

Total Lighting Solutions for Industrial, Commercial and Mining Applications!



Industrial, mining and hazardous lighting manufacturers Nordland Lighting, based in Muldersdrift, Gauteng, South Africa started out in 1967 as a luminaire importer but it soon became a local manufacturer instead. Today, the company produces and exports a large range of luminaires that includes hazardous and non-hazardous areas. Close co-operation with the SABS ensures compliance with relevant specifications and the company is a permit mark holder for its entire range of Ex lighting products. Products for non-hazardous applications comply with SANS/IEC 60598, as well as Accredited ISO 9001:2015.



Aspects of Hazardous Lighting

Light fittings for use in Hazardous areas have certain characteristics. They have a seal or machined face to ensure resistance to liquid, dust or gas, or a quenching flame path. Light fittings have different grades of protection depending on their construction and intended purpose. Some fittings are classified according to their IP (Ingress Protection) rating as it is designated.

What constitutes a hazardous area:

In some contexts it could be a badly lit step, however, we consider it an area in which a flammable material, gas or vapour must be mixed in the correct proportion with air and within this mixture a spark or heat is present, sufficient to ignite the mixture. When light fittings and other electrical apparatus are to be installed in a Hazardous Area it is essential that the decision maker takes measures to reduce the likelihood of an explosion by the correct selection of equipment

to be installed in that area. As the gases and vapours liable to be present are rated according to ignition temperature, flash point and lower explosive limit, this information must be on hand when making your light fitting selection.

Gases also have a gas group classification, namely Group I, Group IIA, Group IIB and Group IIC, where Methane falls in the category Group I, while Hydrogen is a Group IIC gas, together with Acetylene. The general classification of the area is then Zone 1 and 2 for gases and vapours and volatile liquids present in the air, Zone 21 for combustible dusts, metallic and non-metallic and also fibres in suspension in the air, Zone 22 dust and easily combustible fibres, not normally in suspension in the air, but are present in sufficient quantities to produce a combustible mixture.

A common fault of the light-fitting purchaser is the non-specification of the gland type required for the installation which has to be compatible to the type of cable and the core diameters. There are different glands available for steel armoured cable and for sheathed cables. Also cables should be of the flame retardant type if for exposed usage and if not sand covered. The more common type of light fittings available for the Zone 1 situation are those designated and enclosed in:

- i) Flameproof or explosion proof Ex “d” housings.
- ii) Increased Safety Ex “e”.

Although both are suitable for use in this type of atmosphere there is a world of difference in their construction format.



Hazardous Areas – Zone 1

N60



- Zone 1, Ex-proof
- Available in 304 & 316 marine-grade stainless steel
- Luminaire range has G13 lamp holders specially designed to allow the use of standard bi-pin lamps and used with an electronic control gear
- Available in emergency configuration
- Isolating switch can be incorporated on control rail as an optional extra
- **IP65**

NLE



- Zone 1, Ex-proof
- Luminaire range has G13 lamp holders specially designed to allow the use of standard bi-pin lamps and used with an electronic control gear
- Temperature rating T4
- Gas group II
- Isolating switch can be incorporated on control rail as an optional extra
- Available in emergency configuration
- **IP66**

HX1 LED Ex-Proof Pendant

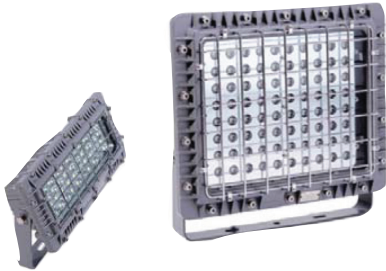
LED



- For use in zones 1, 2, 21 & 22
- Circuit watts from 30 w to 200 w
- > 60,000 hr rated life expectancy
- Ambient temperature -40° C to +55° C
- **IP66**

BLD 150 LED Ex-Proof Floodlight

LED



- For use in zones 1, 2, 21 & 22
- Ex protection: Ex d IIB T6 Gb/Ex tb IIIB T85° C Db
- Circuit watts 60 w to 160 w
- > 50,000 hr rated life expectancy
- **IP65**

