

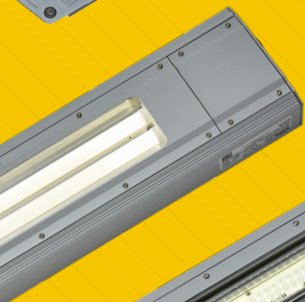


WITHOUT COMPROMISE

NEW

HAZARDOUS AREA INSTALLED LED LIGHTING

INTRODUCING DLO – THE REVOLUTIONARY
NEW DIRECTIONAL LINEAR OPTICS INNOVATION FROM WOLF



LMX LINEAR

LMX-E EMERGENCY LINEAR

LFX FLOODLITE

LHX HIGHBAY

LBX BULKHEAD

LBX-E EMERGENCY BULKHEAD



BRITISH DESIGN AND INNOVATION SINCE 1912



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WOLF SAFETY, THE WORLD'S LEADING MANUFACTURER OF PORTABLE AND TEMPORARY ATEX AND IECEX CERTIFIED HAZARDOUS AREA SAFETY LIGHTING, IS NOW PROUD TO INTRODUCE THE NEW WOLF RANGE OF LED INSTALLED LIGHTING FOR SAFE USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES.



Founded in 1912, Wolf has been lighting the way and keeping workers safe in potentially explosive atmospheres for well over 100 years.

Already world leaders in Portable and Temporary Hazardous Area Lighting, we have now put our experience, manufacturing skills and expertise into developing the next generation of innovative Hazardous Area LED Installed lighting

Manufactured in our Sheffield, UK production facility, the brand new Wolf range of ATEX and IECEx certified explosion protected LED Installed Lighting consists of:

- Linear luminaires (including Intelligent Emergency versions)
- Floodlights
- Highbays
- Bulkheads (including Intelligent Emergency versions)

Revolutionary patented Directional Linear Optics (DLO) LED technology, unique to Wolf, is available as an option in the LMX Linear range and as standard in the LBX Bulkhead range.

With the addition of this new lineup of Hazardous Area Installed lighting to the existing range of Portable and Temporary lighting and Power Distribution products, Wolf now offers the most comprehensive range of Hazardous Area lighting available anywhere.



DIRECTIONAL LINEAR OPTICS (DLO)

Directional Linear Optics (DLO) is Wolf's revolutionary patented light delivery technology which combines all the benefits of fluorescent and LED technology, whilst eliminating the drawbacks of both.

Designed and produced with quality of light as its primary function, DLO technology takes full advantage of the efficiency and cost benefits of LEDs, but with light output that mimics traditional fluorescent fittings, with immediately visible improved light output quality over established LED fittings.

DLO technology:

- Delivers very high light uniformity with minimal glare
- Directs light where needed, eliminating unwanted and costly spill – almost 100% of optical output is useful illumination
- Has zero colour shift with angle change – absolute colour uniformity
- Superior colour definition and CRI makes it essential in colour critical tasks such as:
 - Reading labels
 - Wiring
 - Electronic assembly
 - Inspection processes
 - Maintenance procedures

Human centric benefits:

- Reduced eye strain and fatigue through controlled intensity and glare
- Significantly reduced UGR (Unified Glare Rating) – debilitating high glare does not exist with Directional Linear Optics technology.

Human centric lighting has been seen to aid the sense of overall wellbeing in workers and can lead to higher motivation and increased productivity.

The Wolf Installed LMX and LBX luminaires using DLO LED technology employ patented Directional Linear Optic rods, efficiently collecting light from LEDX high intensity LED sources, dispersing then emitting that light over the Optic rod major projected surface, maintaining high lumen levels but reducing light intensity by a factor of 500 times, to a low intensity, eye-friendly light.

This high lumen, low intensity light produced by Wolf DLO LED Technology is ideal for use in localised and close proximity lighting applications, including control areas, manufacturing locations and access routes, minimising risk of debilitating glare caused by established high intensity Ex LED luminaires.

Products which utilize Directional Linear Optics (DLO):

Directional Linear Optics (DLO) LED technology is available as an option in the LMX2 (2ft) and LMX4 (4ft) Linear Luminaire models, and is fitted as standard in the LBX Bulkhead, including emergency versions of all of these models.



LMX Linear Luminaire fitted with DLO Technology



LBX Bulkhead fitted with DLO LED Technology

DLO OR FFA? HOW TO CHOOSE

The Wolf LMX Linear range is available in both conventional FFA (Forward Facing Array) LED modules and the revolutionary Directional Linear Optics (DLO) modules. This allows users to select the optimal and most efficient illumination for their specific application.

The LBX Bulkhead range is solely available with DLO LED Technology, delivering ideal low glare illumination in eye-level applications where bulkhead fittings are typically used.

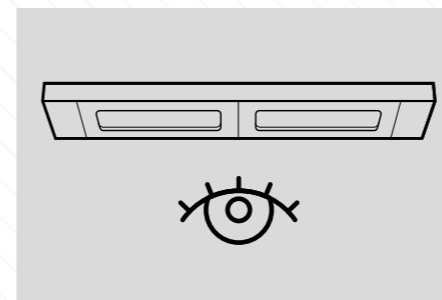
Use LMX FFA (Forward Facing Array) LED Technology luminaires when:

- Illuminating large areas and the light is mounted at a greater height or distance away from operators (so they are not affected by glare and intensity)
- More transient areas, where operators are not working continuously

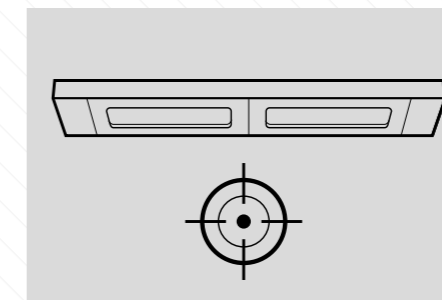
Use LMX Directional Linear Optics (DLO) LED Technology luminaires to eliminate debilitating harmful glare when:

- Lights are mounted at a lower level (in the eyeline)
- Operators are present for longer periods
- Work requiring high quality, consistent light is required

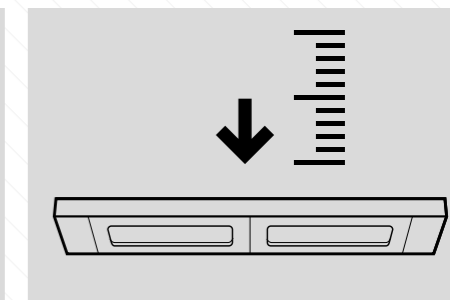
USE DLO WHEN...



