	278.000 Cd	740.000 Cd (645.000 + 95.000)
Range (1 lx)	527 m	860 m
Tested range	Detects bouy reflex on 0,5 NM (926 m)	Detects bouy reflex on 1 NM (1.852 m)
Color rendering index (CRI)	70 (min.)	70 (min.)
Color temperature	5.000 - 8.000 K	5.000 - 8.000 K
Alternative color temperature	2.700 K - 3.000 K	2.700 K - 3.000 K
General Specifications		
Startup time	1 sec.	1 sec.
Operating ambient temperature (Ta)	- 40°C to + 55°C	- 40°C to + 55°C
Storage temperature	- 40°C to + 80°C	- 40°C to + 80°C
Weight (apx.)	5,6 kg	9,5 kg
Weight external PSU (apx.)	1 x 2 kg	2 x 2 kg
Cable gland	1xM20 (6-13mm)	2xM20 (6-13mm)
IP class	IP66/67	IP66/67
Lifetime housing and materials	Made to endure at least 20 years. Corrosion class C5m ISO 9223/12944 (for offshore and maritime environments) verified by DELTA	
Lifetime LED and electronics	L70 @ >25°C ~57.900h	L70 @ >25°C ~57.900h
	At high ambient temperatures and no wind the BLX™ Temperature Protection Control will limit the light output to ensure lifetime.	
Cable lenghts	Recommended cable length between 24VDC PSU and bowlight is 15m on BLX™ C/D (250W per section). Specified lenghts is applicable with use of 2,5mm2 cross section supply cable. This is a general recommendation. It is the installer´s responsibility to assess this on each installation.	





Materials

Body / casing / chassis	Seawater resistant; casted, anodized and powder coated aluminium
Glass	Tempered glass
Bracket, bolts, nuts, etc.	Stainless steel AISI 316L (1.4404), A4



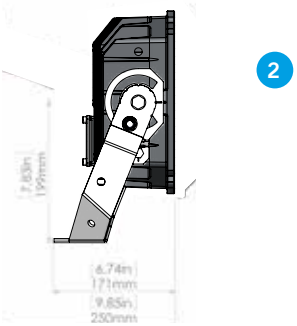
Safety Standards

Description	Standard
LED modules for general lightning	EN 62031:2008/A1:2013/A2:2015
Photo biological safety of lamps and lamp systems	EN 62471:2008
EMC radiated and conducted	EN 55015:2013 and MIL-STD461F/G Navy Top Deck
EMC marine radiated and conducted (using screened cable)	EN/IES 60945:2002
ETL / cETL certified	ANSI/UL1598, ANSI/UL1598A, ANSI/UL 8750 and CSA C22.2 No.250.0

Dimensions and Mounting

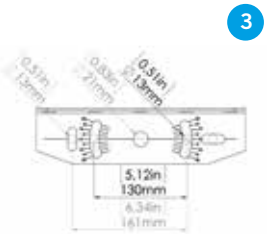
Front view	Fig. 1
Side view	Fig. 2
Bracket	Fig. 3
Control panel	Fig. 4





Options and Accessories

- Protection grid
- Anti-Ice kit
- Control panel

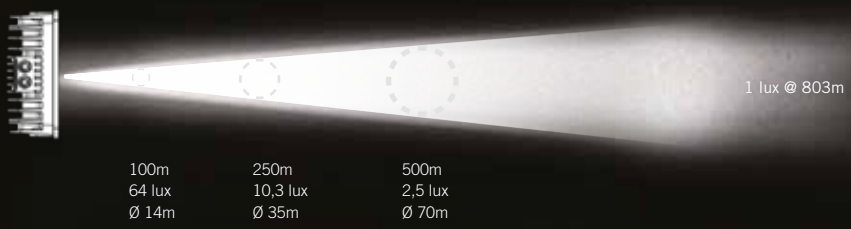




Control Panel

- Multiple bowlights can be controlled from the same panel
- Individual dimming of each section
- Master ON/OFF
- Dimmable panel light (require 24VDC/VAC)
- Select individual dimming range on spot and oval (0-100% or 10-100%)
- Potential-free contact for optional control of external equipment
- Contact sets for optional external push button

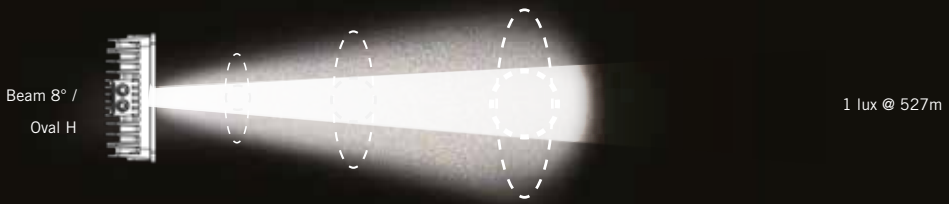
Beam illustration BLX™C



100m	250m	500m
64 lux	10,3 lux	2,5 lux
Ø 14m	Ø 35m	Ø 70m

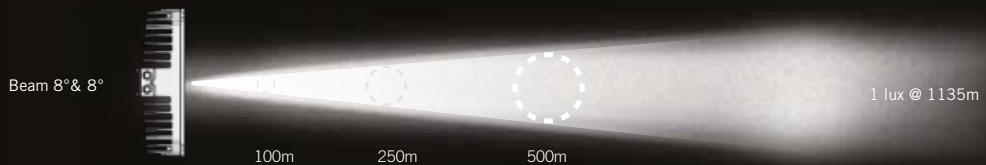


100m	250m
10 lux	1,5 lux
Ø 82,2m	Ø 207,1m



100m	250m	500m
28 lux	4,4 lux	1 lux
Ø 14 / 82,8m	Ø 35 / 207,1m	Ø 70m

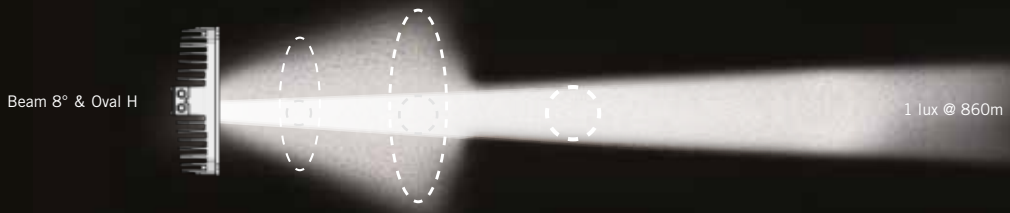
Beam illustration BLX™D



100m	250m	500m
127 lux	20,4 lux	5 lux
Ø 14m	Ø 35m	Ø 70m



100m	250m
19 lux	3 lux
Ø 82,2m	Ø 207,1m



100m	250m	500m
74 lux	11,9 lux	3 lux
Ø 14 / 82,8m	Ø 35 / 207,1m	Ø 70m



Specifications are subject to change at any point without prior notice.

SLX™
SEARCHLIGHT

luminell®
Light Matters



The SLX™ Searchlight module are created to push limits and maximize the potential in LED technology and optical performance.

Luminell SLX™ 220W LED Searchlight.
Distance: 257 meters.



«This is a perfect light for us! Regarding light beam, power and range there is nothing to complain about! The light always works and it gets a lot of beating in the rough Northern-Sea, with our small vessel traveling at 30 knots.»

Asbjørn Thomassen, RS-138 (Search and rescue Vessel)

5 YEAR WARRANTY

Key Features

- Instant light
- No maintenance
- Upgrade your searchlight w./ different bracket kits available
- One or two different beam types per SLX™ module
- Very even light distribution
- Dimmable – perfect in snow, fog or similar conditions
- Compact, sealed and resistant to vibrations and shocks
- Available in 24VDC and 100-277VAC
- Proven endurance

The SLX™ Series LED searchlight module is made to replace conventional searchlight modules, increase light performance and eliminate costly and annoying maintenance. It is crafted to give superior value to the user with a powerful, compact and durable design, giving you the best return on investment possible.

The SLX™ searchlight unit will enable you detect an object at a distance of up to 2,600 meters away, depending on the chosen beam type for your needs.

The SLX™ is made to be mounted or fixed to suitable, existing movable platforms. Adapter bracket kits for certain movable searchlight platforms can also be delivered with your SLX™ searchlight module.

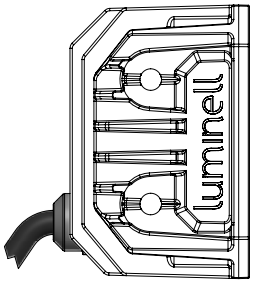
Our team are ready to take your requests and questions, so that your SLX™ searchlight can start making a real difference for you.

When safety at sea matters, Light Matters!

Input Specifications

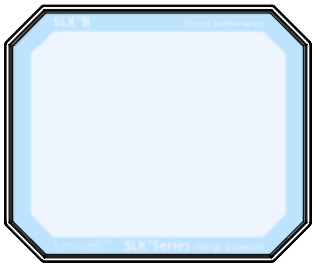
Input voltage range	9-36 VDC
Alternative voltage rang	100-277 VAC (external PSU)
Frequency range	50-60 Hz
Current @ 24 VDC	1,6A/3,2A
Current @ 230 VAC	0,2A/0,4A
DIM	Not dimmable

SLX™ Module



General Specifications

Startup time	1 sec.
Operating ambient temperature (Ta)	-40°C to +55°C
Storage temperature	-40°C to +80°C
Weight (apx.)	1,2kg
Weight external PSU (apx.)	1x1kg or 1x2kg
Cable gland	Fixed and moulded 3m 2x1,5 cable
Blind caps	None
IP class	IP66/67
Lifetime prediction (L70) @ Ta 25˚ C	75.000 hrs
Corrosion class	C5m ISO 9223/12944 (for offshore and maritime environments)

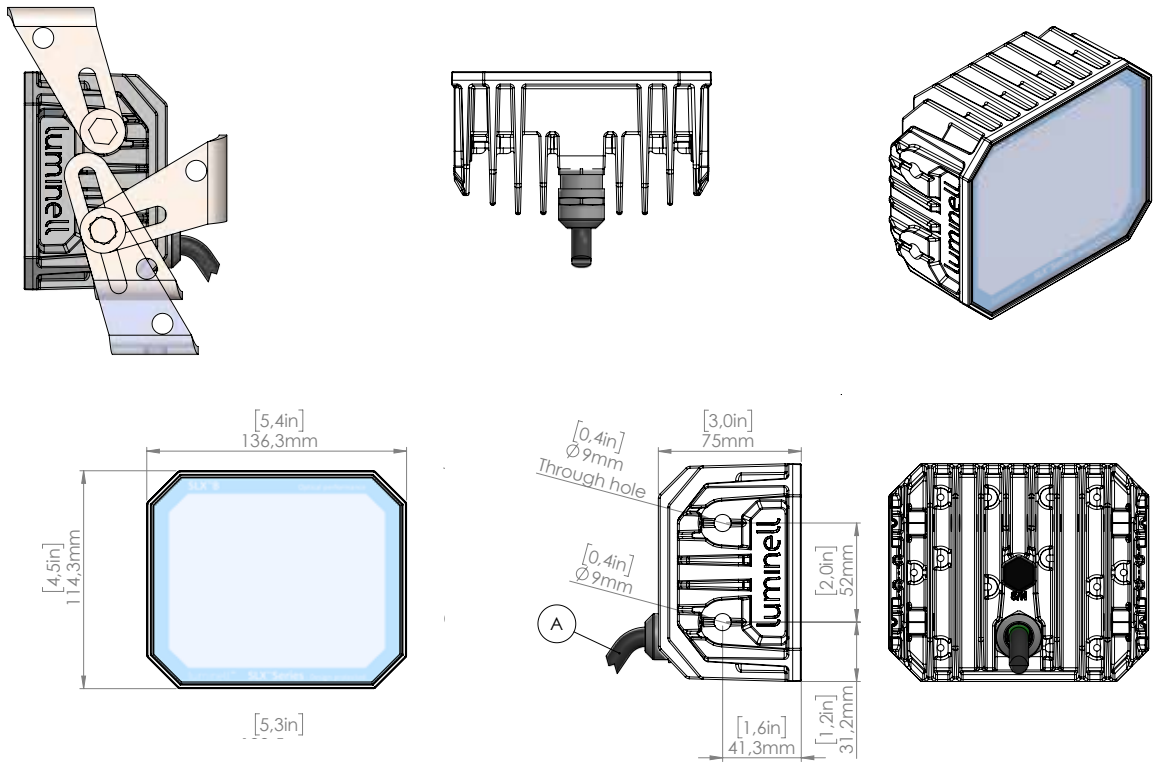


3,5° beam or 15° beam

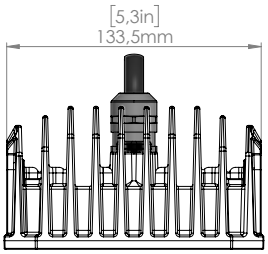
Product	SLX B 40WDC1 5K	SLX B 80WDC1 5K
Model no.	L0525-1	L0525-2
Light beam angle	3.5°	15°
Total intensity Cd	400kCd	80kcd
Range (1 lux/0,25 lux)	630m / 1265m	280m / 565m
Color rendering (CRI)	70 (min.)	70 (min.)
Color temperature (CCT)	5000-6000K	5000-6000K
Power	40W	80W
Optional AC PSU Acc.	1xS0093 (max 2 SLX B/PSU)	1xS0093 (max 2 SLX B/PSU)
Comments:	1xS0117 (max 3 SLX B/PSU)	1xS0117 (max 3 SLX B/PSU)
	1x power input 1x PSU is needed for AC installations If the SLX is powered using an external VAC power supply the used power will increase by approx. 10%.	

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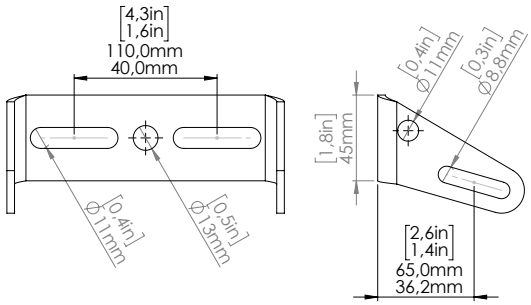
Multiple mounting options for optional bracket



A Supplied with 3m 2x1,5mm2 permanently fixed cable.



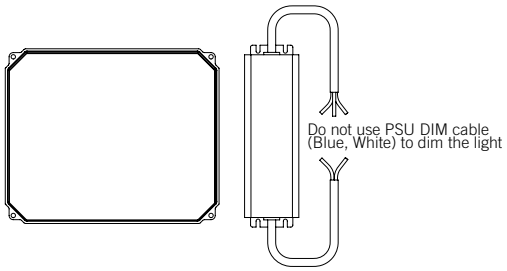
OPTINAL BRACKET: 1002613 L0570 B MARINE BRACKET SET	
Component:	**Qty.**
L0489 RLX B Bracket	1
S0023 M8x25 DIN 933 ISO 4017 A4 Hex Cap Screw	2
S0043 M8 DIN 985 ISO 7040 A4 Lock nut wNylon	2
insert S0185 8,4 DIN 9021 ISO 7093 A4 Flat washer	4



Input Specifications

Input voltage range	22 – 30 VDC
Alternative voltage range	100 – 277 VAC (external PSU)
Frequency range	50 – 60 Hz
Current @ 24 VDC	< 6,25 A
Current @ 230 VAC	< 0,7 A
DIM	0-100 kΩ or 0-10VDC

SLX™ Module



General Specifications

Startup time	1 sec.
Operating ambient temperature (Ta)	- 40˚C to + 55˚C
Storage temperature	- 40˚C to + 80˚C
Weight (apx.)	5 kg
Weight external PSU (apx.)	1 x 1 kg
Cable gland	2xM20 (6-13mm)
Blind caps	None
IP class	IP66/67
Lifetime prediction (L70) @ Ta 25˚ C	75.000 hrs
Corrosion class	C5m ISO 9223/12944 (for offshore and maritime environments)
Cable lenghts	Recommended cable length between 24VDC PSU and SLX™ C is 20m (150W per section). Specified lenghts are applicable with use of 2,5mm2 cross section supply cable.This is a general recommendation. It is the installer´s responsibility to assess this on each installation.