HA1 LED Ex-Proof Pendant

LED



- For use in zones 1, 2, 21 & 22
- With unique internal heat sink structure
- Various mounting options
- Circuit watts from 20 w to 40 w
- > 60,000 hr rated life expectancy
- Ambient temperature -40° C to +55° C
- **IP66**

**EZE SAFE – Ex 'd'
IA No SABS MS/12-831**

Available in
LED



- For zone 1 group I/II B T6
- To be used in underground and surface coal mines
- Applications: walkways, conveyor belts, roadways etc.
- Fluorescent tubes available in 600, 1200 & 1500 mm
- Compact fluorescent energy savers and LED options
- Clear flame retardant polycarbonate lens cover
- 110-220 V; 12, 24 & 36 V
- Available in emergency mode
- SABS approved
- **IP66**



Hazardous Areas – Zones 2, 21, 22

JBP

Available in
LED



Zone 2 Vapour-Proof Light

- Luminaire range has a GRP body, polycarbonate injection-moulded lens with linear prisms, with stainless-steel clips
- Control gear is approved for Zone 2, 21 and 22 applications
- Available in single and double 18 w, 36 w and 58 w versions
- **IP65 and IP66**

N50

Available in
LED



Zone 2 Corrosion-Resistant Light

- Available in 304 and 316 marine grade stainless steel
- Luminaire range has a deep drawn stainless-steel body, single piece pressed frame and stainless-steel clips
- 4 mm-thick clear armour-plated glass
- Electronic Control Gear and LED driver are approved for Zone 2 applications
- Available in single and double lamp 18 w, 36 w and 58 w versions
- Lens wire guard is available as an optional extra
- **IP66**

N50HID



Zone 2 Corrosion-Resistant Light

- Available in 304 and 316 marine grade stainless steel
- Luminaire range has a deep drawn stainless-steel body, single piece pressed frame and stainless-steel clips
- 4 mm-thick clear armour-plated glass
- Mounted on a gear tray, comprising the 150 w HPS choke
- Power Factor correction capacitor and ignitor with thermal cutout which protects the choke, and prevents the possibility of sparking during lamp change
- **IP65**

NHP/NHDP Highbay



Zone 2 Highbay Light

- Control gear housing in GRP
- Suspension hooks carry the weight of the luminaire
- Die-cast aluminium lamp-holder assembly
- The high purity bright anodised spun aluminium reflector incorporates a heat tempered, armour-plated glass carried in a silicone seal. This is spun into the reflector to form an integral unit
- **IP66**

Zone 2 Highbay Light

- Control gear housing in GRP
- Suspension hooks carry the weight of the luminaire
- Die-cast aluminium lamp-holder assembly
- 4 mm-thick armour-plated glass with polycarbonate shield spun into the polished reflector
- **IP66**
- Applications: Food industry, Tissue Production

NGBP LED

LED



LED Zone 2 Bulk Head Light

- High pressure, die-cast aluminium body and frame supplied with stainless-steel clips
- 4 mm-thick clear armour-plated glass
- The LED modules and control gear are approved for Zone 2 applications
- Circuit watts 35 w and 54 w
- **IP65**

NFP



Zone 2 Floodlight

- Luminaire consists of two parts, an exterior control-gear box and a separate lamp-holder/ reflector compartment. The two units are assembled together to form an integral unit
- Extreme temperature rises are limited by the separation of control gear and lamp
- Lamp options are mercury vapour, metal halide, and high-pressure sodium
- **IP66**

HL1 LED Ex-Proof Lighting

LED



Zone 2 Linear Fitting

- Ex-proof linear luminaires are for use in locations such as Zones 2 & 22
- Circuit watts 35 w and 75 w; > 60 000 hr rated life expectancy
- Ambient temperature - 40°C ~ +55°C
- Luminous efficacy 130 lm/w
- **IP66**
- Emergency option available

LED Vapour-Proof Luminaires

NFL LED Floodlight

LED



- Available in: 100 w, 150 w, 200 w, 240 w
- 220 V – 240 V at 50 000 hr rated life expectancy (L70/B10).
- Ambient working temperature -30°C ~ +50°C
- Luminous efficacy 110 lm/w ~ 130 lm/w
- **IP66**