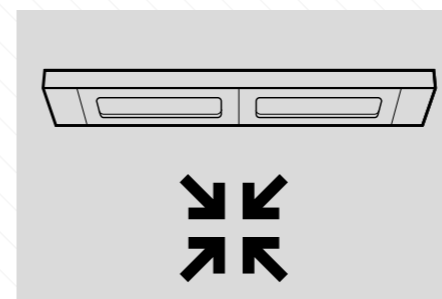
Operators are likely to glance at or look towards the light source



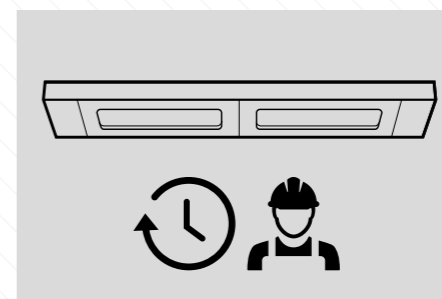
Light needs to be directed to a precisely defined area, without overspill



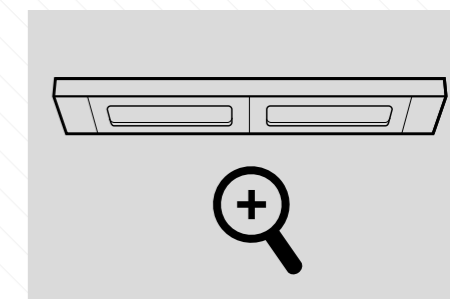
The light mounting is low



The area to be illuminated is smaller or more specific

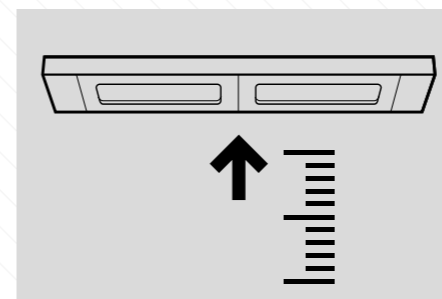


Operators are present for longer periods in the illuminated area

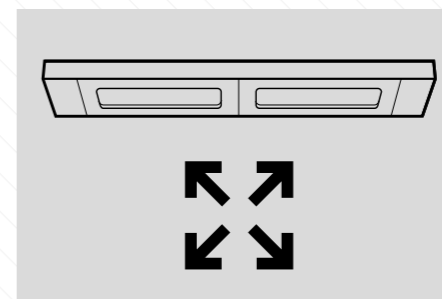


When close, high quality or inspection work is to be carried out in the illuminated area

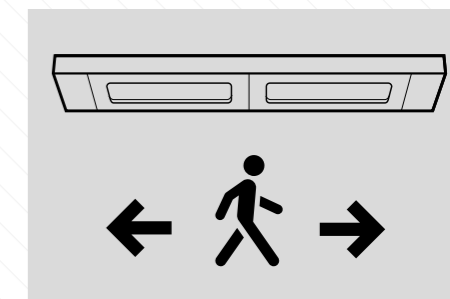
USE FFA WHEN...



The light is mounted high in the ceiling



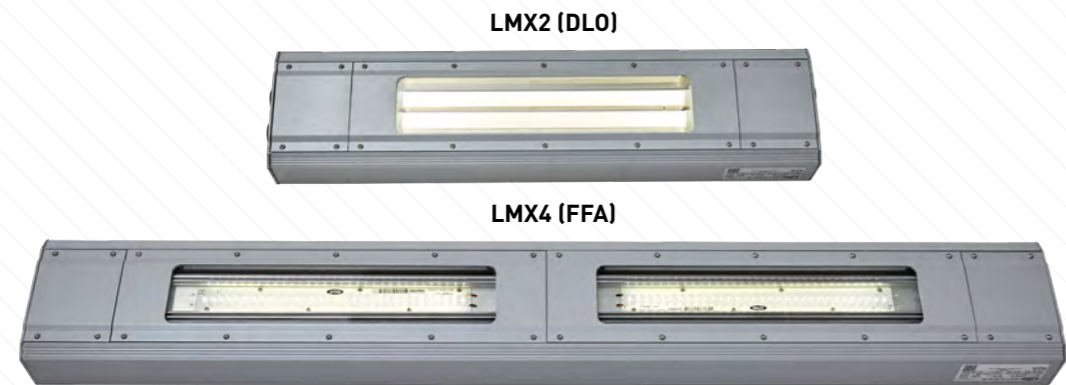
The area to be illuminated is larger



It is a more transient area, or operators are not contentiously present

ZONE 1/21 INSTALLED LIGHTING RANGE

LMX LINEAR



The LMX installed linear range is ATEX, IECEx, and UKCA certified for safe use in Zones 1 and 21 potentially explosive atmospheres. Ideal for general illumination requirements in Hazardous Areas, all products are IP67 rated, tough, reliable and ideal for indoor or outdoor use in new installations or for replacing existing fluorescent or LED installations for improved performance, greater reliability and lower energy consumption.

- Available in either FFA or DLO versions, allowing you to select the optimum illumination for your specific application
- Forward Facing Array (FFA) versions are ideal for illuminating larger areas, where the light is mounted away from the direct eye line
- Directional Linear Optics (DLO) versions offer market leading low glare performance, the ability to illuminate precisely defined areas with no light overspill or wasted light output
- Up to a remarkable 5,258 lumens of light output (4 foot, FFA version) ensuring fewer lights are needed than lower output models
- All models are T4 Temperature Class and have a lower ambient temperature of -50°C. High temperature versions are available with an upper temperature limit up to 60°C - ideal for use in hotter climates, including the Middle East
- IP67 rated - ideal for indoor and outdoor use
- Colour temperature: 5,000K (FFA) for bright and crisp light that's ideal for general illumination; 4,600K (DLO) for maximum comfort and ease for more detailed operations
- Simple but effective design ensures supreme reliability and performance under even the harshest of conditions
- The modular LED system allows easy, quick and efficient servicing, repair and replacement if necessary through easy access and rapid part replacement
- Standard industry luminaire lengths and fittings allow the easy retrofit of existing fluorescent installations
- Advanced thermal management technology; ensures a lifetime of 10+ years
- 5 year warranty supplied as standard



LMX LINEAR TECHNICAL TABLE

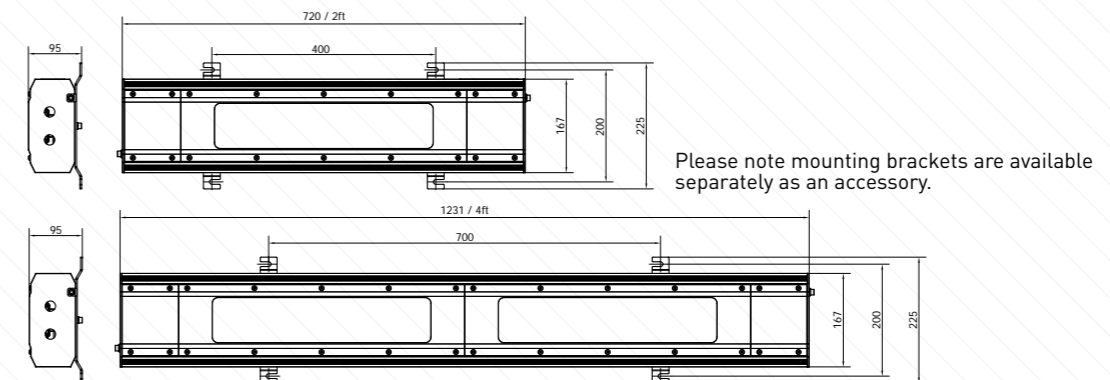
	LMX2S -F-50	LMX2S -F-60	LMX2S -L-50	LMX2S -L-60	LMX4S -F-50	LMX4S -F-60	LMX4S -L-50	LMX4S -L-60
Code	II 2 G D Ex eb mb IIC T4 Gb Ex tb IIIC T T80°C..90°C Db							
Certificate	ExVeritas 19 ATEX 0433X / IECEx EXV 19.0001X / ExVeritas 21 UKEX 0946X							
Input Voltage Range	88-140V AC; 180 - 277 V AC							
Input Power (230V) (W)	23		24		46		48	
Frequency	50 - 60 Hz							
Power Factor	>0.90							
Enclosure Size	2ft				4ft			
Lumen Output (max)*	2,629	2,629	1,988	1,988	5,258	5,258	3,976	3,976
LED Module & Quantity	1 x FFA	1 x FFA	1x DLO	1x DLO	2x FFA	2x FFA	2x DLO	2x DLO
Beam Angles	115°		90° (110° upon request)		115°		90° (110° upon request)	
Ingress Protection	IP67							
Lower Temp. Limit	-50 °C							
Upper Temp. Limit	50 °C	60 °C	50 °C	60 °C	50 °C	60 °C	50 °C	60 °C