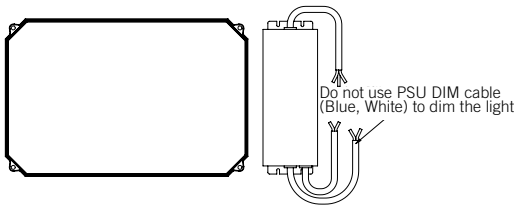
4° beam or 6+° beam

Product	SLX™ C 24V 4	SLX™ C 24V 6
Model no.	L0210-1	L0210-2
Light beam angle	4°	6+°
Total intensity Cd	875 000 Cd	875 000 Cd
Range (1 lux/0,25 lux)	935m / 1870m	935m / 1870m
Color rendering (CRI)	70 (min.)	70 (min.)
Color temperature (CCT)	5000-8000 Kelvin	5000-8000 Kelvin
Power	105 W	150 W
Optional AC PSU Acc.	1x S0093	1x S093
Comments:	- 1x power input - 1x PSU is needed for AC installations - If the SLX™ is powered using an external VAC power supply the used power will increase by approx. 10%.	

Input Specifications

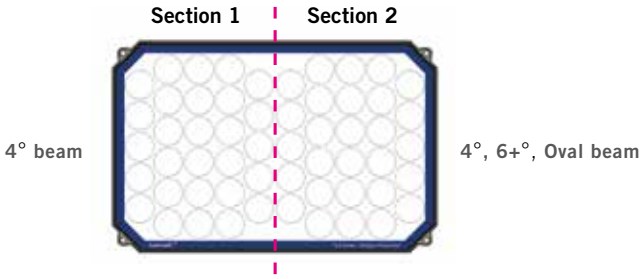
Input voltage range	22 – 30 VDC
Alternative voltage range	100 – 277 VAC (external PSU)
Frequency range	50 – 60 Hz
Current @ 24 VDC	< 10,7 A
Current @ 230 VAC	< 1,1 A
DIM	0-100 kΩ or 0-10VDC

SLX™ Module



General Specifications

Startup time	1 sec.
Operating ambient temperature (Ta)	- 40°C to + 55°C
Storage temperature	- 40°C to + 80°C
Weight (apx.)	8 kg
Weight external PSU (apx.)	1 x 2 kg
Cable gland	2xM20 (6-13mm)
Blind caps	None
IP class	IP66/67
Lifetime prediction (L70) @ Ta 25° C	75.000 hrs
Corrosion class	C5m ISO 9223/12944 (for offshore and maritime environments)
Cable lenghts	Recommended cable length between 24VDC PSU and SLX™ D is 15m (255W per section). Specified lenghts are applicable with use of 2,5mm2 cross section supply cable.This is a general recommendation. It is the installer´s responsibility to assess this on each installation.



Product	SLX™ D 24V 4/4	SLX™ D 24V 4/6	SLX™ D 24V 4/Oval
Model no.	L0084-1	L0084-2	L0084-3
Light beam angle (Section 1/2)	4°/4°	4°/6+°	4°/Oval H
Total intensity Cd	1,75 mCd	1,75 mCd	0,950 mCd
Range (1 lux/0,25 lux)	1322m / 2645m	1322m / 2645m	975m / 1950m
Color rendering (CRI)	70 (min.)	70 (min.)	70 (min.)
Color temperature (CCT)	5000-8000 Kelvin	5000-8000 Kelvin	5000-8000 Kelvin
Power	210 W	255 W	255 W
Optional AC PSU Acc.	1x S0117	1x S0117	1x S0117
Comments:	- 2x sections linked together - 1x power input - 1x PSU is needed for AC installations	- 2x sections, each controlled separately. - 1x power input - 1x PSUs is need for AC installations - Control panel is highly recommended!	
	- If the SLX™ is powered using an external VAC power supply the used power will increase by approx. 10%.		

Materials

Body / casing / chassis	Seawater resistant; casted, anodized and powder coated aluminium
Glass	Tempered glass
Bracket, bolts, nuts, etc.	Stainless steel AISI 316L (1.4404), A4

Standards for SLX™ Searchlight

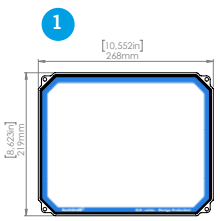
Description	**Standard**
LED modules for general lightning	EN 62031:2008/A1:2013/A2:2015
Photo biological safety of lamps and lamp systems	EN 62471:2008
EMC radiated and conducted	EN 55015:2013 and MIL-STD461F/G Navy Top Deck
EMC marine radiated and conducted (using screened cable)	EN/IEC 60945:2002
ETL / cETL certified	ANSI/UL1598, ANSI/UL1598A, ANSI/UL 8750 and CSA C22.2 No.250.0 (not SLX B)

Dimensions and Mounting

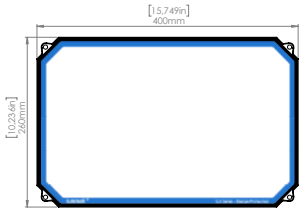
SLX™ Searchlight (fixed)

Front view	Fig. 1
Side view	Fig. 2
Side view up-close	Fig. 3

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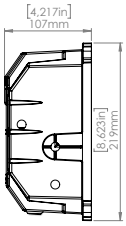


C

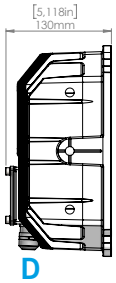


D

2

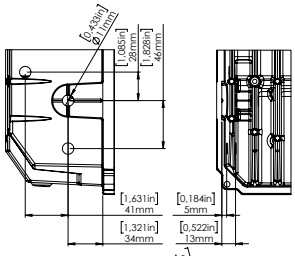


C

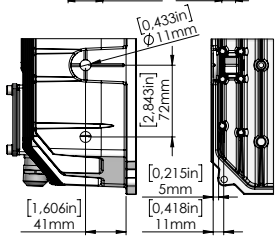


D

3



C



D

Bracket Options SLX™ D

Compatible with

L0413 Marine Bracket	SLX D	Fig. 4
L0378 Adapter Bracket D Type 1.	«Seematz» 351	Fig. 5
L0379 Adapter Bracket D Type 2.	«Norselight» SH 260-470, B-BH	
L0412 C Marine Bracket Set	SLX C	
L0570 B Marine bracket set	SLX B	

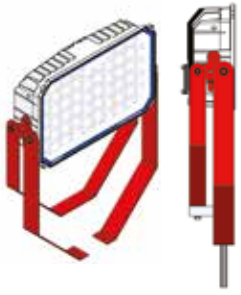
4



5



6



Control Panel



Control panel

Options and Accessories

- Control panel
- Protection grid
- Anti-ice kit

- Multiple searchlights can be controlled from the same panel
- Individual dimming of beams
- Master ON/OFF
- Dimmable panel light (require 24VDC/VAC)
- Select individual dimming range on beams (0-100% or 10-100%)
- Potential-free contact for optional control of external equipment
- Contact sets for optional external push button

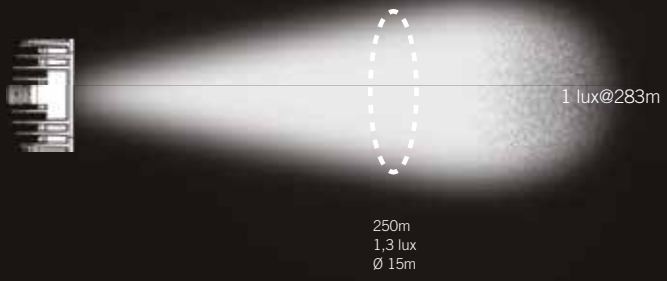
SLX™ SEARCHLIGHT

SLX™B SEARCHLIGHT

Beam 3.5°

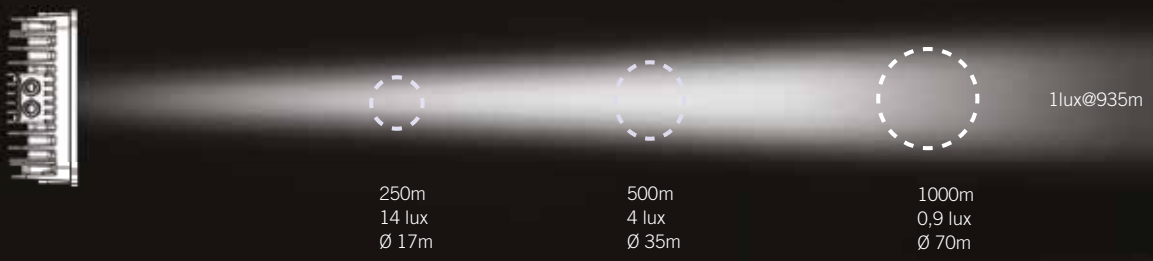


Beam 15°

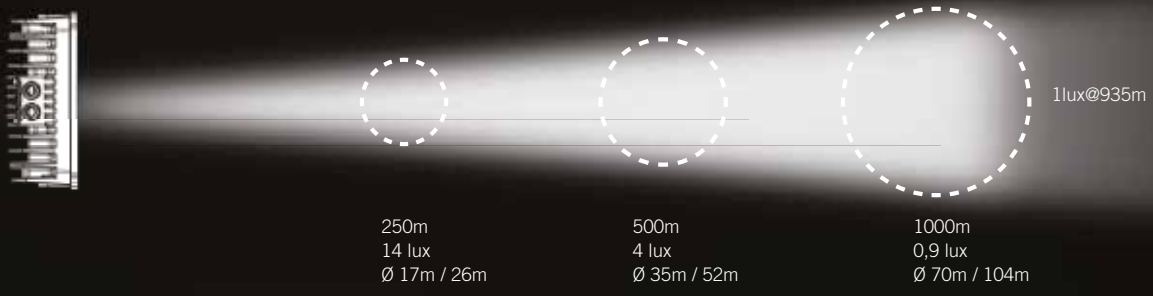


SLX™C SEARCHLIGHT

Beam 4°

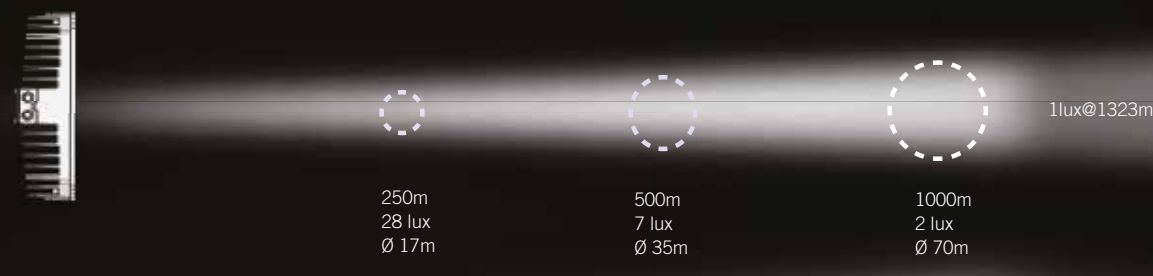


Beam 6+°

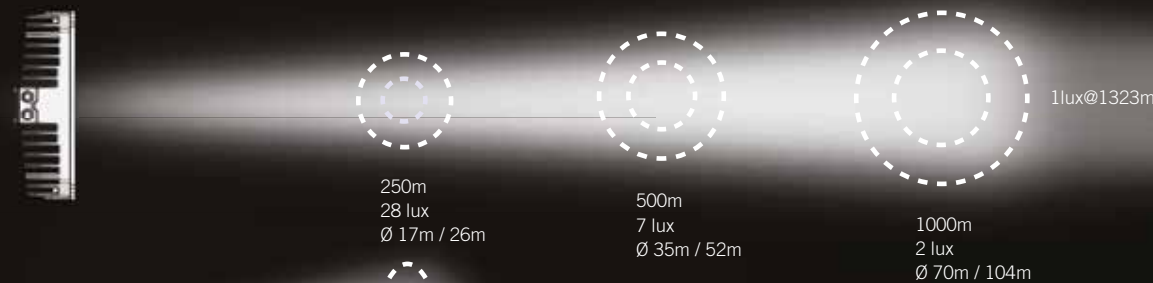


SLX™D SEARCHLIGHT

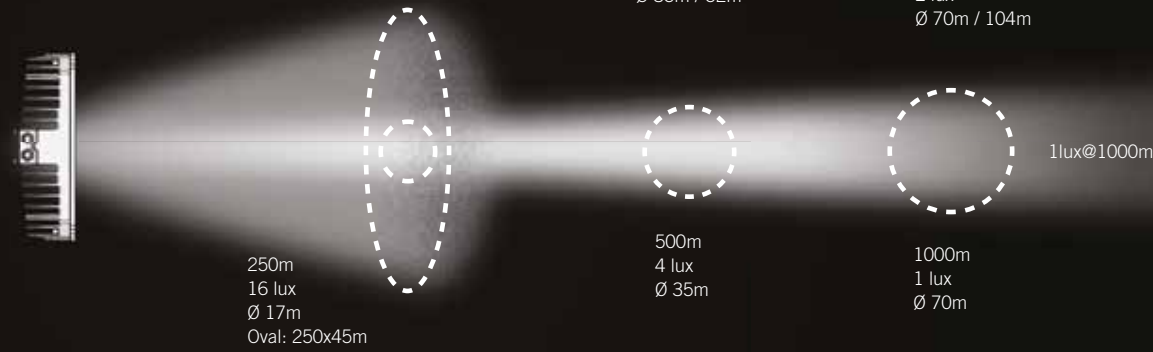
Beam 4°/4°



Beam 4°/6+°



Beam 4°/Oval





Luminell SLX™ 220W LED searchlight

COMPARISON

Traditional 500W halogen searchlight





Photo: Gert-Jan van Hest



luminell®
Light Matters

SL1 – LED searchlight
Compact & Powerful

Photo: Redningsselskapet

- Compact size
- Progressive design
- Light weight
- Excellent EMC characteristics
- Ruggadized construction
- Unlimited horizontal movement
- Wave compensated tilt movement
- New user friendly operator panel logic
- Digital controlled spot and flood beam
- Over 2.0 MCd light intensity with LED
- Dimmable beam
- Hold light direction (HLD) function