NFL-HP LED

LED



High Power Modular Floodlight Luminaire

- Circuit watts from 300 w ~ 900 w
- 100 V – 240 V at 50 000 hr rated life expectancy
- Various optics available.
- Impact protection IK08
- Luminous efficacy 110 lm/w
- **IP66**
- Suitable for sports and area lighting

NGB LED

Available in
LED



LED Bulk Head

- Circuit watts 35 w, 47 w and 66 w
- 220 V – 240 V at 50 000 hr rated life expectancy
- Luminous efficacy 105 lm/w ~ 130 lm/w
- **IP65**

NST LED

LED



LED Street Light

- Circuit watts from 30 w to 180 w
- 100 V – 277 V at 50 000 hr rated life expectancy
- Ambient working temperature -30°C ~ +50°C
- Luminous efficacy 120 lm/w
- Side and bottom entry available
- **IP66**
- Additional Intelligent management controls on request

NFL-Mini LED

LED



LED Mini Floodlight

- Circuit watts 50 w, 70 w and 90 w
- 100 V - 277 V at 50 000 hr rated life expectancy
- Ambient Temperature 30°C ~ +50°C
- Luminous efficacy 115 lm/w
- **IP65**

JBLT/JBLS LED

LED



LED Vapour-Proof Light

- Unique opal prismatic diffuser which optimises the light distribution
- A good replacement for any standard electronic ballast luminaires
- Available in 600 mm, 1200 mm and 1500 mm bodies
- Circuit watts 28 w / 39 w (600 mm) 53 w / 75 w (1200 mm) 64 w / 92 w (1500 mm) 50000 hour rated life (L90/B10)
- available in 9 w, 18 w and 24 w LED tubes
- **IP65 and IP66.**

NML LED

LED



LED Flood/Bulk Head

- Small security light (various optical systems available)
- Circuit watts 40 w and 60 w
- 220 V - 240 V at 50 000 hr life expectancy (L70/B10)
- Ambient working temperature 35°C
- **IP65**

NHL100 LED

LED



LED Highbay Light

- Advance ergonomic light distribution
- High transmittance lens for even light distribution
- The LED Highbay is available in four optical beams for different types of wattage (100 w/120 w/150 w/200 w)
- 100 V - 277 V at 50 000 hr rated life expectancy
- Operates at -30°C ~ + 50°C
- Luminous efficacy 150 lm/w
- **IP65**

JBLS-LB LED

LED

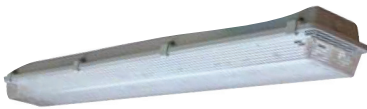


LED Low Bay Vapour-Proof Light

- Circuit watts 39 w (600mm) 75 w (1200 mm) 92 w (1500 mm) at 50 000 hr rated life (L90/B10)
- 4 mm-thick clear armour-plated glass
- Unique aluminium reflector design to optimise light distribution
- **IP65**

Industrial Lighting – Vapour-Proof Luminaires

JB/JBF



Vapour-Proof Light

- JB for Industrial applications with twistlock lamp holders
- JBF luminaire range has a flame-retardant body, polycarbonate injection moulded lens with linear prisms, with stainless-steel clips
- Available in emergency configuration
- **IP65 and IP66**

NMS1200



Microwave Motion Sensor Light

- Pre-set motion detector
- Detection is possible through doors, glass panes and thin walls
- Suitable for Zone 2 indoor and outdoor classified areas
- SA Patent No. 2012/06/12
- Rated load 1200 w @ 220 VAC – 240 VAC
- **IP65**

N20



Available in
LED

Corrosion-Resistant Light

- Available in 304 and 316 marine grade stainless steel
- Luminaire range has a deep drawn stainless-steel body, single-piece pressed frame and stainless-steel clips
- 4 mm-thick clear armour-plated glass
- Available in T8 and T5 lamps
- LED strip versions also available
- **IP65**