*Lumen output figures stated are for 230V AC

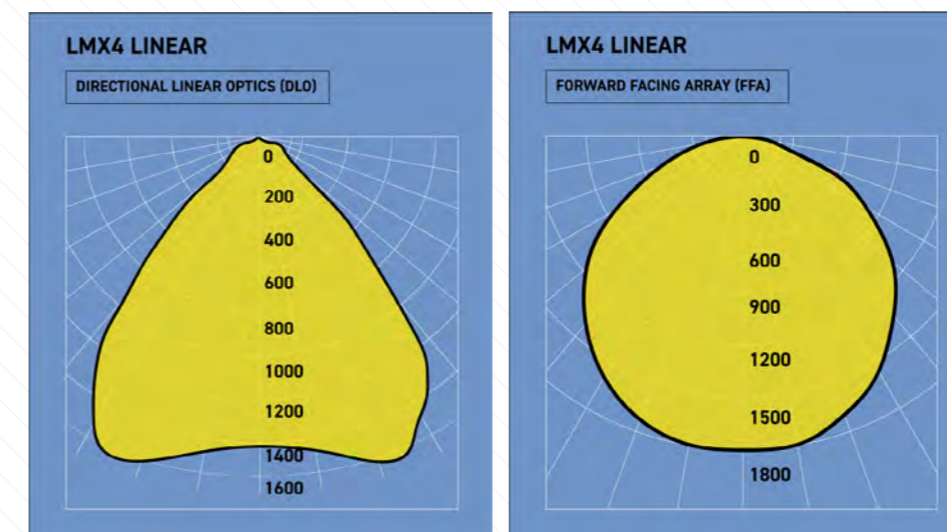
**For certification codes and full product details, visit our website at www.wolfsafety.com

All information has been gathered under laboratory conditions, the user must regard the values given as approximate. Changes may be made to the above specification without notification, details are available on request. E&OE.

PRODUCT DIMENSIONS

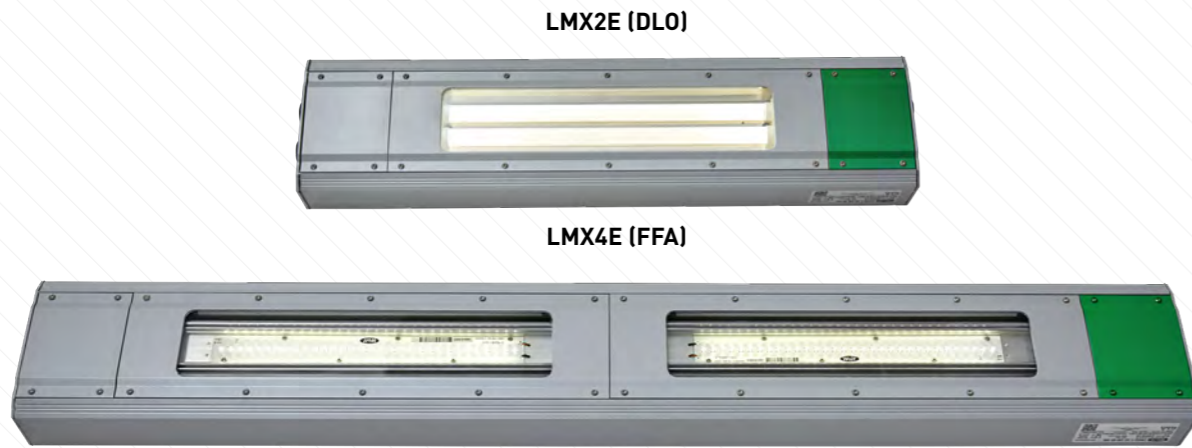


LIGHT OUTPUT DIAGRAMS



ZONE 1/21 INSTALLED LIGHTING RANGE

LMX-E EMERGENCY LINEAR



The LMX-E Intelligent Emergency Linear provides the additional safety of an emergency back-up supply should power fail in the Hazardous Area.

The LMX-E Emergency has all the features and benefits of the standard LMX linear range (see previous pages), with the additional advantage of the following emergency mode durations (selectable by the installer on-site) supplied by the NiMH battery:

- 4 hours of emergency lighting at 25% output
- 2 hours of emergency lighting at 50% output
- 1 hour of emergency lighting at 100% output

The Intelligent Emergency circuit automatically performs periodic functional and battery duration self-testing to monitor the system and battery condition. Throughout this period LED output from the Emergency Linear remains at full power to ensure activities and operations in the vicinity remain undisturbed.

A 3 colour LED indicator will show the state of the circuit:

- Green indicates that everything is functioning correctly
- Faults are highlighted by specific colours and flash combinations, notifying the user that action is required
- Critical faults will shut down the function of the lamp

If the battery is removed for maintenance or replacement and the Emergency Linear is re-energised, it will continue to illuminate normally at full output whilst powered from mains.