5 YEAR WARRANTY



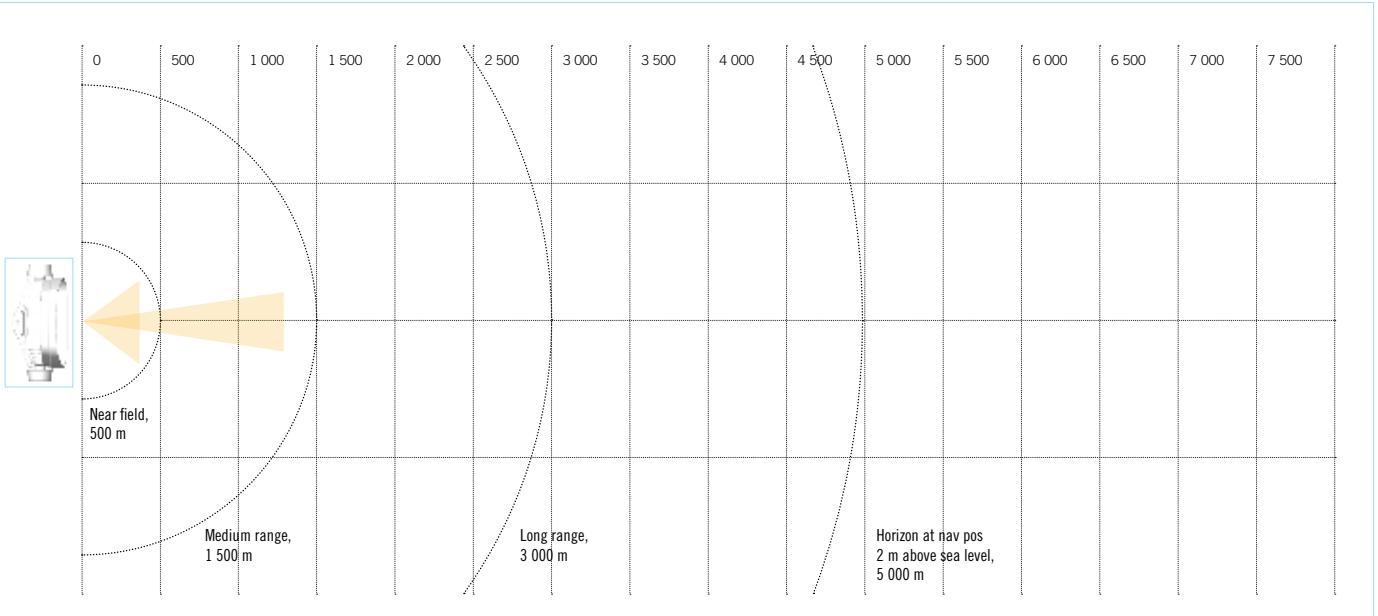


SL1
SEARCHLIGHT

SL1 – Searchlight

Output / performance	
Spot beam	3.5°/ 1 800 kCd / 1340 m
Wide beam	15 °/ 420 kCd / 12 000 lm
Initial luminous flux	Over 30 000 lm
CRI	Min. 70
Color temp	6000
Input	
Mains power searchlight	24 VDC, power consumption max 550W (for AC mains power, a separate AC/DC converter is needed)
Mains power operator panel	18 – 32 VDC
Pan/Tilt	
Horisontal	Adaptive progressive control wheel Unlimited movement with slipring technology Horizontal movement max speed 33°/second
Vertical	Proportional progressive joystick + 90°/ - 30 movement Vertical movement max speed 68°/second Wave compensation function – activate/deactivation
Functions	
Direct button functions	Horizontal and vertical movement Light on/off Wave compensation on/off Hold light direction on/off Beam angle spot/flood Dimming step by step
Standard menu functions	Custom home screen – set your 4 most used functions Up to 4 programmable fixed positions Sweep in horizontal direction Surveillance in horizontal and vertical direction Switch – to another potential SL1 in the network Sync – advanced smarter sync with offset setting possibility

Illumination presentation

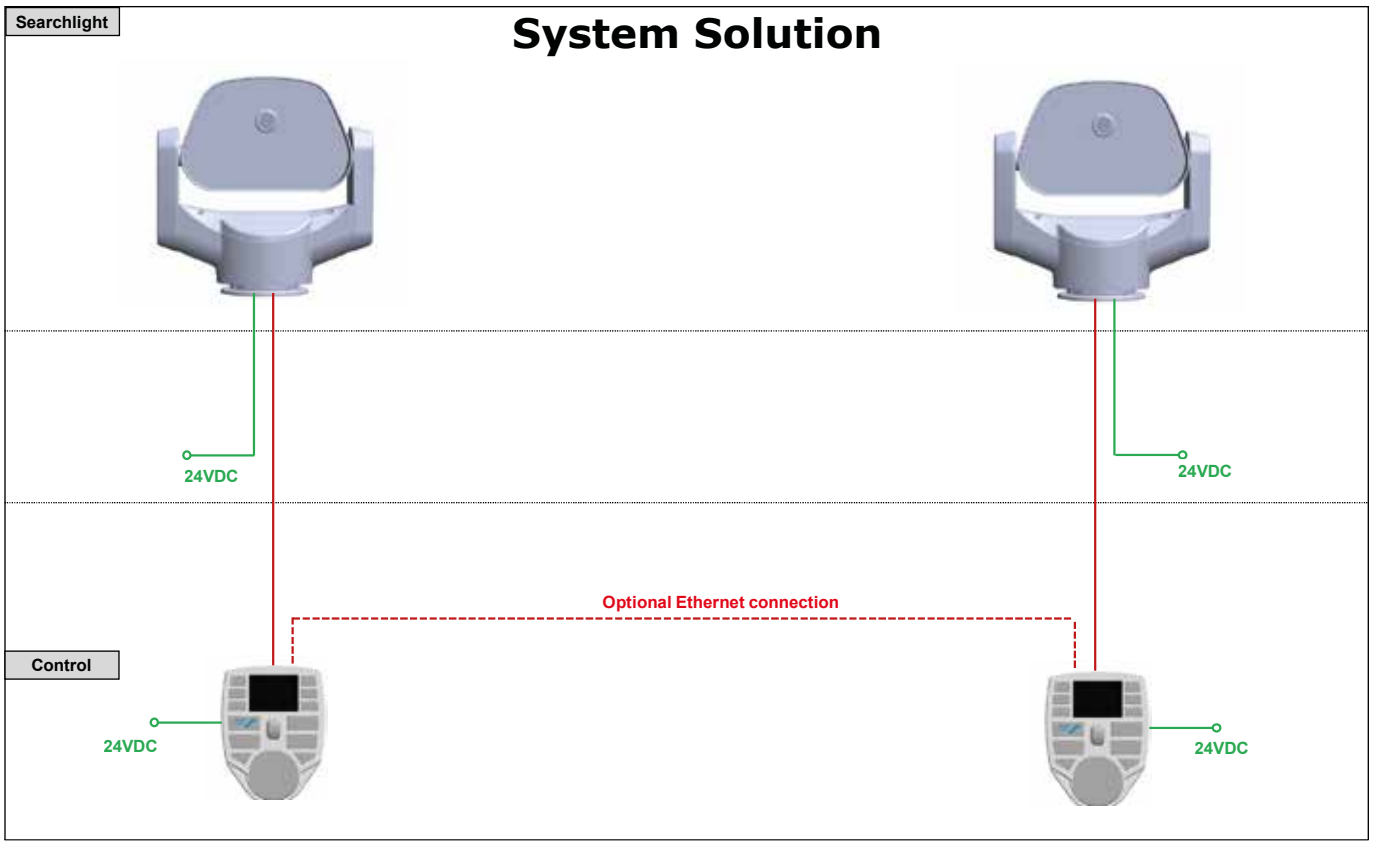


SL1 – Searchlight

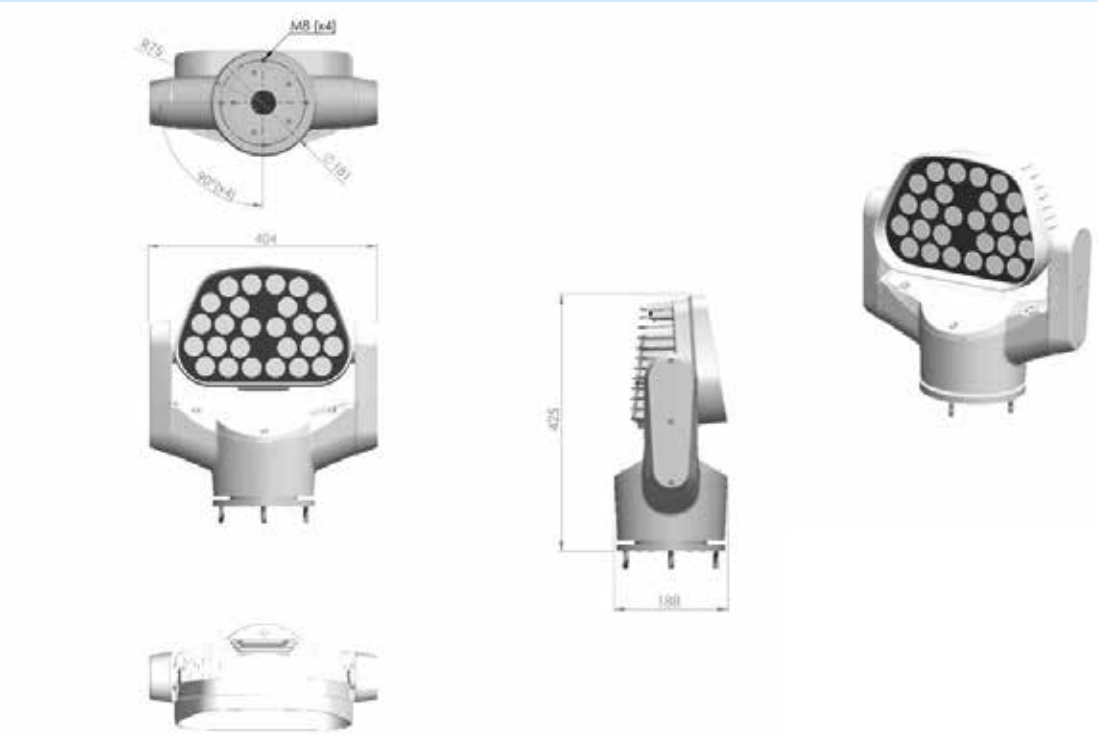
General specification

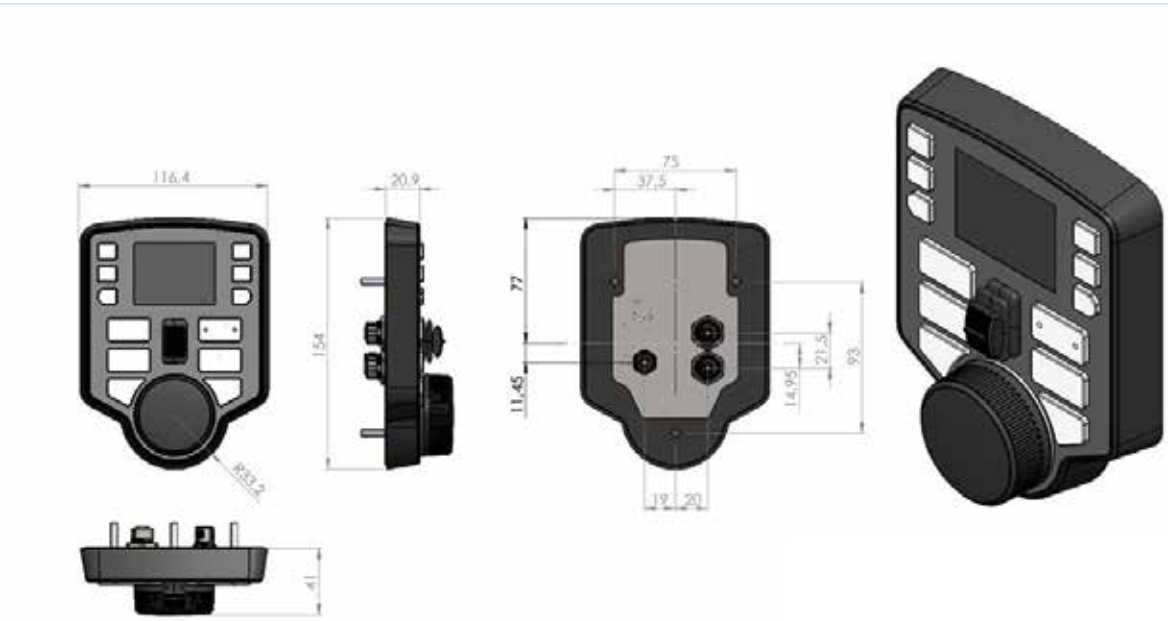
IP class	Searchlight IP66 Operator panel IP56
Operating temperature	Searchlight -40°C to +55°C* Operator panel -20°C to +55°C
EMC	Designed for IEC 60945
Vibration/shock	Designed for IEC 60945
Materials	- Searchlight body in seawater resistance aluminum, anodized and powder coated. - Searchlight mechanical hub in acidproof stainless steel. - Tempered front glass. - Operator panel made in PC-ABS.
Colours	- The searchlight body comes in 3 colour versions: - White RAL 9016 gloss level 70 - Matt Jet Black RAL 9005 gloss level 20 - Matt Light grey RAL 7035 gloss level 20
Electrical interface to vessel	- DC power 3 wires (+/-/earth) - Ethernet for operator control panel
Mechanical interface to vessel	4 x threaded rod M8 in the searchlight mechanical hub. Sealing between vessel and searchlight mechanical hub for galvanic insulation (and to avoid water ingress in wheelhouse).
Static size and weight	19 x 40 x 42 cm, 18 kg
Optional hardware	- Side entry connection adaptor (Q3 2019) - Stray light reduction shield (Q3 2019) - Integration Unity Hub (Q3 2019)

**Temperature monitored LED for increased lifetime. Reduced light effect at higher environmental temperatures*



SL1 – Searchlight







- Compact size
- Progressive design
- FiFi regulation compliance
- Excellent EMC characteristics
- Ruggadized construction
- Unlimited horizontal and vertical movement
- User friendly operator panel logic
- Powerful spotbeam for range
- Massive wide beam for near vessel operations
- Over 4.0 MCd total light intensity
- Optional integration and automation functions

5 YEAR WARRANTY

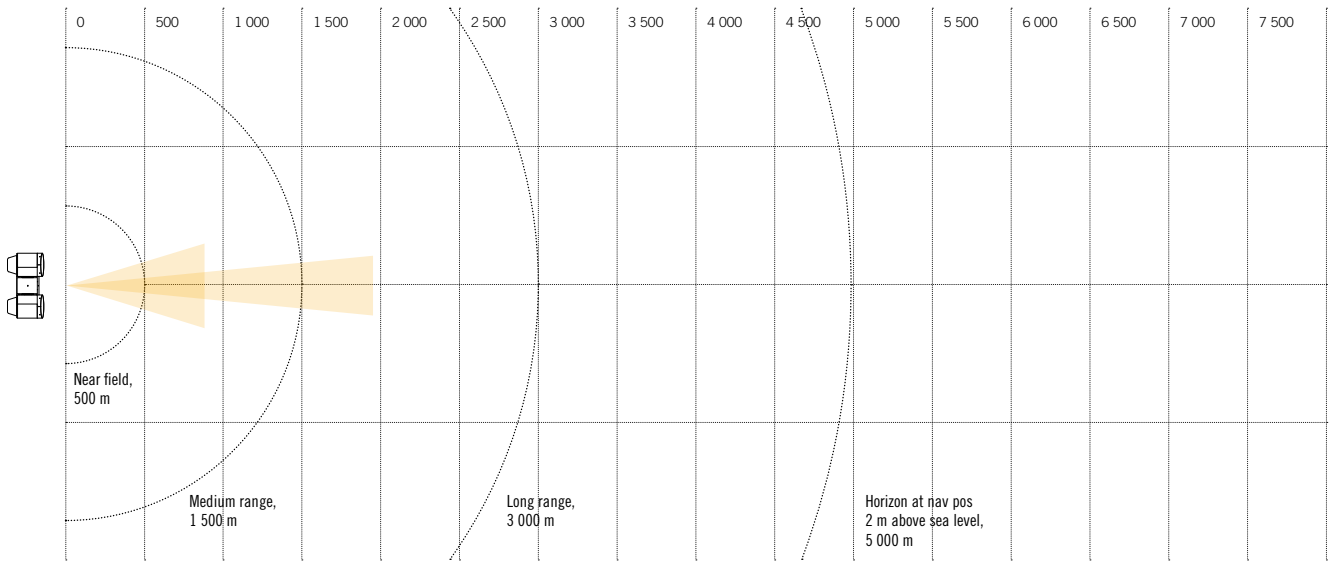


SL2
SEARCHLIGHT

SL2 – Searchlight

Output / performance	
Spot beam	3.5°/ 3 600 kCd / 1 900 m
Wide beam	15 °/ 840 kCd / 24 000 lm
Initial luminous flux	Over 60 000 lm
CRI	Min. 70
Color temp	6000
Input	
Mains power searchlight	24 VDC to electrical cabinet. Power consumption max 800 W (for AC mains power, an alternative electrical cabinet is available)
Mains power operator panel	9 – 28 VDC
Pan/Tilt	
Both axis	Proportional progressive joystick Unlimited movement in horizontal and vertical direction with slipring technology Movement max speed 33°/second
Functions	
Direct button functions	Horizontal and vertical movement Light on/off Beam angle spot/flood Dimming step by step
Standard menu functions	Up to 4 programmable fixed positions Sweep in horizontal direction Surveillance in horizontal and vertical direction Switch – to another searchlight in the network Syncronized control

Illumination presentation

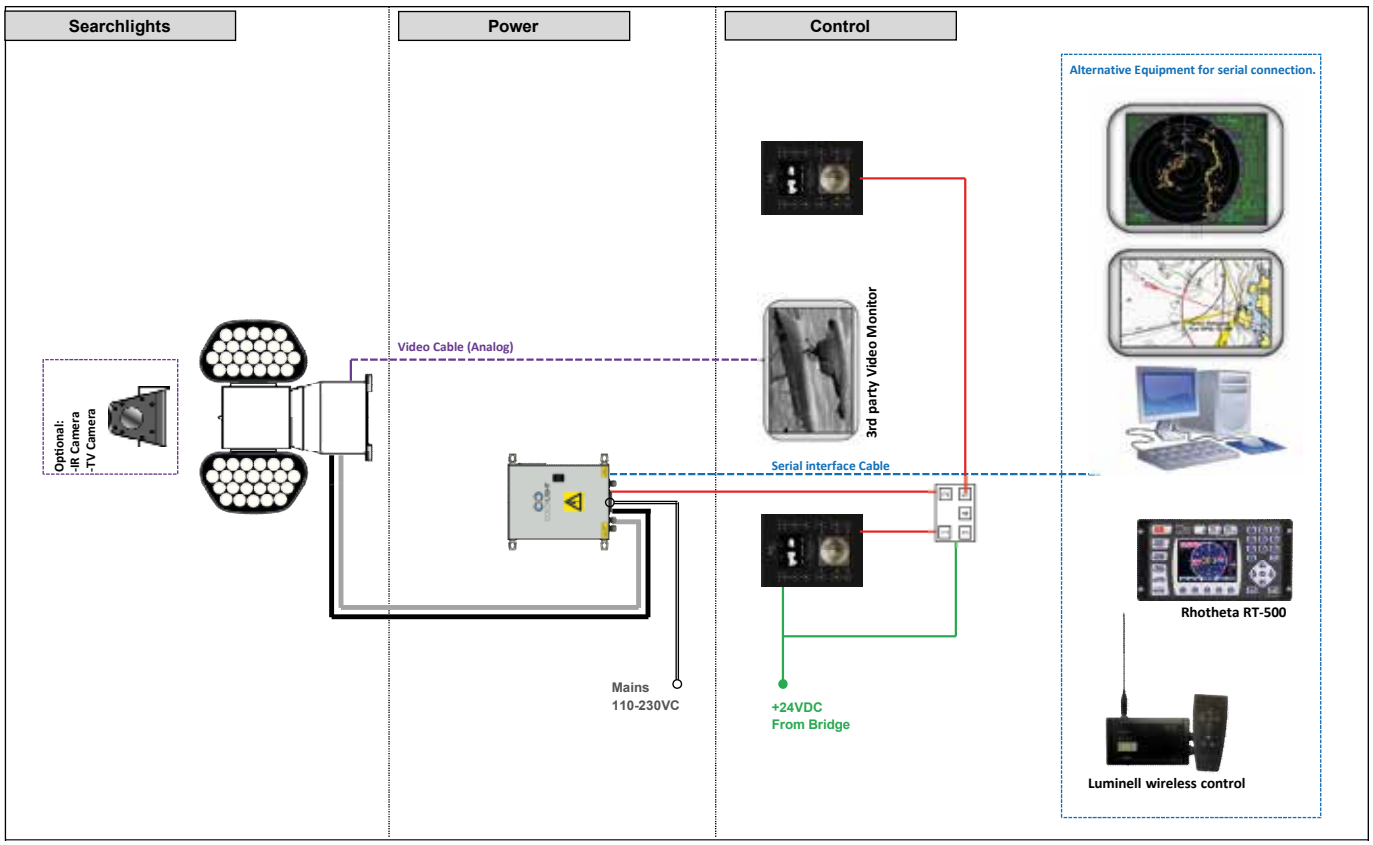


SL2 – Searchlight

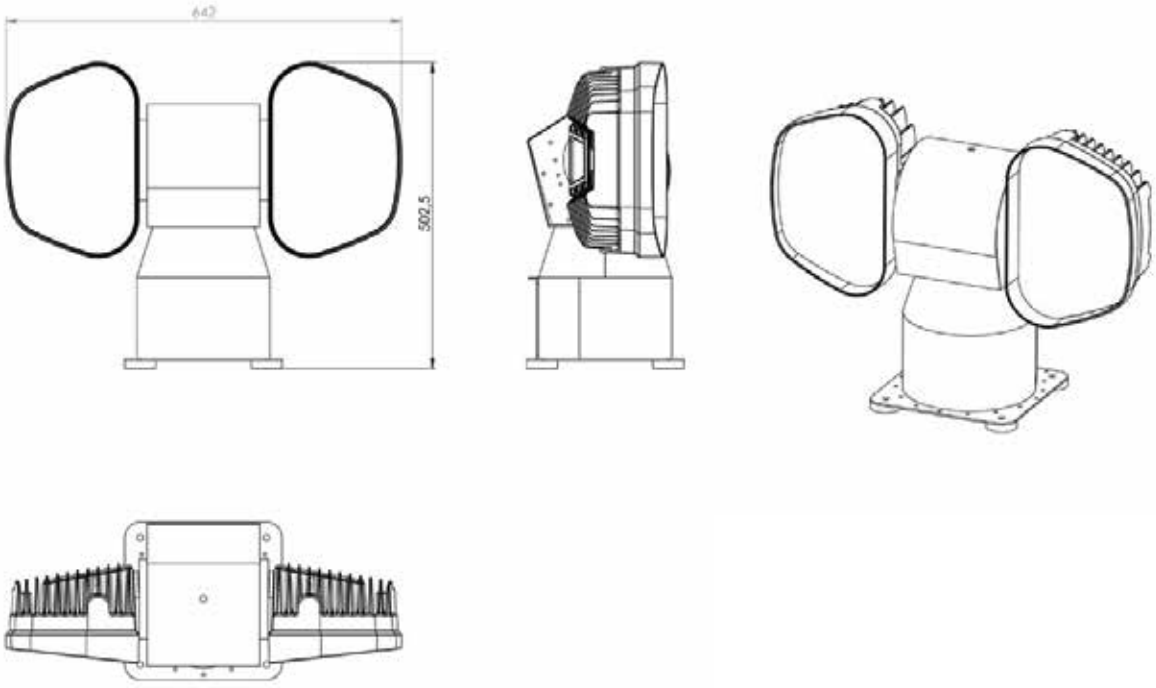
General specification

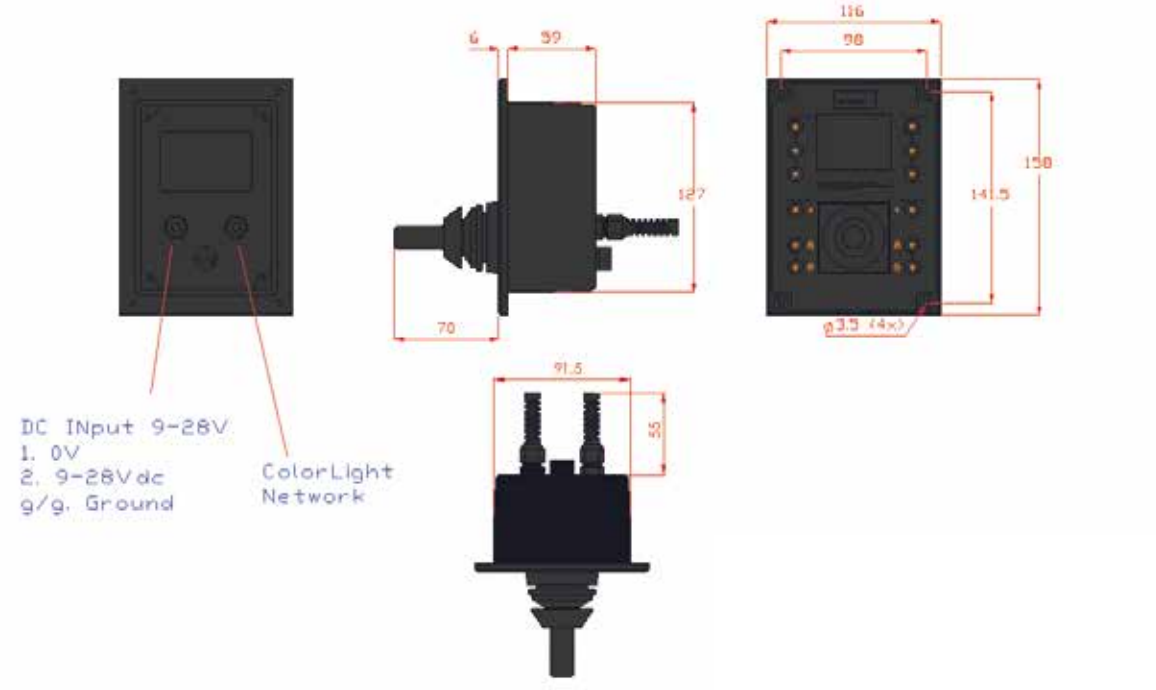
IP class	Searchlight IP66 Operator panel IP56
Operating temperature	Searchlight -40°C to +55°C* Operator panel -20°C to +55°C
EMC	Designed for IEC 60945
Vibration/shock	Designed for IEC 60945
Materials	- Searchlight body in acidproof stainless steel 1.4404, powder coated. - LED-module in seawater resistant aluminum, powder coated white. - Tempered front glass. - Operator panel made in ABS and anodized aluminum
Colours	- The searchlight comes in 3 optional colours: - White RAL 9016 gloss level 70 - Matt Jet Black RAL 9005 gloss level 20 - Matt Light grey RAL 7035 gloss level 20
Electrical interface to vessel	- DC or AC power cable as electrical block schematic. - Ethernet for operator control panel
Mechanical interface to vessel	4 x M10 bolts in the searchlight mechanical foot. Vibration dampers for protection and galvanic insulation.
Static size and weight	26x65x50 cm, weight 28 kg (excluding cabinet and operator panel) (see also drawing)

**Temperature monitored LED for increased lifetime. Reduced light effect at higher environmental temperatures*



SL2 – Searchlight





luminell®
Light Matters

SL2IR – LED searchlight with integrated thermal imager

Photo: Redningsselskapet

- Compact size
- Progressive design
- FiFi regulation compliance
- Excellent EMC characteristics
- Ruggadized construction
- Unlimited horizontal and vertical movement
- User friendly operator panel logic
- Powerful spotbeam for range
- Massive wide beam for near vessel operations
- Over 4.0 MCd total light intensity
- Optional integration and automation functions
- Ruggadized built in thermal imager

5 YEAR WARRANTY

* IR cam 2 year

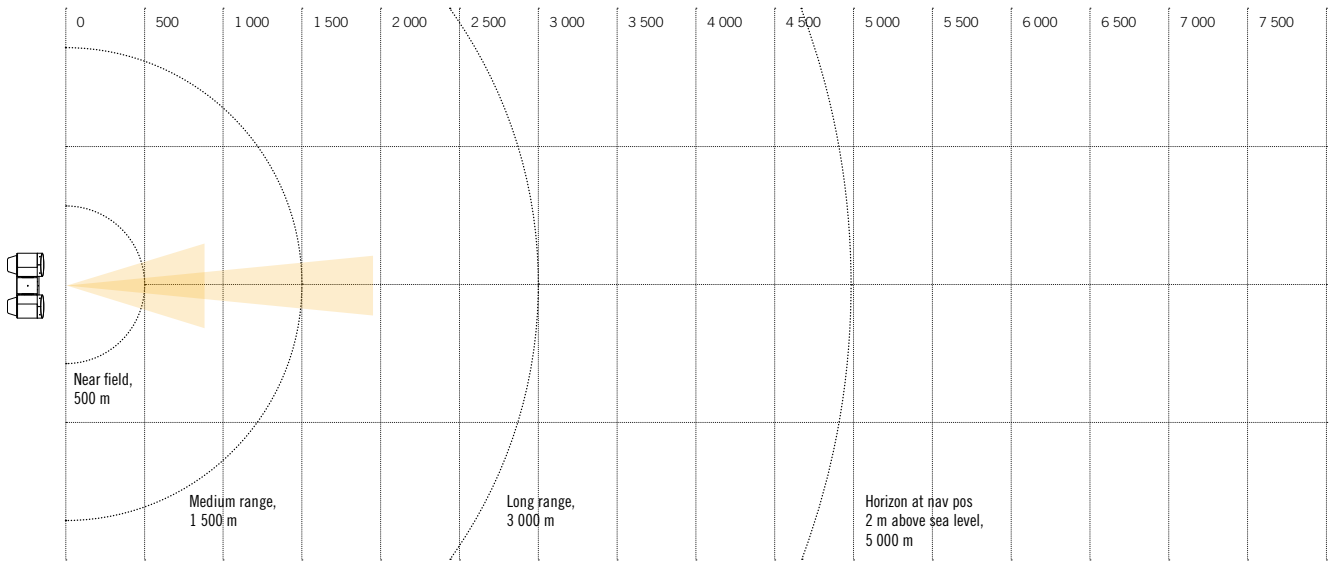


SL2IR
SEARCHLIGHT

SL2IR – Searchlight

Output / performance	
Spot beam	3.5°/ 3 600 kCd / 1 900 m
Wide beam	15 °/ 840 kCd / 24 000 lm
Initial luminous flux	Over 60 000 lm
CRI	Min. 70
Color temp	6000
Input	
Mains power searchlight	24 VDC to electrical cabinet. Power consumption max 800 W (for AC mains power, an alternative electrical cabinet is available)
Mains power operator panel	9 – 28 VDC
Pan/Tilt	
Both axis	Proportional progressive joystick Unlimited movement in horizontal and vertical direction with slipring technology Movement max speed 33°/second
Functions	
Direct button functions	Horizontal and vertical movement Light on/off Beam angle spot/flood Dimming step by step
Standard menu functions	Up to 4 programmable fixed positions Sweep in horizontal direction Surveillance in horizontal and vertical direction Switch – to another searchlight in the network Syncronized control