LMX-E EMERGENCY LINEAR TECHNICAL TABLE

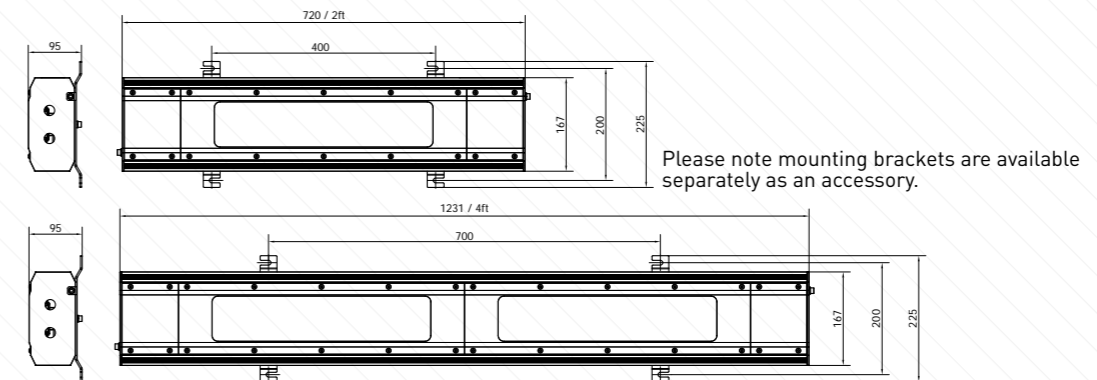
	LMX2E -F-55	LMX2E -L-55	LMX4E -F-55	LMX4E -L-55
Code	II 2 G D Ex eb mb IIC T4 Gb Ex tb IIIC T T80°C..90°C Db			
Certificate	ExVeritas 19 ATEX 0433X / IECEx EXV 19.0001X / ExVeritas 21 UKEX 0946X			
Input Voltage Range	100-140V AC; 200-277V AC			
Input Power (230V) (W)	44	45	67	69
Frequency	50 - 60 Hz			
Power Factor	>0.90			
Enclosure Size	2ft		4ft	
Lumen Output (max)*	TBC			
LED Module & Quantity	1 x FFA	1x DLO	2x FFA	2x DLO
Beam Angles	115°	90° (110° upon request)	115°	90° (110° upon request)
Ingress Protection	IP67			
Lower Temp. Limit	-50 °C			
Upper Temp. Limit	55 °C			

*Lumen output figures stated are for 230V AC

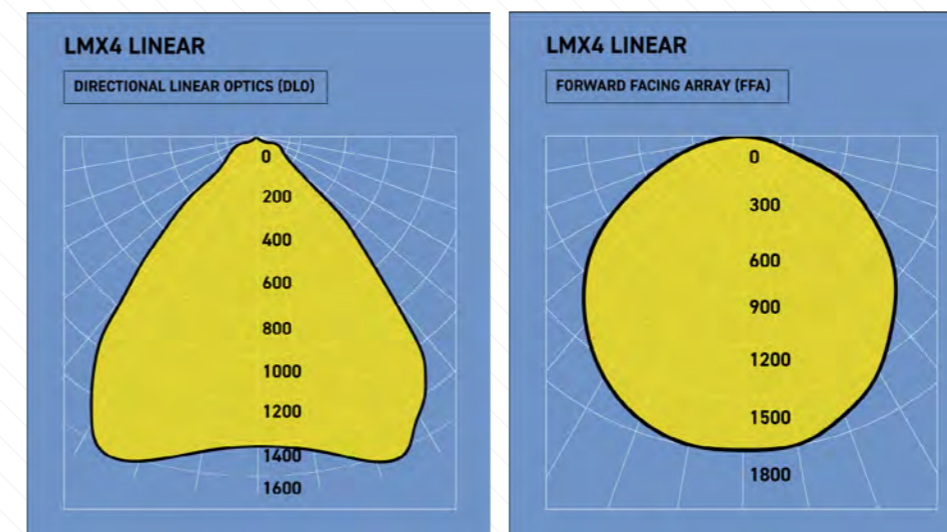
**For certification codes and full product details, visit our website at www.wolfsafety.com

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PRODUCT DIMENSIONS



LIGHT OUTPUT DIAGRAMS



Powered light output shown

ZONE 1/21 INSTALLED LIGHTING RANGE

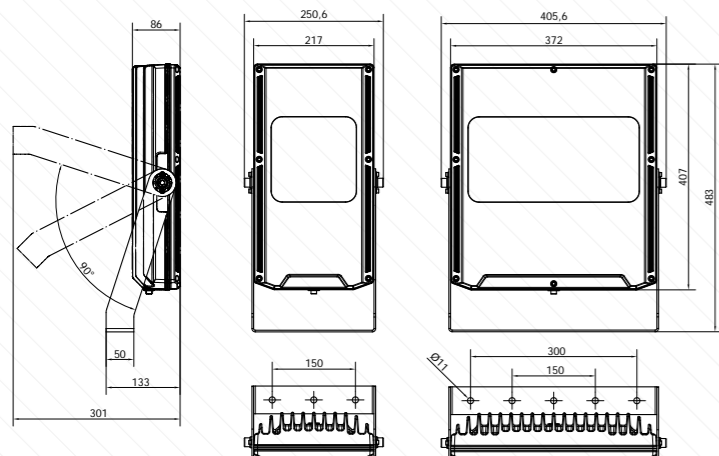
LFX FLOODLITE



The LFX range of high-power Hazardous Area LED installed floodlights is ideal for safely illuminating large hazardous areas that need wide, even, bright light coverage. ATEX, IECEx and UKCA certified for safe use in potentially explosive atmospheres Zones 1 and 21, the range is available in 2 sizes, with 12, 16, 24 or 32 LED arrays, 4 different beam angles and a light output up to 25,932 lumens. IP67 certified, and with a full range of fixing accessories, LFX Floodlights are ideal for both indoor and outdoor use.

- Market leading light output of up to 25,932 lumens
- Available in 4 sizes; large and small, and 12, 16, 24 or 32 LED arrays providing flexible solution to user requirements
- Available with beam angles 36°, 45°, 62° and 102° to efficiently direct light to the desired work area
- All models are T4 Temperature Class and have a lower ambient temperature of -50°C. High temperature versions are available with an upper temperature limit up to 65°C - ideal for use in hotter climates, including the Middle East
- Ultra-long life LED technology; up to 100,000 hours
- Supplied with stirrup bracket as standard
- 5 year warranty supplied as standard