Illumination presentation



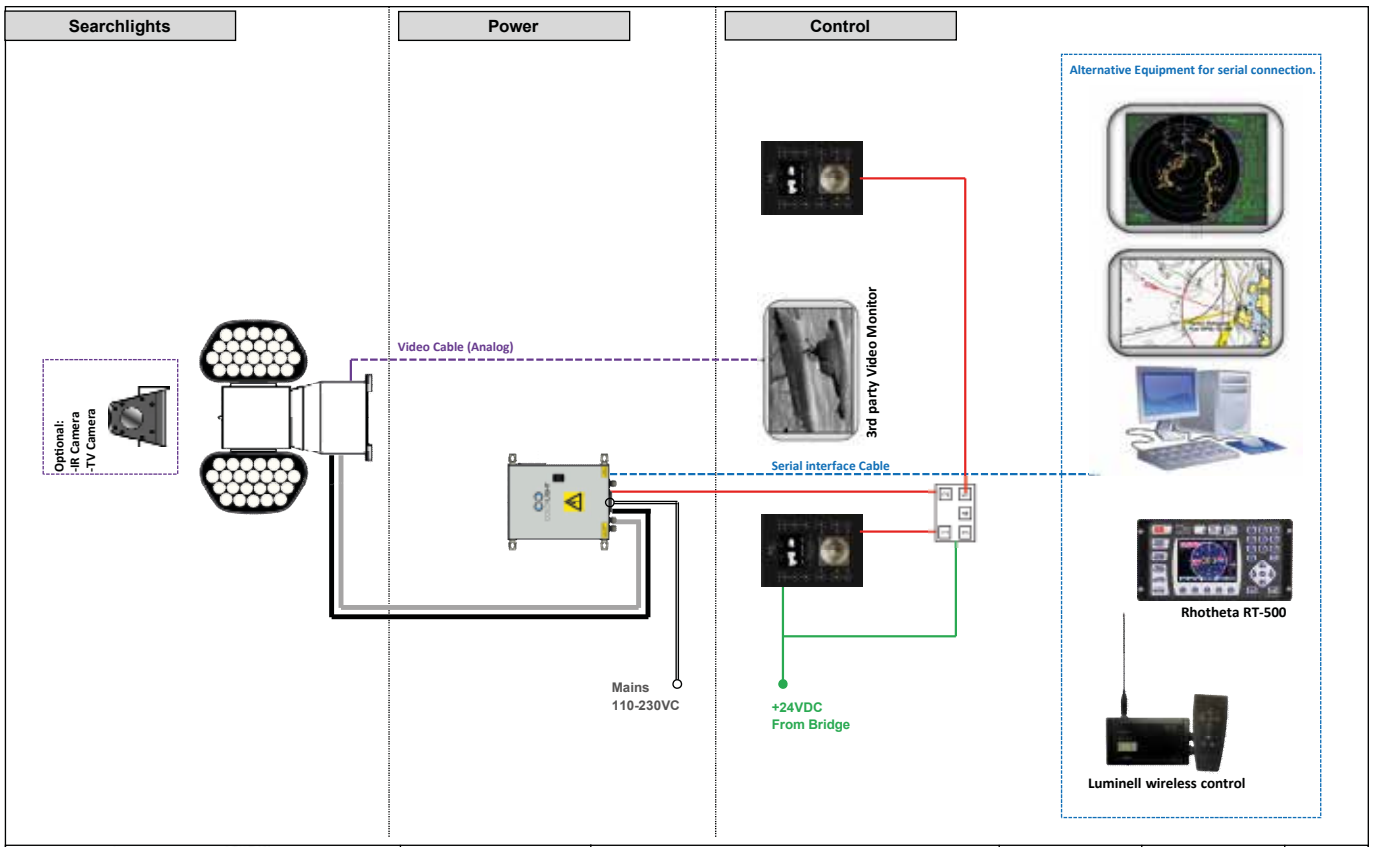
Performance of thermal imager		
IR STD 336 RES	FOW 13 x 10°	800 m Detection man, 2 000 m Detection small vessel
IR STD 640 RES	FOW 25 x 20°	900 m Detection man, 2 800 m Detection small vessel

SL2IR – Searchlight

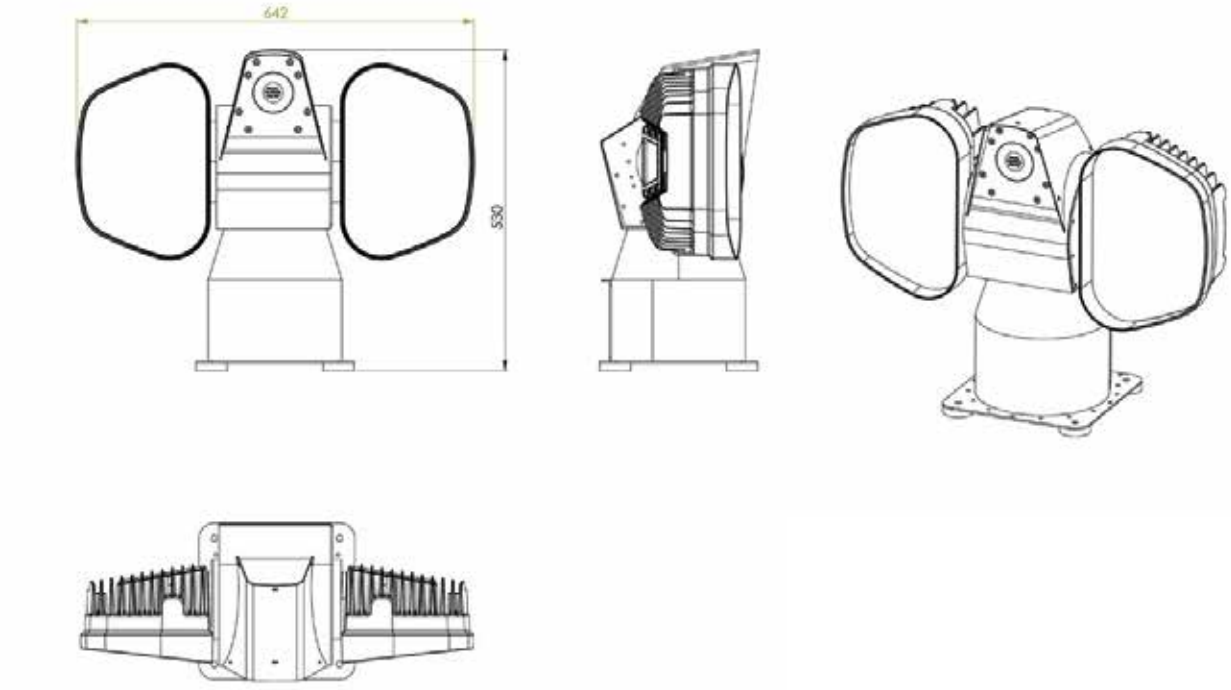
General specification

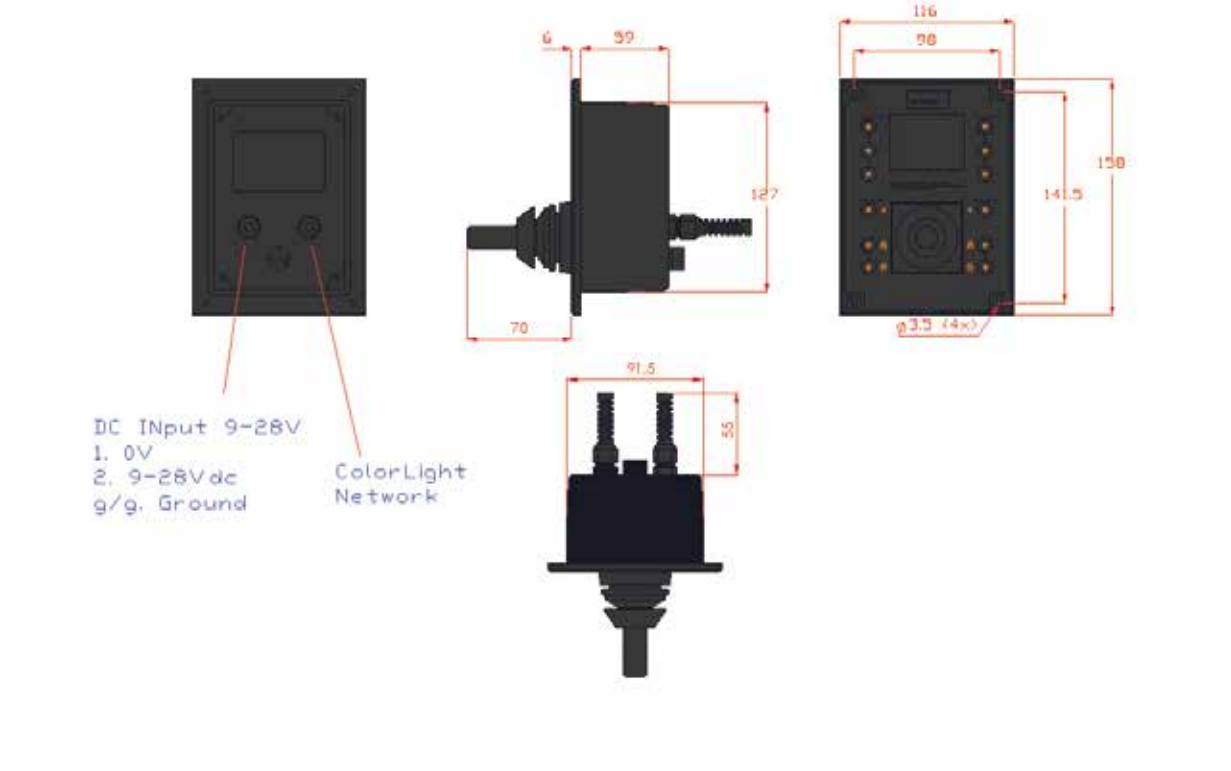
IP class	Searchlight IP66 Operator panel IP56
Operating temperature	Searchlight -40°C to +55°C* Operator panel -20°C to +55°C
EMC	Designed for IEC 60945
Vibration/shock	Designed for IEC 60945
Materials	- Searchlight body in acidproof stainless steel 1.4404, powder coated. - LED-module in seawater resistant aluminum, powder coated white. - Tempered front glass. - Operator panel made in ABS and anodized aluminum
Colours	- The searchlight comes in 3 optional colours: - White RAL 9016 gloss level 70 - Matt Jet Black RAL 9005 gloss level 20 - Matt Light grey RAL 7035 gloss level 20
Electrical interface to vessel	- DC or AC power cable as electrical block schematic. - Ethernet for operator control panel
Mechanical interface to vessel	4 x M10 bolts in the searchlight mechanical foot. Vibration dampers for protection and galvanic insulation.
Static size and weight	26x65x50 cm, weight 28 kg (excluding cabinet and operator panel) (see also drawing)

**Temperature monitored LED for increased lifetime. Reduced light effect at higher environmental temperatures*



SL2IR – Searchlight





luminell®
Light Matters

CL25
SEARCHLIGHT

Powerful and compact HID searchlight



'My own experience has been very good with the searchlight. It works great in the dark. But even in rain and fog, the results are excellent. The blacklight works great, too. We use the searchlight every night. It's dark here from 22:30 until 04:00 in the morning. We have to cope with a great many icebergs, 'bergy bits' and 'growlers.' The searchlight is definitely a necessary part of the equipment that we need here in order to operate under these conditions.'

Captain of the S/Y 'Rembrandt van Rijn.



A Searchlight – but also much more. Improving Light at Sea

APPLICATIONS:	Search and Rescue, Navigation support, Ice navigation support, Worklight, Security surveillance, Oil spill illumination (UV)
TYPE:	HID light source with adjustable beam width
INPUT POWER:	100-240 VAC, 50/60 Hz optional
PAN/TILT:	Motorised with endless rotation in horizontal and vertical direction
KEY FEATURES:	Low EMC, unlimited movement, daylight characteristics, maintenance free operation, combination UV/IR/ HMI/LED light possibility, long range illumination

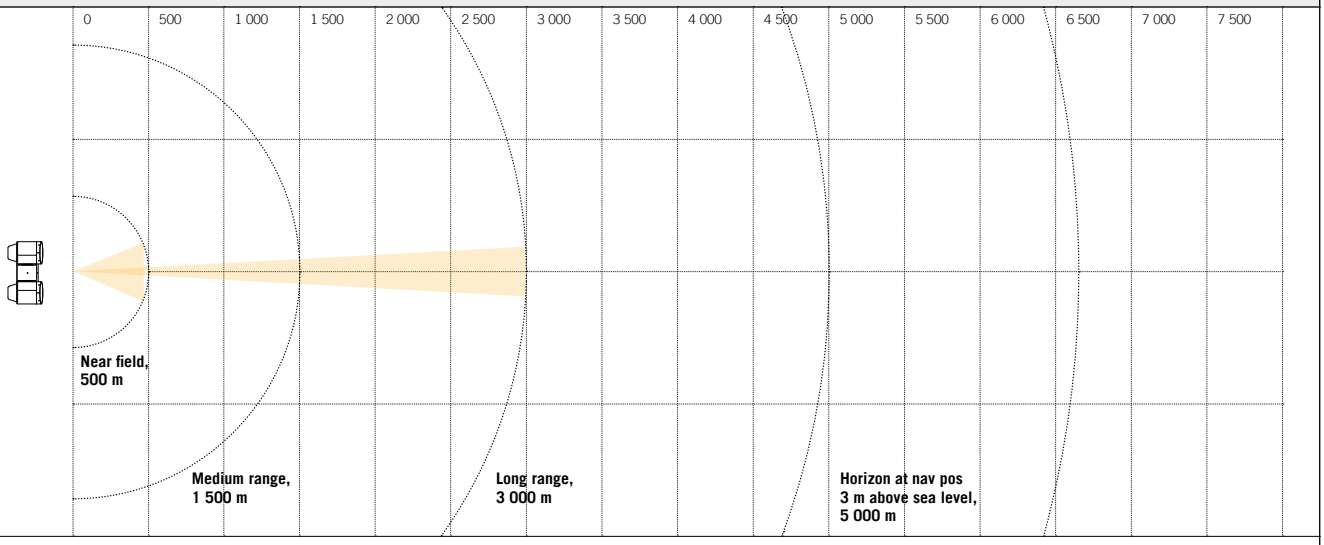
PART DESCRIPTION	PART NO	NOTE
Searchlight model CL25-11 400W/400W	CLS-25011	Also available in hanging version
Searchlight model CL25-12 400W/UV	CLS-25012	Also available in hanging version
There is a variety of other combinations on the CL25 platform, ask us for more information		

OUTPUT / PERFORMANCE	
Range with 1 lux at target	3 200 m
Light beam angle	Adjustable 4-20°
Color Rendering (CRI)	90 Ra minimum
Color Temperature (CCT)	6000 K
Lumen (lm)	66 000 lm
Candela (Cd)	10,7 MCd measured

KEY TECHNICAL INFORMATION
Stainless steel in critical structural parts
Powder coat white RAL 9016
IP66
Operating temp -40/+70
Bulb lifetime up to 1 000 hours

INPUT INFORMATION
Mains power 100-240 VAC, 50/60 Hz, 1070W, 4,7 A @ 230 VAC (max load)
CAN bus / signal cable 3x2x1 shielded, twisted pair (between searchlight and electrical cabinet)
5G1,5 shielded power cable (between searchlight and electrical cabinet)
For electrical control box and operator panel data, see separate information

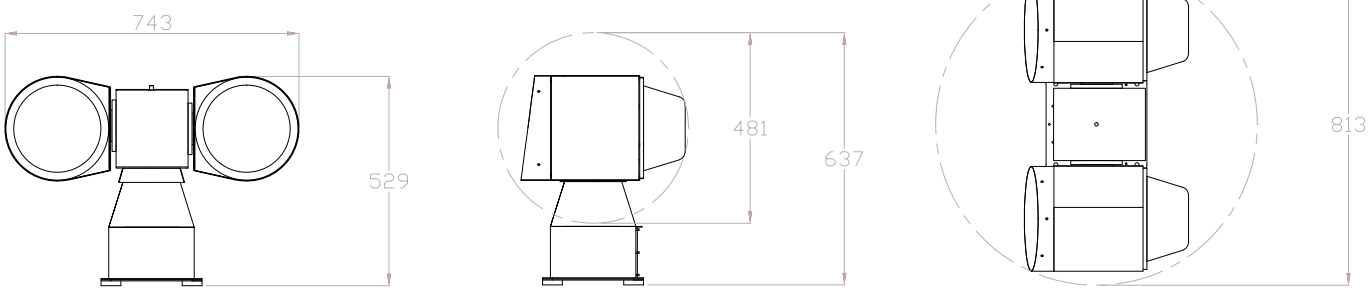
ILLUMINATION PRESENTATION



DISTANCE (M)	BEAM ANGLE	200	500	1000	2000	3000	5000	10000	MAX RANGE 1 LUX
SINGLE SPOT	4°	134 lux Ø 14 m	21 lux Ø 35 m	5,3 lux Ø 70 m	1,3 lux Ø 140 m				2 300 m
DUAL SPOT	4°	268 lux Ø 14 m	42 lux Ø 35 m	10 lux Ø 70 m	2,6 lux Ø 140 m	1,1 lux Ø 210 m			3 200 m
SINGLE WIDE	20°	7 lux Ø 70 m	1 lux Ø 176 m						

Graphics based on data measured in accredited test laboratory.
Lux-values are peak values, diam mentioned is spot-zone with min 50% intensity at the perifieri.

DIMENSIONAL OVERVIEW



Front view | Side view | Top view

luminell®
Light Matters

CL35
SEARCHLIGHT

Powerful HID searchlight







A Searchlight – but also much more. Improving Light at Sea

APPLICATIONS:	Search and Rescue, Navigation support, Ice navigation support, Worklight, Security surveillance, Oil spill illumination (UV)
TYPE:	HID light source with adjustable beam width
INPUT POWER:	100-240 VAC, 50/60 Hz optional
PAN/TILT:	Motorised with endless rotation in horizontal and vertical direction
KEY FEATURES:	Low EMC, unlimited movement, daylight characteristics, maintenance free operation, combination UV/IR/ HMI/LED light possibility, long range illumination

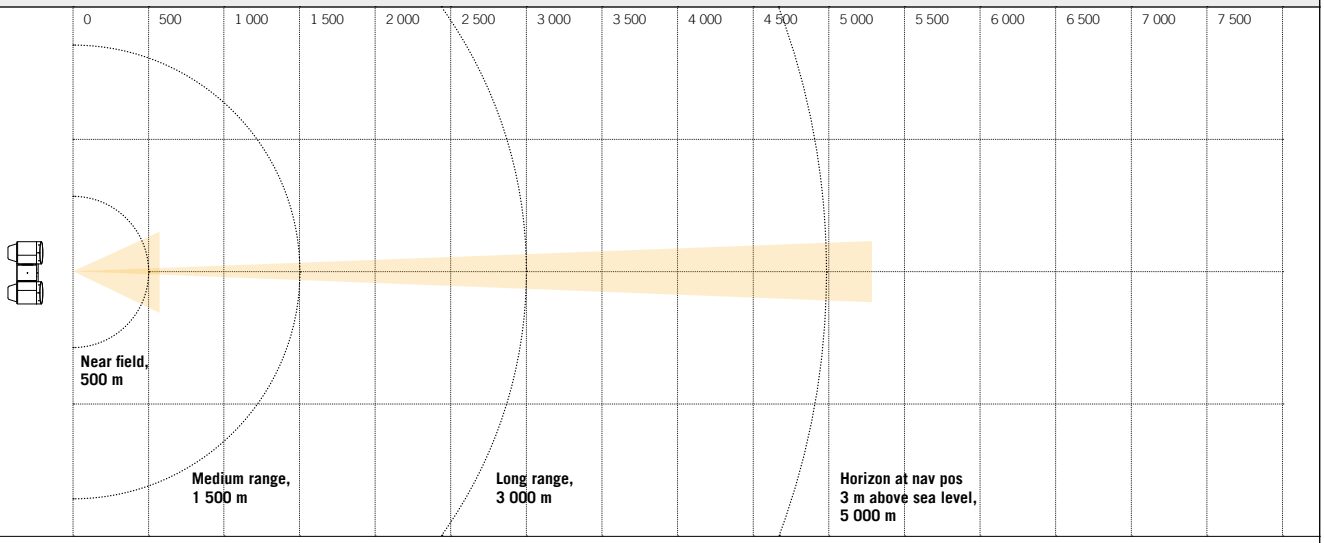
PART DESCRIPTION	PART NO	NOTE
Searchlight model CL35-11 575W/575W	CLS-35011	Also available in hanging version
Searchlight model CL35-12 575W/UV	CLS-35012	Also available in hanging version
There is a variety of other combinations on the CL35 platform, ask us for more information		

OUTPUT / PERFORMANCE	
Range with 1 lux at target	5 300 m
Light beam angle	Adjustable 3-20°
Color Rendering (CRI)	90 Ra minimum
Color Temperature (CCT)	6000 K
Lumen (lm)	98 000 lm
Candela (Cd)	28,7 MCd measured

KEY TECHNICAL INFORMATION
Stainless steel in critical structural parts
Powder coat white RAL 9016
IP66
Operating temp -40/+70
Bulb lifetime up to 1 000 hours

INPUT INFORMATION
Mains power 100-240 VAC, 50/60 Hz
CAN bus / signal cable 4x2x1 shielded, twisted pair (between searchlight and electrical cabinet)
5G2.5 shielded power cable (between searchlight and electrical cabinet)
For electrical control box and operator panel data, see separate information

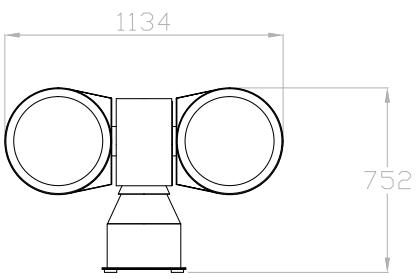
ILLUMINATION PRESENTATION



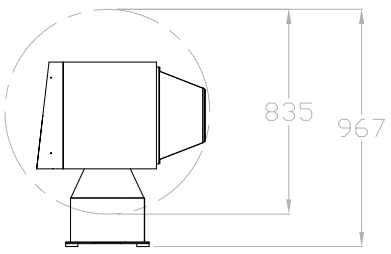
DISTANCE (M)	BEAM ANGLE	200	500	1000	2000	3000	5000	10000	MAX RANGE 1 LUX
SINGLE SPOT	3°	360 lux Ø 10 m	57 lux Ø 26 m	14 lux Ø 52 m	3,5 lux Ø 105 m	1,6 lux Ø 157 m	0,6 lux Ø 260 m		3 750 m
DUAL SPOT	3°	720 lux Ø 10 m	114 lux Ø 26 m	28 lux Ø 52 m	7 lux Ø 105 m	3,2 lux Ø 157 m	1,2 lux Ø 260 m		5 300 m
SINGLE WIDE	20°	12 lux Ø 70 m	2 lux Ø 176 m						

Graphics based on data measured in accredited test laboratory.
Lux-values are peak values, diam mentioned is spot-zone with min 50% intensity at the perifieri.

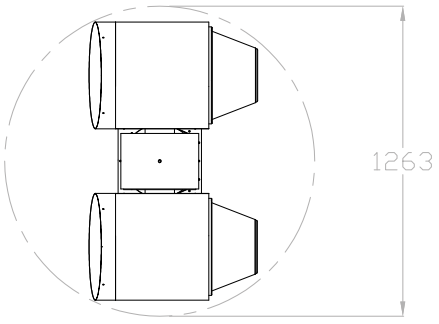
DIMENSIONAL OVERVIEW



Front view



Side view



Top view

luminell®
Light Matters

CL38
SEARCHLIGHT

Our most powerful HID searchlight







A Searchlight – but also much more. Improving Light at Sea

APPLICATIONS:	Search and Rescue, Navigation support, Ice navigation support, Worklight, Security surveillance, Oil spill illumination (UV)
TYPE:	HID light source with adjustable beam width
INPUT POWER:	100-240 VAC, 50/60 Hz optional
PAN/TILT:	Motorised with endless rotation in horizontal and vertical direction
KEY FEATURES:	Low EMC, unlimited movement, daylight characteristics, maintenance free operation, combination UV/IR/ HMI/LED light possibility, long range illumination

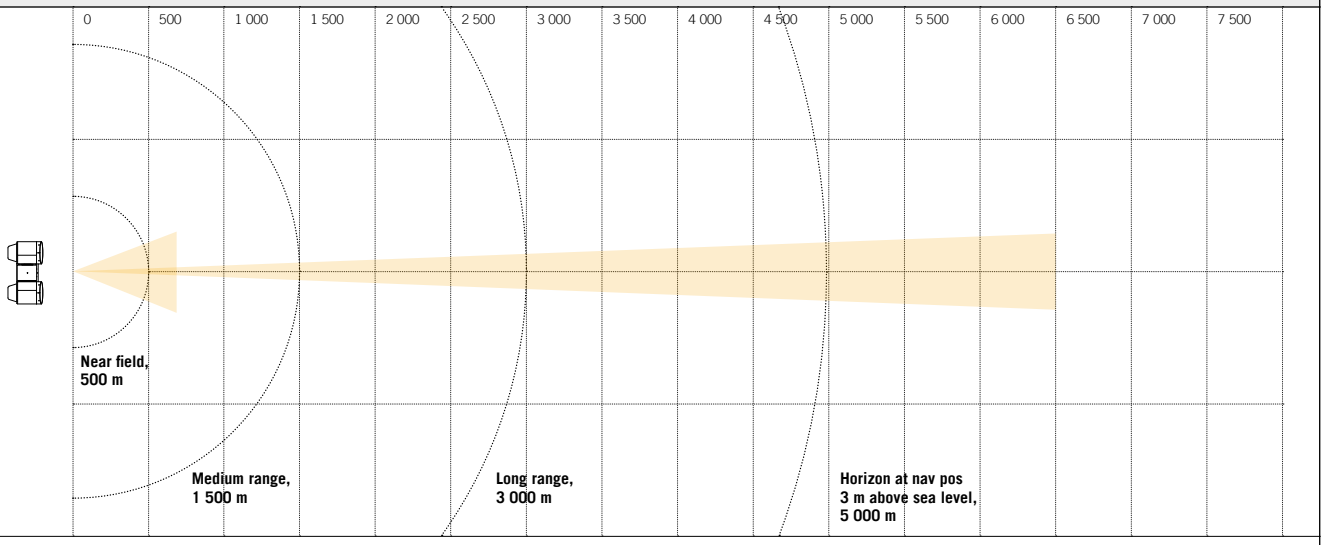
PART DESCRIPTION	PART NO	NOTE
Searchlight model CL38-11 800W/800W	CLS-38011	Also available in hanging version
Searchlight model CL38-12 800W/UV	CLS-38012	Also available in hanging version
There is a variety of other combinations on the CL38 platform, ask us for more information		

OUTPUT / PERFORMANCE	
Range with 1 lux at target	6 100 m
Light beam angle	Adjustable 3-20°
Color Rendering (CRI)	90 Ra minimum
Color Temperature (CCT)	6000 K
Lumen (lm)	130 000 lm
Candela (Cd)	38,1 MCd measured

KEY TECHNICAL INFORMATION
Stainless steel in critical structural parts
Powder coat white RAL 9016
IP66
Operating temp -40/+70
Bulb lifetime up to 1 000 hours

INPUT INFORMATION
Mains power 100-240 VAC, 50/60 Hz
CAN bus / signal cable 4x2x1 shielded, twisted pair (between searchlight and electrical cabinet)
5G2.5 shielded power cable (between searchlight and electrical cabinet)
For electrical control box and operator panel data, see separate information

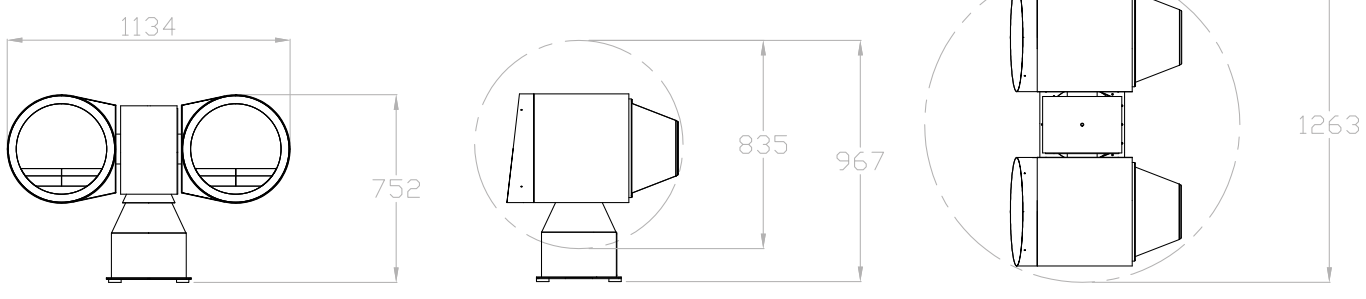
ILLUMINATION PRESENTATION



DISTANCE (M)	BEAM ANGLE	200	500	1000	2000	3000	5000	10000	MAX RANGE 1 LUX
SINGLE SPOT	3°	476 lux Ø 10 m	76 lux Ø 26 m	19 lux Ø 52 m	5 lux Ø 105 m	2 lux Ø 157 m	0,75 lux Ø 262 m		4 350 m
DUAL SPOT	3°	952 lux Ø 10 m	152 lux Ø 26 m	3,8 lux Ø 52 m	10 lux Ø 105 m	4 lux Ø 157 m	1,5 lux Ø 262 m	0,4 lux Ø 524	6 100 m
SINGLE WIDE	20°	16 lux Ø 71 m	2,6 lux Ø 176 m	0,6 lux Ø 350 m					

Graphics based on data measured in accredited test laboratory.
Lux-values are peak values, diam mentioned is spot-zone with min 50% intensity at the perifieri.

DIMENSIONAL OVERVIEW



Front view | Side view | Top view

luminell®
Light Matters

CL25IR

SEARCHLIGHT

Powerful and compact HID searchlight with integrated thermal camera







A Searchlight – but also much more. Improving Light at Sea

APPLICATIONS:	Search and Rescue, Navigation support, Ice navigation support, Worklight, Security surveillance, Oil spill illumination (UV)
TYPE:	HID light source with adjustable beam width as well as integrated thermal imaging system.
INPUT POWER:	100-240 VAC, 50/60 Hz
PAN/TILT:	Motorised with endless rotation in horizontal and vertical direction
KEY FEATURES:	Low EMC, unlimited movement, daylight characteristics, maintenance free operation, combination UV/IR/ HMI/LED light possibility.