PRODUCT DIMENSIONS



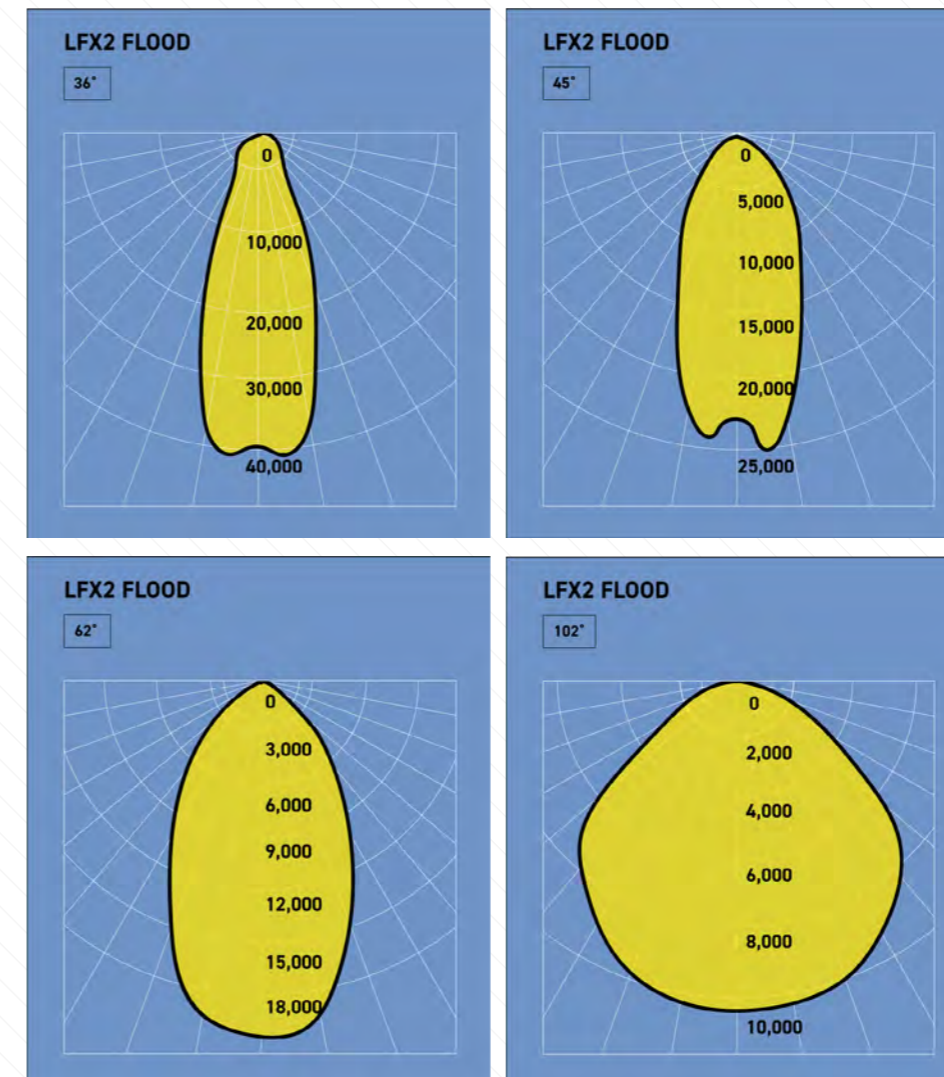
LFX FLOODLITE TECHNICAL TABLE

	LFX2S -32-50	LFX2S -32R-55	LFX2S -24R-50	LFX2S -24R-60	LFX1S -16R-45	LFX1S -16R-55	LFX1S -12R-55	LFX1S -12R-65
Code	II 2 G D Ex eb mb IIC T4 Gb Ex tb IIIC T110 °C Db							
Certificate	ExVeritas 19 ATEX 0586X / IECEx EXV 19.0079X / ExVeritas 21 UKEX 0939X							
Input Voltage Range	88 - 140V AC; 180 - 277 VAC							
Input Power	180W	120W	135W	90W	90W	60W	67.5W	45W
Frequency	50 - 60 Hz							
Power Factor	>0.95	>0.95	>0.95	>0.95	>0.95	>0.95	>0.90	>0.90
Enclosure Size	Large				Small			
Lumen Output (max)*	25,932	17,288	19,449	12,996	12,996	8,644	9,724	6,483
LEDs	32 LED	32 LED	24 LED	24 LED	16 LED	16 LED	12 LED	12 LED
Beam Angles	Narrow (36°), Medium (45°), Wide (62°), Ultra Wide (102°)							
Ingress Protection	IP67							
Lower Temp. Limit	-50°C							
Upper Temp. Limit	50 °C	55 °C	50 °C	60 °C	45°C	55 °C	55 °C	65 °C

*Lumen output figures stated are for 230V AC **For certification codes and full product details, visit our website at www.wolfsafety.com

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LIGHT OUTPUT DIAGRAMS



ZONE 1/21 INSTALLED LIGHTING RANGE

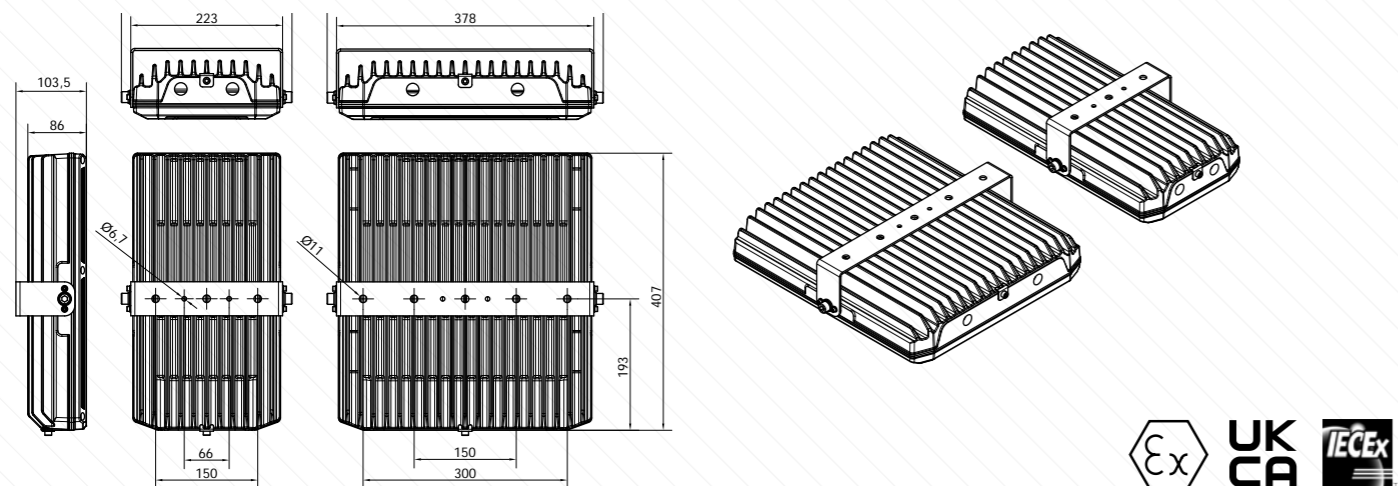
LHX HIGHBAY



The LHX Installed LED Highbay range is ideal for use in very high and large hazardous work areas. ATEX, IECEx and UKCA certified for safe use in potentially explosive atmospheres Zones 1 and 21, the range is available in 2 sizes, with 12, 16, 24 or 32 LED arrays, 4 different beam angles and a light output up to 25,932 lumens. IP67 certified, and with a full range of fixing accessories, LHX Highbays are ideal for both indoor and outdoor use.

- Market leading performance; up to 25,932 lumens
- Available in 4 sizes; large and small, and 12, 16, 24 or 32 LED arrays providing flexible solution to user requirements
- Available in beam angles 36°, 45°, 62° and 102° to efficiently direct light to the desired work area
- All models are T4 Temperature Class and have a lower ambient temperature of -50°C. High temperature versions are available with an upper temperature limit up to 65°C - ideal for use in hotter climates, including the Middle East
- Ultra-long life LED technology; up to 100,000 hours
- Supplied with ceiling bracket as standard
- 5 year warranty supplied as standard