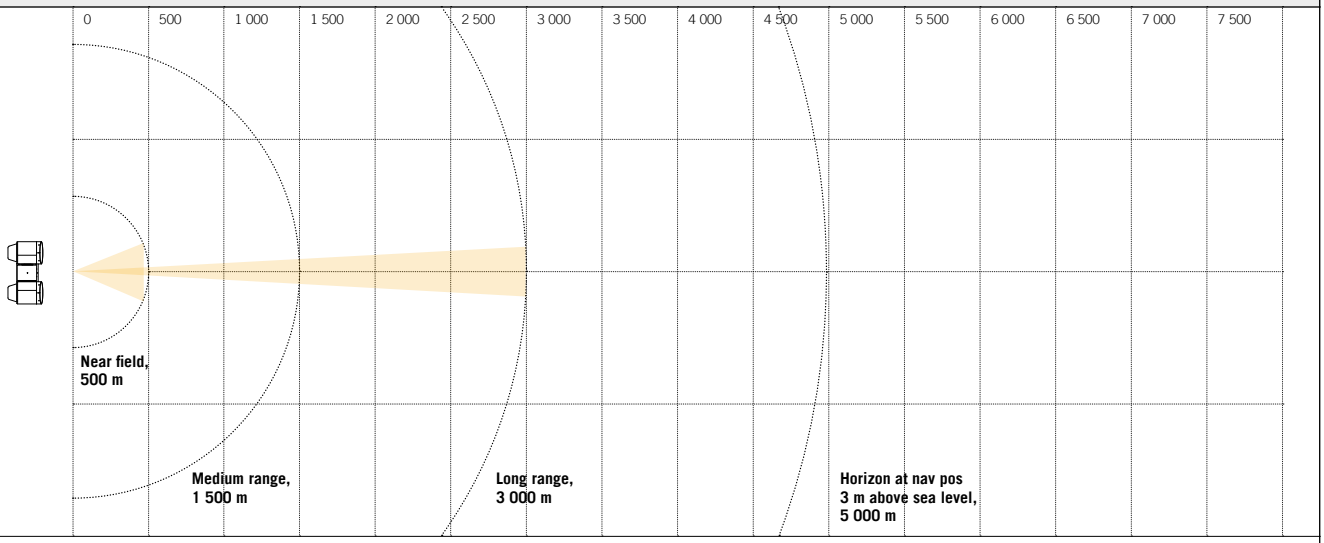
PART DESCRIPTION	PART NO	NOTE
Searchlight model CLIR25-11 HID 400W/400W with IR cam, 336 res, 25 mm lens	CLS-25026	Also available in hanging version
Camera core upgrade to 640 res, 25 mm lens	CLN0530	
There is a variety of other combinations on the CLIR25 platform, ask us for more information		

OUTPUT / PERFORMANCE	
Range with 1 lux at target	3 200 m
Light beam angle	Adjustable beam 4-20°
Color Rendering (CRI)	90 minimum
Color Temperature (CCT)	6000 K
Lumen (lm)	66 000 lm
Candela (Cd)	10,7 MCd measured

KEY TECHNICAL INFORMATION
Stainless steel in critical structural parts
Powder coat white RAL 9016
IP66
Operating temp -40/+70
Bulb lifetime up to 1 000 hours
For IR cam details, see separate pages in this catalogue.

INPUT INFORMATION
Mains power 100-240 VAC, 50/60
CAN bus / signal cable 4x2x1 shielded, twisted pair (between searchlight and electrical cabinet)
5G1.5 shielded power cable (between searchlight and electrical cabinet)
For electrical control box and operator panel data, see separate information

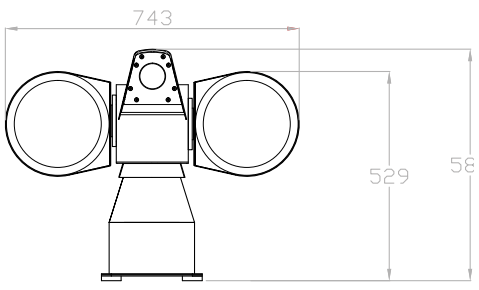
ILLUMINATION PRESENTATION



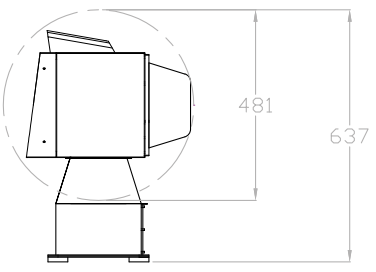
DISTANCE (M)	BEAM ANGLE	200	500	1000	2000	3000	5000	10000	MAX RANGE 1 LUX
DUAL SPOT	4°	268 lux Ø 14 m	42 lux Ø 35 m	10 lu Ø 70 m	2,6lux Ø 140 m				3 200 m
IR STD 336 RES	FOW 13x10°	800 m Detection man 2 000 m Detection small vessel							
IR STD 640 RES	FOW 25x20°	900 m Detection man 2 800 m Detection small vessel							

Graphics based on data measured in accredited test laboratory.
Lux-values are peak values, diam mentioned is spot-zone with min 50% intensity at the perifieri.

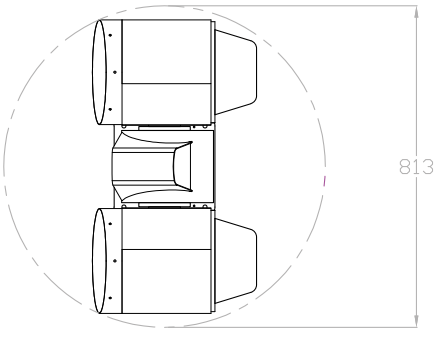
DIMENSIONAL OVERVIEW



Front view



Side view



Top view

luminell®
Light Matters

CL35IR

SEARCHLIGHT

Powerful HID searchlight with integrated thermal camera







A Searchlight – but also much more. Improving Light at Sea

APPLICATIONS:	Search and Rescue, Navigation support, Ice navigation support, Worklight, Security surveillance, Oil spill illumination (UV)
TYPE:	HID light source with adjustable beam width as well as integrated thermal imaging system.
INPUT POWER:	100-240 VAC, 50/60 Hz
PAN/TILT:	Motorised with endless rotation in horizontal and vertical direction
KEY FEATURES:	Low EMC, unlimited movement, daylight characteristics, maintenance free operation, combination UV/IR/ HMI/LED light possibility.

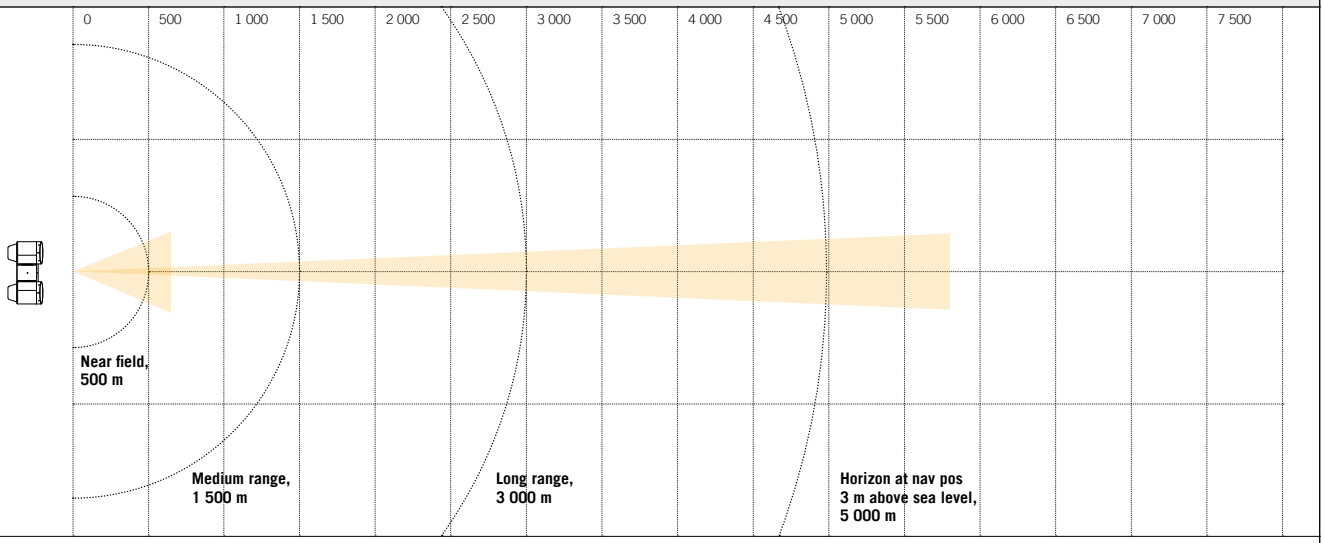
PART DESCRIPTION	PART NO	NOTE
Searchlight model CLIR35-11 HID 575W/ 575W with IR cam, 336 res, 25 mm lens	CLS-35026	Also available in hanging version
Camera core upgrade to 640 res, 25 mm lens	CLN0530	
There is a variety of other combinations on the CLIR35 platform, ask us for more information		

OUTPUT / PERFORMANCE	
Range with 1 lux at target	5 300 m
Light beam angle	Adjustable beam 3-20°
Color Rendering (CRI)	90 minimum
Color Temperature (CCT)	6000 K
Lumen (lm)	98000 lm
Candela (Cd)	28,7 MCd measured

KEY TECHNICAL INFORMATION
Stainless steel in critical structural parts
Powder coat white RAL 9016
IP66
Operating temp -40/+70
Bulb lifetime up to 1 000 hours
For IR cam details, see separate pages in this catalogue.

INPUT INFORMATION
Mains power 100-240 VAC, 50/60
CAN bus / signal cable 4x2x1 shielded, twisted pair (between searchlight and electrical cabinet)
5G1.5 shielded power cable (between searchlight and electrical cabinet)
For electrical control box and operator panel data, see separate information

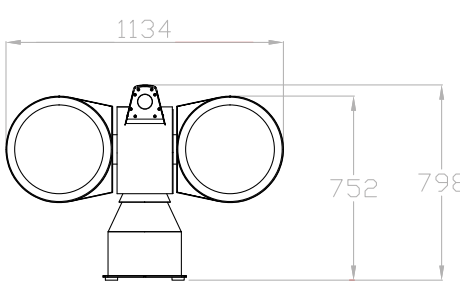
ILLUMINATION PRESENTATION



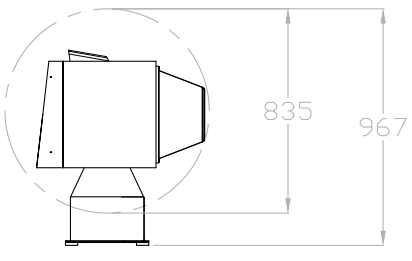
DISTANCE (M)	BEAM ANGLE	200	500	1000	2000	3000	5000	10000	MAX RANGE 1 LUX
DUAL SPOT	3°	720 lux Ø 10 m	114 lux Ø 26 m	28 lux Ø 52 m	7 lux Ø 105 m	3,2 lux Ø 157 m	1,2 lux Ø 260 m		5 300 m
IR STD 336 RES	FOW 13x10°	800 m Detection man 2 000 m Detection small vessel							
IR STD 640 RES	FOW 25x20°	900 m Detection man 2 800 m Detection small vessel							

Graphics based on data measured in accredited test laboratory.
Lux-values are peak values, diam mentioned is spot-zone with min 50% intensity at the perifieri.

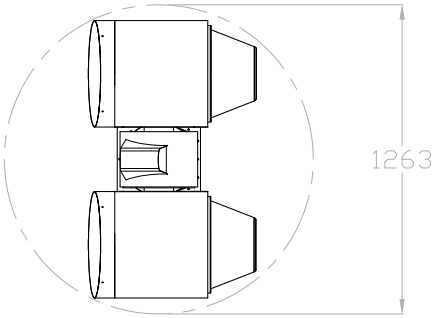
DIMENSIONAL OVERVIEW



Front view



Side view



Top view

luminell®
Light Matters

CL38IR

SEARCHLIGHT

Our most powerful HID searchlight with integrated thermal camera







A Searchlight – but also much more. Improving Light at Sea

APPLICATIONS:	Search and Rescue, Navigation support, Ice navigation support, Worklight, Security surveillance, Oil spill illumination (UV)
TYPE:	HID light source with adjustable beam width as well as integrated thermal imaging system.
INPUT POWER:	100-240 VAC, 50/60 Hz
PAN/TILT:	Motorised with endless rotation in horizontal and vertical direction
KEY FEATURES:	Low EMC, unlimited movement, daylight characteristics, maintenance free operation, combination UV/IR/ HMI/LED light possibility.

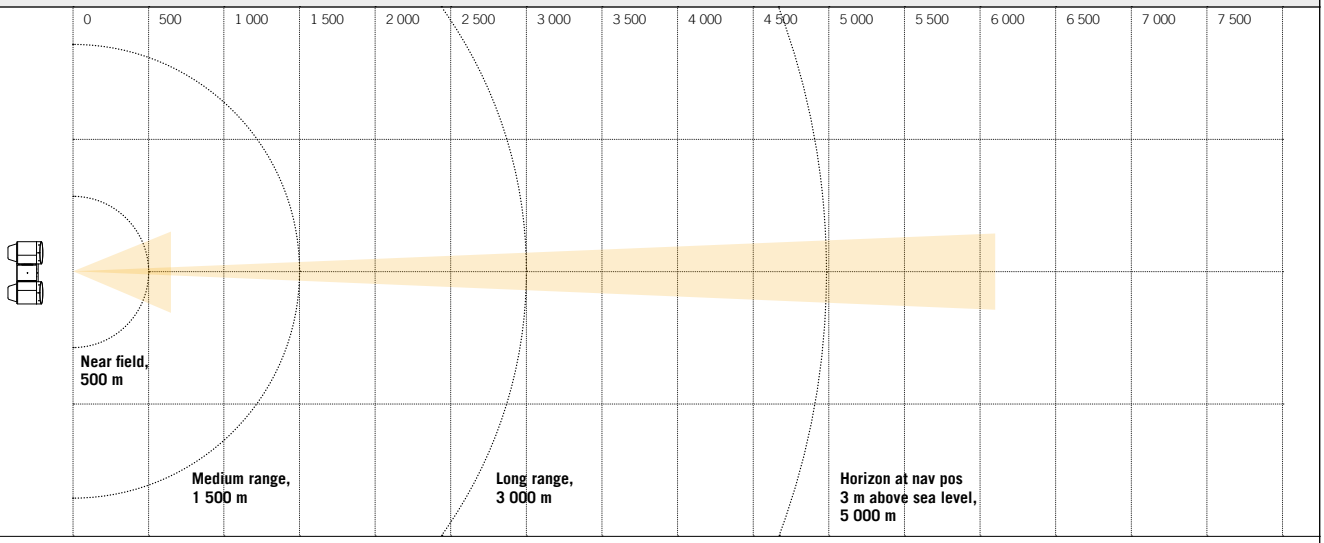
PART DESCRIPTION	PART NO	NOTE
Searchlight model CLIR38-11 HID 800W/ 800W with IR cam, 336 res, 25 mm lens	CLS-38026	Also available in hanging version
Camera core upgrade to 640 res, 25 mm lens	CLN0530	
There is a variety of other combinations on the CLIR38 platform, ask us for more information		

OUTPUT / PERFORMANCE	
Range with 1 lux at target	6 100 m
Light beam angle	Adjustable beam 3-20°
Color Rendering (CRI)	90 minimum
Color Temperature (CCT)	6000 K
Lumen (lm)	130 000 lm
Candela (Cd)	38,1 MCd measured

KEY TECHNICAL INFORMATION
Stainless steel in critical structural parts
Powder coat white RAL 9016
IP66
Operating temp -40/+70
Bulb lifetime up to 1 000 hours
For IR cam details, see separate pages in this catalogue.