PRODUCT DIMENSIONS



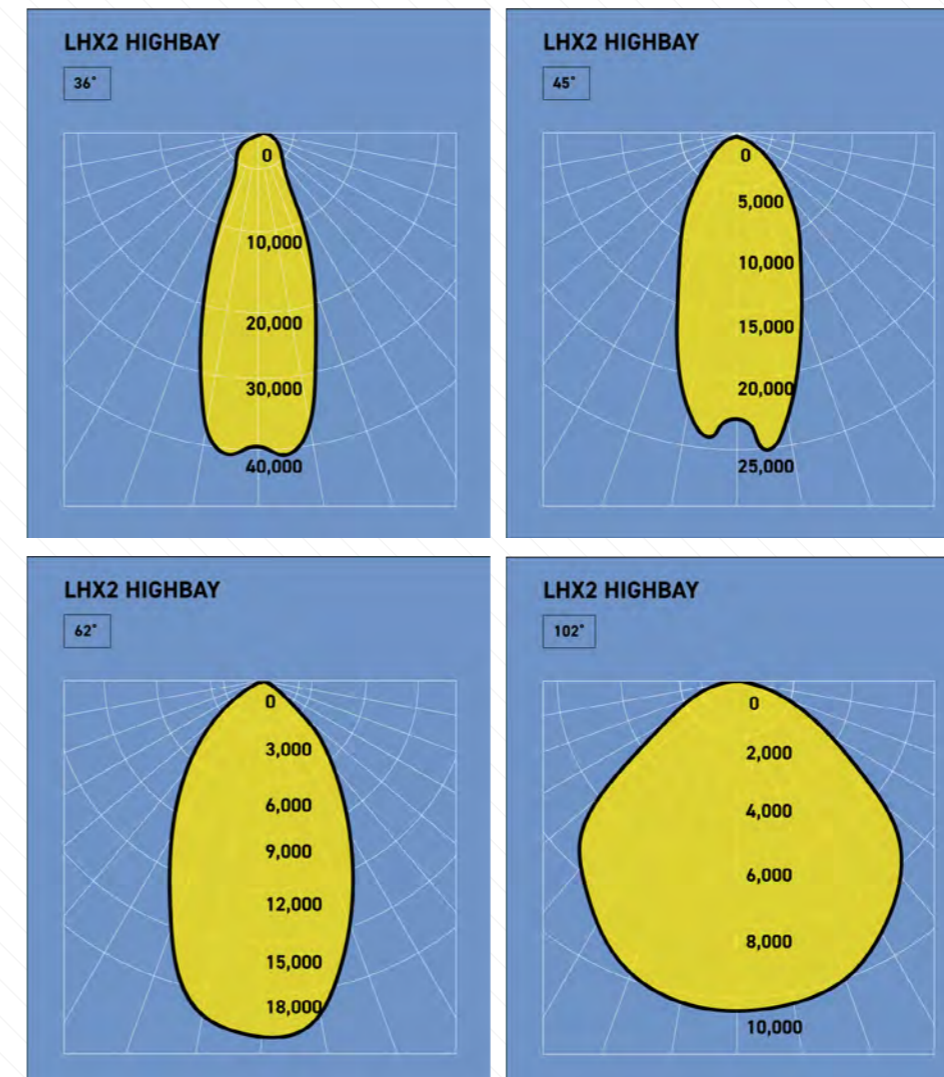
LHX HIGHBAY TECHNICAL TABLE

	LHX2S -32-50	LHX2S -32-55	LHX2S -24-50	LHX2S -24-60	LHX1S -16-45	LHX1S -16-55	LHX1S -12-55	LHX1S -12-65
Code	II 2 G D Ex eb mb IIC T4 Gb Ex tb IIIC T110 °C Db							
Certificate	ExVeritas 19 ATEX 0586X / IECEx EXV 19.0079X / ExVeritas 21 UKEX 0939X							
Input Voltage Range	88 - 140V AC; 180 - 277 VAC							
Input Power	180W	120W	135W	90W	90W	60W	67.5W	45W
Frequency	50 - 60 Hz							
Power Factor	>0.95	>0.95	>0.95	>0.95	>0.95	>0.95	>0.95	>0.90
Enclosure Size	Large				Small			
Lumen Output (max)*	25,932	17,288	19,449	12,996	12,996	8,644	9,724	6,483
LEDs	32 LED	32 LED	24 LED	24 LED	16 LED	16 LED	12 LED	12 LED
Beam Angles	Narrow (36°), Medium (45°), Wide (62°), Ultra Wide (102°)							
Ingress Protection	IP67							
Lower Temp. Limit	-50°C							
Upper Temp. Limit	50°C	55°C	50°C	60°C	45°C	55°C	55°C	65°C

*Lumen output figures stated are for 230V AC **For certification codes and full product details, visit our website at www.wolfsafety.com

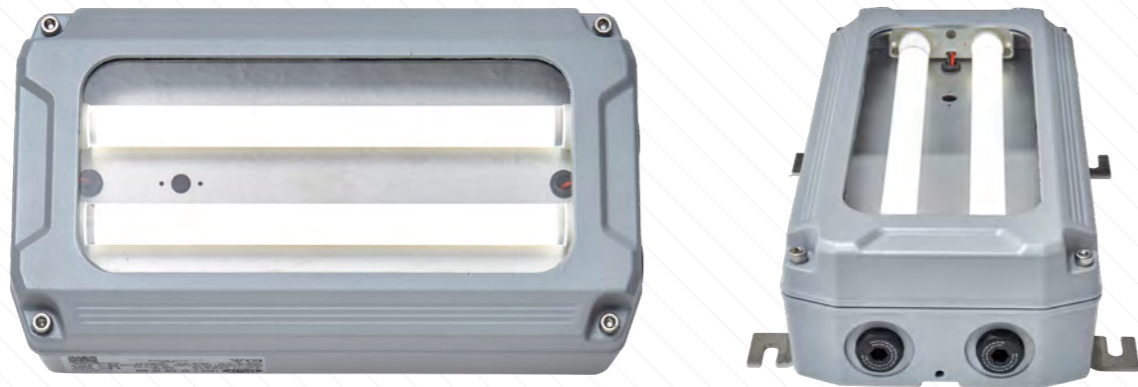
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LIGHT OUTPUT DIAGRAMS



ZONE 1/21 INSTALLED LIGHTING RANGE

LBX BULKHEAD



The LBX LED Bulkhead is a compact, versatile and robust light ideal for safely illuminating walkways, steps and entrances within Hazardous Areas. ATEX, IECEx, and UKCA certified for safe use in Zones 1/21, all models in the range feature our unique, patented Directional Linear Optics (DLO) technology, which means the beam can be directed exactly where needed, with no overspill or wasted light, and there's low glare - even when installed at eye level. All models are IP67 rated, making them perfect for both indoor and outdoor use.

The LBX Bulkhead is available in two lumen outputs and 230V supply.

- Directional Linear Optics (DLO) technology; ensures no glare when installed at eye level
- 90° beam angle (110° also available); ideal angle for bulkhead lighting
- Different versions offer a range of light output from 1,086 to 1,629 lumens
- Wide operating temperatures available -55° to +65°
- Easy installation and maintenance
- Low profile aluminium housing
- IP67 rating for outdoor or indoor use
- 5 year warranty supplied as standard
- Supplied with wall brackets as standard



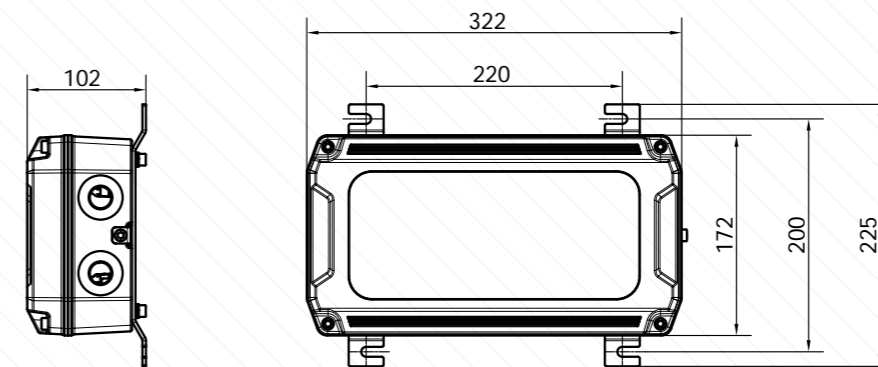
LBX BULKHEAD TECHNICAL TABLE

	LBXS-L-55	LBXS-L-65
Code	II 2 G D Ex eb mb IIC T4 Gb Ex tb IIIC T80°C Db	
Certificate	ExVeritas 19 ATEX 0439X / IECEx EXV 19.0002X / ExVeritas 21 UKEX 0945X	
Input Voltage Range	88 - 140V AC; 180 - 277 VAC	
Input Power (W)	24W	16W
Frequency	50 - 60 Hz	
Power Factor	>0.95	
Lumen Output (max)*	1,629	1,086
LED Module & QTY	1x DLO	
Beam Angles	90° (110° upon request)	
Ingress Protection	IP67	
Lower Temp. Limit	-50°C	
Upper Temp. Limit	55 °C	65 °C

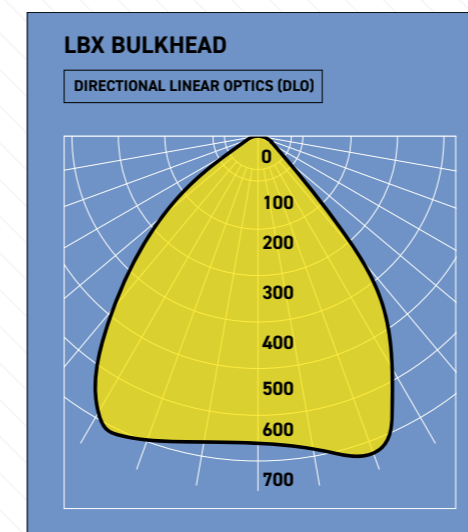
*Lumen output figures stated are for 230V AC **For certification codes and full product details, visit our website at www.wolfsafety.com

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PRODUCT DIMENSIONS

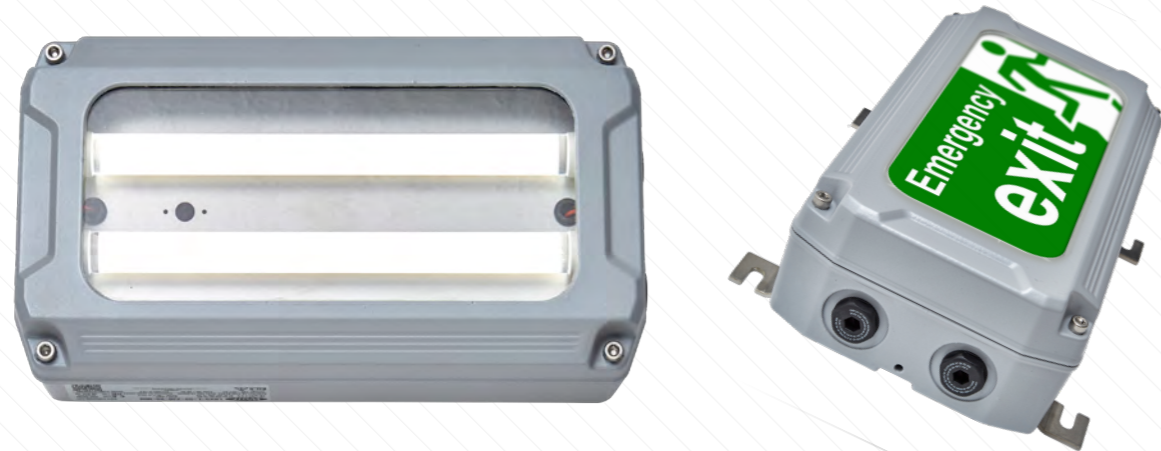


LIGHT OUTPUT DIAGRAMS



ZONE 1/21 INSTALLED LIGHTING RANGE

LBX-E EMERGENCY BULKHEAD



The LBX-E Intelligent Emergency Bulkhead provides the additional safety of an emergency back-up supply should power fail in the Hazardous Area.

The LBX-E Emergency has all the features and benefits of the standard LBX Bulkhead range (see previous pages), with the additional advantage of the following emergency mode durations (selectable by the installer on-site) supplied by the NiMH battery:

- 4 hours of emergency light at 25% output
- 2 hours of emergency light on 50% output
- 1 hour of emergency light at 100% output

The Intelligent Emergency circuit automatically performs periodic functional and battery duration self-testing to monitor the system and battery condition. Throughout this period LED output from the Emergency Bulkhead remains at full power to ensure activities and operations in the vicinity remain undisturbed.

Two versions of the Emergency Bulkhead are available, the LBXE maintained emergency which remains permanently illuminated whilst energised, and the LBXN non-maintained emergency, which remains permanently non-illuminated whilst energised. In the event of mains power failure, both of the units will illuminate. As an optional accessory, a range of self adhesive emergency exit signs are available to apply to the external surface of either Emergency Bulkhead unit.

A 3 colour LED indicator will show the state of the circuit:

- Green indicates that everything is functioning correctly
- Faults are highlighted by specific colours and flash combinations, notifying the user that action is required
- Critical faults will shut down the function of the lamp

If the battery is removed for maintenance or replacement and the Emergency Bulkhead is re-energised, it will continue to illuminate normally at full output whilst powered from mains.



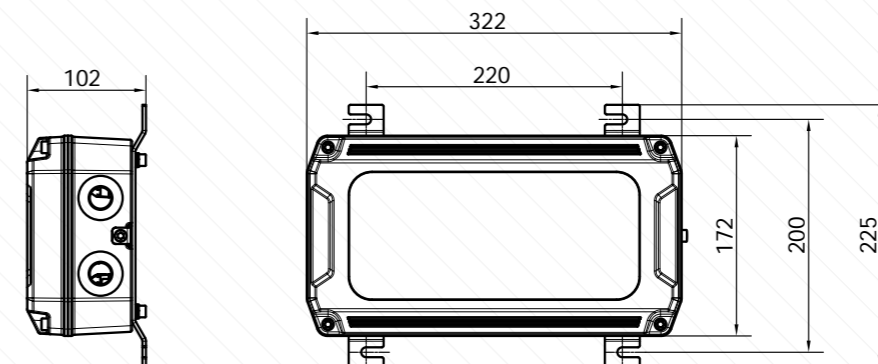
LBX-E EMERGENCY BULKHEAD TECHNICAL TABLE

	LBXE-L-55	LBXN-L-55
Code	II 2 G D Ex eb mb IIC T4 Gb Ex tb IIIC T80°C Db	
Certificate	ExVeritas 19 ATEX 0439X / IECEx EXV 19.0002X / ExVeritas 21 UKEX 0945X	
Input Voltage Range	100-140V AC; 200-277V AC	
Max. Input Current	45W	24W
Frequency	50 - 60 Hz	
Power Factor	0.90	
Lumen Output	1,629	
LED Module & Qty	1x DLO	
Beam Angle	90° (110° upon request)	
Ingress Protection	IP67	
Lower Temp. Limit	-50°C	
Upper Temp. Limit	55°C	