INPUT INFORMATION
Mains power 100-240 VAC, 50/60
CAN bus / signal cable 4x2x1 shielded, twisted pair (between searchlight and electrical cabinet)
5G2.5 shielded power cable (between searchlight and electrical cabinet)
For electrical control box and operator panel data, see separate information

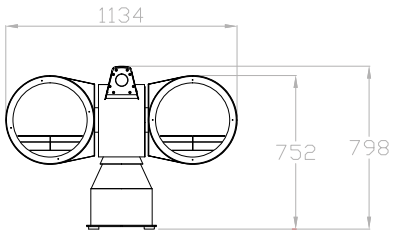
ILLUMINATION PRESENTATION



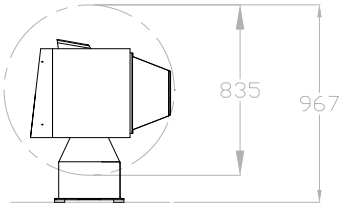
DISTANCE (M)	BEAM ANGLE	200	500	1000	2000	3000	5000	10000	MAX RANGE 1 LUX
DUAL SPOT	3,0	952 lux Ø 10 m	152 lux Ø 26 m	3,8 lux Ø 52 m	10 lux Ø 105 m	4 lux Ø 157 m	1,5 lux Ø 262 m	0,4 lux Ø 524	6 100 m
IR STD 336 RES	FOW 13x10°	800 m Detection man 2 000 m Detection small vessel							
IR STD 640 RES	FOW 25x20°	900 m Detection man 2 800 m Detection small vessel							

Graphics based on data measured in accredited test laboratory.
Lux-values are peak values, diam mentioned is spot-zone with min 50% intensity at the perifieri.

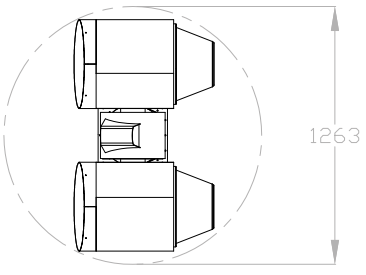
DIMENSIONAL OVERVIEW



Front view



Side view



Top view

CL series system overview

SEARCHLIGHT

Our searchlight system can be set up with different levels of complexity - from a Basic solution to a more advanced control integration. The most important factor is that you as a customer recieve the right solution for your needs, Improving Light at Sea. One important thing to note is that our systems are expandable - easy to upgrade to add further solutions and functionality.

The Basic Solution

The Luminell Basic Solution setup contains a searchlight, electronic control box and an operator panel; an effective and straight forward setup. Place the searchlight in a position which allows the light beam to reach as much area as possible around your vessel. Next place the electronic control box in an appropriate environment, and finally place the operator panel where it suits the operator best.

We also have a software upgrade available, Package 2 (Sweep, fixed positions, surveillance) increasing automatic operations and simplifying your work.







Customized control solutions

We have developed more simplified, one button control function, which can be driven by specific customer demands.

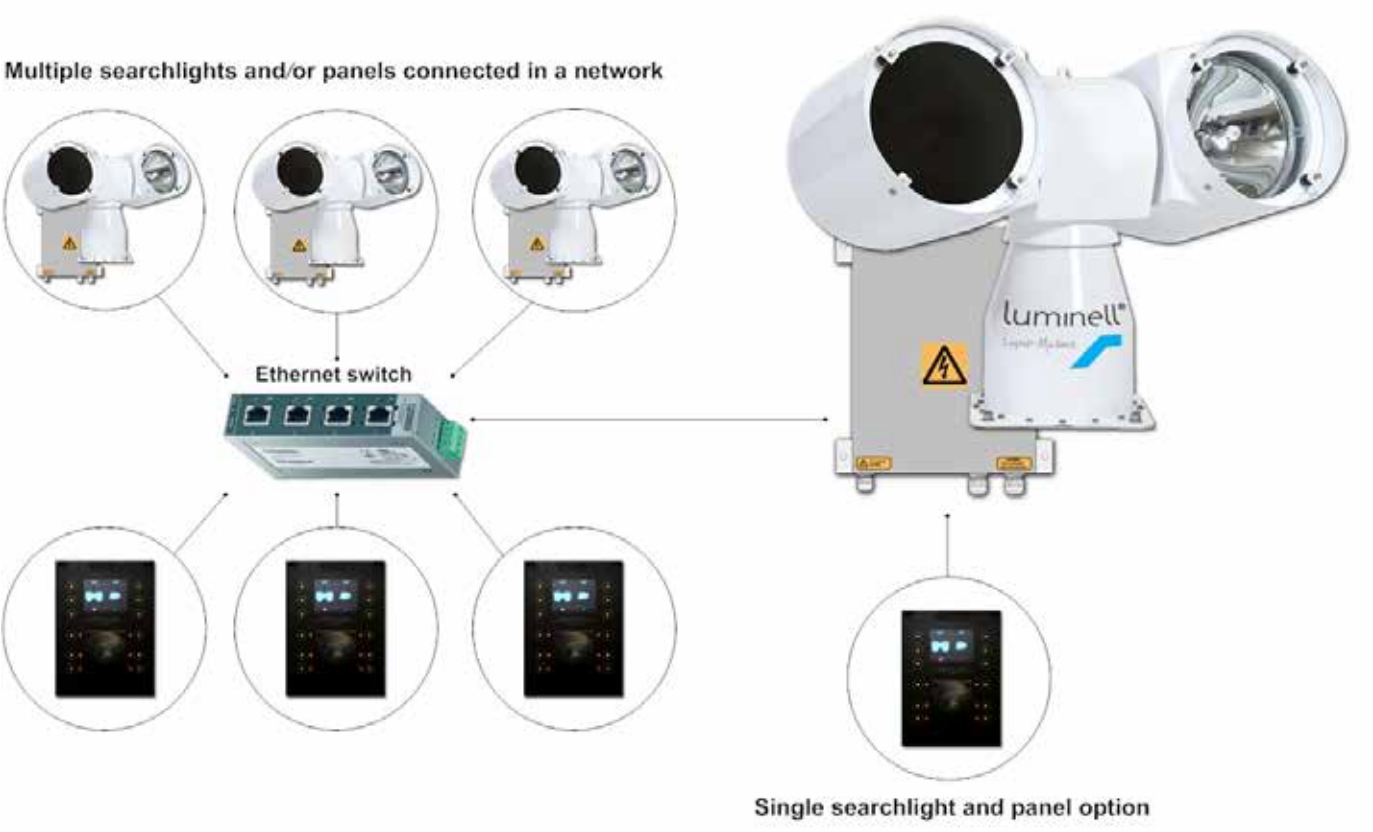
Helideck control button – press the allocated button and the searchlight lights up and goes to a pre-set position.
Press the button again – the searchlight lights off and goes back to a park position.

Another example is the solution RHOTHETA Radio Detection Finder control integration.

Press the allocated button, the searchlight lights up and follows the NMEA-output of the RHOTHETA Radio Detection Finder, most likely picking up the radio signal from the MOB beacon and defines the bearing from the vessel to a man or a vessel in distress. If you focus your light on the SAR operation, the searchlight will automatically follow and illuminate the target.

The Network Solution

The Network Solution contains multiple searchlights in combination with one or many operator panels. It connect all units with an Ethernet Switch and can access any system in the network from any control panel. A suitable software upgrade is our Package 3, which gives you synchronised control of multiple searchlights - where one or more searchlights will follow a master searchlight, increasing light power, and giving you the ease of simplified control by operating only one operator panel. Luminell can also create a block schematic solutions diagram, giving you an overview of your desired network.



Customized control solutions

We have developed more simplified, one button control function, which can be driven by specific customer demands.

Helideck control button – press the allocated button and the searchlight lights up and goes to a pre-set position.
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Another example is the solution RHOTHETA Radio Detection Finder control integration.

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Control Integration Solutions

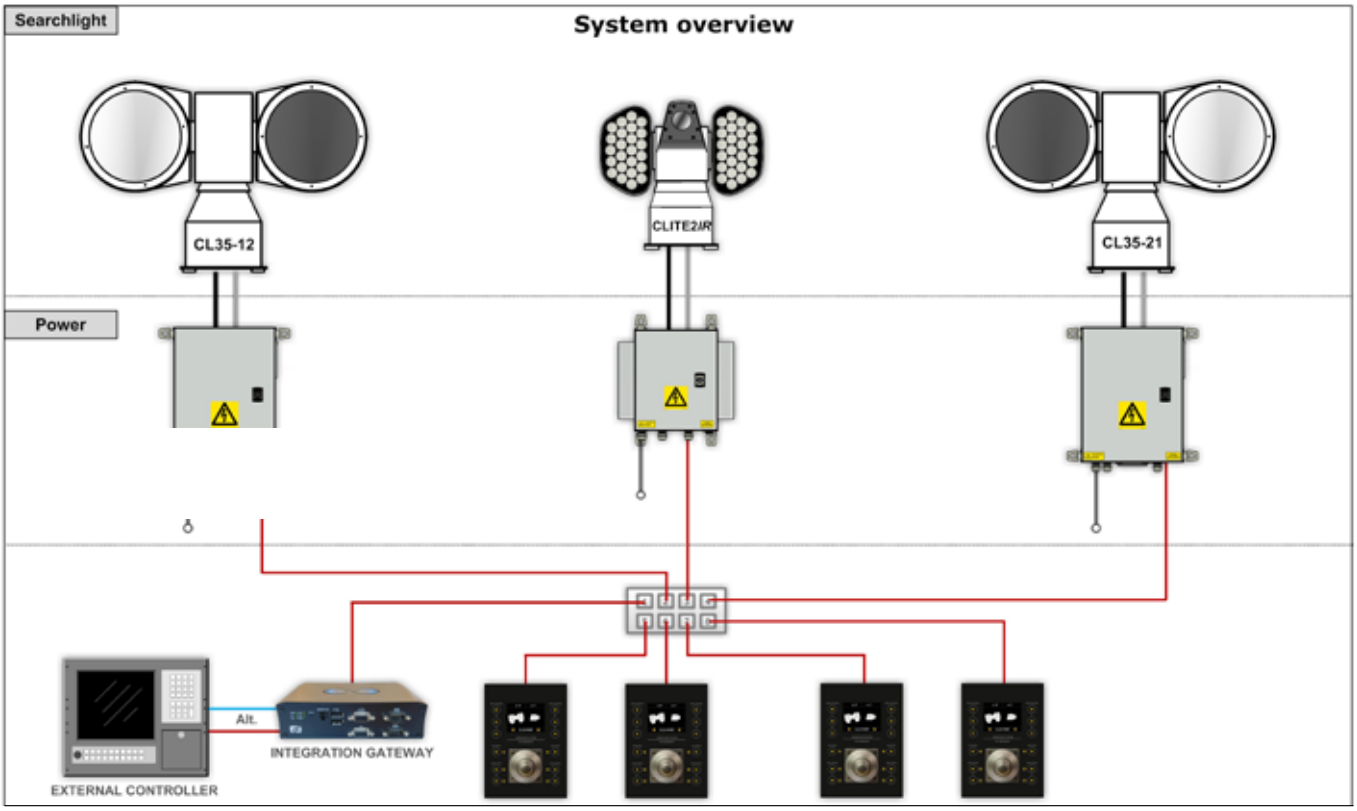
Our systems have been developed for the easy intergration of both basic an advanced controls.

The electronics and the control software are well designed for one-man bridge solutions, as well as defined single button control functionality.

A good example of a more advanced integration is when functionality and control into the vessel's bridge and security system is made, by using input from Radar, GPS, AIS and other targets to define the manoeuvring of the searchlight. In this instance it is up to your requirements and the creativity of the system integrator to determine whether or not you fully utilise the full potential of our systems.
Many bridge system integrators have already integrated with our products. Should you wish to learn more about this, we'd be happy to provide you with references.

To simplify the integration of multiple searchlights, or to add the CL internal LAN network to the vessel's LAN system, we have developed an Integration Gateway. The Integration Gateway is a gateway and a single access point to a network of multiple searchlights – simplifying external control integration from a single controller or from a LAN network. Additionally it is also a programmable computer, making it possible for Luminell to offer the development of customised control functions as an optional feature.

CL35-12 SL2IR CL35-21



Thermal camera solutions integrated in our searchlights – CLIR/SL2IR

The thermal night vision camera unit from FLIR® is placed into a robust, modern designed housing and mounted on top of the searchlight's middle-section. This means that the camera always follows the searchlight's horizontal movement from the joystick. The thermal camera is mounted in a special tilt unit which makes it easy to adjust the camera vertically from the operator panel.

The front section of the unit features a germanium window with an integrated temperature-controlled and self-regulating heating element.The element prevents condensation and ice build-up on the front window that could otherwise disrupt the camera's line of sight. The infrared thermal camera provides a clear picture based on temperature differences, even in complete darkness. This is possible as the camera is sensitive to thermal infrared radiation.

All objects with a temperature over the absolute zero point -273 C (0 degree K) generates infrared radiation. The hotter the temperature, the more infrared radiation. The IR sensor also senses differences of the material's emissivity, reflection and transmission. *Emissivity being the material's capability to emit infrared radiation, Reflection being the material's capability to reflect infrared radiation and Transmission being the material's capability of transmitting infrared radiation.*
Materials with a temperature over -273 C will be detected by the thermal sensor and different materials with same temperature will appear different on the monitor due to the different properties in the materials. The vulnerability of having an uncooled thermal sensor is that rain, fog or snow can reduce the optical sight and can also effect the range of IR detection. Depending on distance, the size of the object and the level of temperature (IR radiation) there is no simple answer as to how much the detection range is affected – (nevertheless it is affected).

Luminell work primarily with two alternative sensor resolutions; our standard version is a 336 core with a 25 mm focal lens, with an optional upgrade to a 640 core with 25 mm lens. The upgrade improves the resolution with an extended detection range and field of view.

A combined solution with a thermal sensor and light will yeild improved visibility, subject to the actual conditions during operation.

Thermal unit

Camera core type	FLIR (uncooled longwave thermal imager)	
Lens	25mm*1	
Field of view Video output	13x10 degrees (25x20 degrees for 640 core) Analog Channel Composite Video (Male RCA connector) PAL (Standard), NTSC.	
	To change the video standard, see section 3.SET CAM VIDEO STANDARD	
Camera type	FLIR Tau 2, 336 (standard)	FLIR Tau 2, 640 (optional)
Detector resolution	336x256, 17µm	640 × 512, 17µm
Video resolution	640 × 480 (NTSC);	640 × 512 (PAL)*2
Refresh rate	25 Hz (PAL), 30 Hz (NTSC)	
Detection man/vessel	800m / 2000m	
Recognition man/vessel	200m / 550m	
Identification man/vessel	100m / 300m	

**1 Other lens types available upon request*

**2 Tau 336 & 324 analog video is upsampled & interpolated to 640 × 480 for NTSC, and to 640 × 512 for PAL*

Premium Visibility Solutions

for demanding maritime and offshore use

luminell®

Light Matters

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