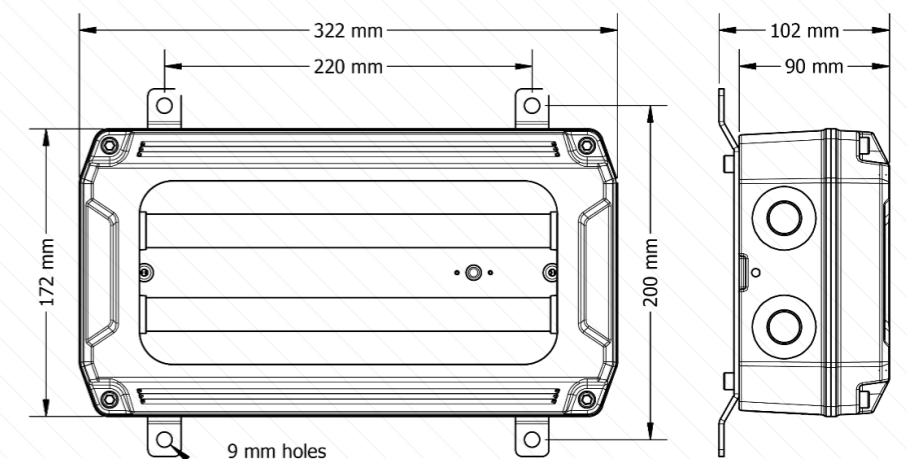
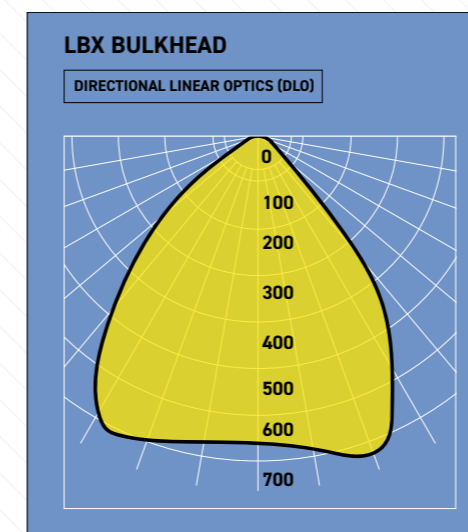
*Lumen output figures stated are for 230V AC **For certification codes and full product details, visit our website at www.wolfsafety.com

All information has been gathered under laboratory conditions, the user must regard the values given as approximate. Changes may be made to the above specification without notification, details are available on request. E&OE.

PRODUCT DIMENSIONS



LIGHT OUTPUT DIAGRAMS



Powered light output shown

ACCESSORIES

A full range of accessories for the installed product range is available; please see our website for more information.

Linear:

112A1765 and 112A1799



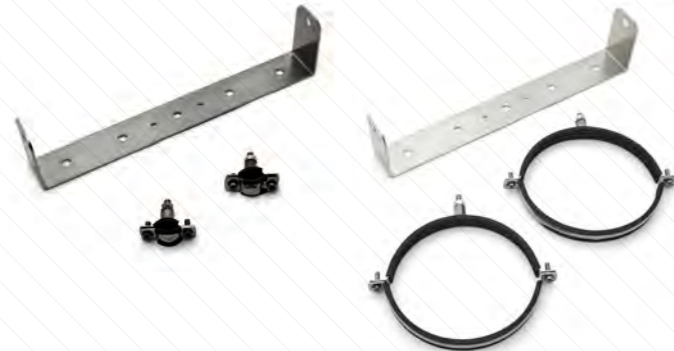
Highbay:

112A1773 and 112A1790



Floodlite:

112A1788 and 112A1782



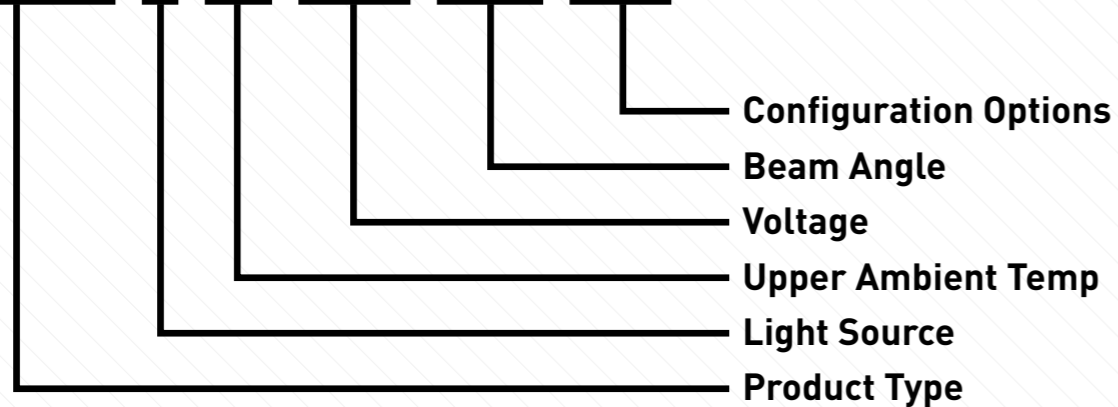
Bulkhead:

112A1765 and 112A1769



PART CODES EXPLAINED

LMX2S-F-50-XXX-YYY-ZZZ



Configuration Options
Beam Angle
Voltage
Upper Ambient Temp
Light Source
Product Type

LM - Linear Aluminium
X = Zone 1
2S = 2ft Standard

ADDITIONAL PRODUCTS AND SERVICES

Wolf Safety is the world's leading manufacturer of Hazardous Area portable & temporary lighting, offering the widest range of ATEX, IECEx and UKCA certified explosion protected lighting and power distribution systems designed in the United Kingdom for safe use in potentially explosive atmospheres worldwide.

Our Portable range includes:

- Straight and right-angled torches
- Headtorches
- Handlamps
- Warning Lights

Our Temporary range includes mains and low voltage:

- LED Luminaires and Floodlights
- Tank Lighting Kits
- Handheld leadlamps
- Battery operated LED worklights
- Air Lamps

Our Temporary lighting range is supported by wide range of **Temporary Power Distribution** products, including transformers, splitter boxes, extension cables and cable reels.

Wolf is the exclusive UK distributor of market leading **Ramfan™** workplace **Ex Fans and Ventilators**.

Additional Services include:

- Technical support
- Lighting installation plans
- Full pre and post sales support



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BRITISH DESIGN AND INNOVATION SINCE 1912





WITHOUT COMPROMISE

Wolf Safety Lamp Company
Saxon Road Works, Sheffield S8 0YA, UK

T: +44 (0) 114 255 1051
E: info@wolfsafety.com

SL110 Rev 1 DF576



www.wolfsafety.com