MiniLite LED



LED

- For underground and surface areas such as walkways; conveyor belts; roadways and washbays, etc.
- 50 000 hr rated life expectancy
- 14 w (110 LEDs)
- Clear polycarbonate lens cover
- Connection via mini lite power junction box
- Voltage: 90 V – 250 V
- **IP65**

MiniLite Energy Saver – Single



LED

- Used for underground haulage and surface areas
- Available in a single 12 w LED GU10 globe
- Voltage: 110 V – 220 V
- Diffused polycarbonate lens cover
- Connection via mini lite power junction box
- **IP66**
- Lead and plug available on request

NHG/NHD



Highbay Light

- Luminaire is a die-cast aluminium lamp holder assembly
- Control gear housing in GRP
- Suspension hooks carry the weight of the luminaire
- 4 mm-thick armour-plated glass with polycarbonate shield spun into the bright anodised reflector ensures an **IP66** rating

NB



Available in
LED

Bulkhead Light

- Luminaire has been designed to satisfy a wide range of Industrial applications
- Options include: wall ceiling brackets, angled wall brackets, anti-vibration mountings, pole mounting brackets and an angled post top bracket
- Available in emergency configuration
- LED versions available
- **IP65**

MiniLite Energy Saver – Double



LED

- Used for underground haulage and surface areas
- Available in double 12 w LED GU10 globes
- Voltage: 110 V – 220 V
- Diffused polycarbonate lens cover
- Connection via mini lite power junction box
- **IP66**
- Lead and plug available on request

NGB



Bulkhead Light

- Luminaire range has been designed for indoor and outdoor lighting installations, industrial and security lighting applications
- This bulkhead luminaire range is suitable for ceiling, wall or pole mounting
- Available in 70 w to 150 w HPS, 70 w to 150 w MH lamps and 80 w to 125 w MVE lamps (optional)
- **IP65**

NSF/Maxi



Flood Light

- Luminaire consists of two parts, an exterior control-gear box and a separate lamp holder/reflector compartment
- Extreme temperature rises are limited by the separation of control gear and lamp
- Lamp options are MVE, MH, and HPS
- **IP65**

Midi



Flood Light

- Luminaire consists of a GRP head compartment with lamp holder and reflector assembly
- The 150 w high pressure sodium control gear is housed within the head
- Instant restrike version has 2 x 26 w compact fluorescents
- **IP65**

Mini



Flood Light

- Luminaire consists of a GRP head compartment with lamp holder and reflector assembly
- The control gear is housed within the head
- Available in 70 w HPS, 125 w MVE and 100 w MH
- **IP65**

Commercial Lighting

NCL-LED

LED



LED Canopy Light

- Recessed, surface and suspended mount
- Circuit watts available from 50 w – 200 w
- 100 V – 277 V at 50 000 hr rated life expectancy
- Ambient temperature -30°C ~ 50°C
- Luminous efficacy 160 lm/w
- Colour temperature 5000 K
- **IP66**

NHO



Highbay Light

- DMC glass fibre reinforced polyester, compression moulded in two sections
- Control gear housing in GRP
- Suspension hooks carry the weight of the light fitting during installation
- **IP20**

NSC

Available in
LED



Corrosion-Resistant Open Channel Light

- Luminaire made of stainless steel and is available in 600 mm, 1200 mm and 1500 mm lengths
- Available in T8 and LED tubes
- Stainless-steel wings available as an optional extra
- **IP20**

NBV

Available in
LED



Bulkhead Light

- Suitable for indoor and outdoor applications
- Available in emergency configuration
- Series bulkhead, economical and energy efficient compact fluorescent suitable for industrial and/ or public buildings, weather-proof ceiling or wall mounting luminaires if required, particularly where low running costs and long trouble-free operation are important
- **IP65**

T8 LED TUBES Frosted and Clear Tubes

LED



LED Tubes

- Fully compatible with the traditional T8 fluorescent lamps
- The milky-white Frosted glass and Clear glass tubes provide high light transmittance and soft light colour, available in 600 mm (9 w), 1200 mm (18 w) and 1500 mm (24 w) LED tubes
- 35 000 hr rated life expectancy
- Ambient working temperature -10°C ~ 45°C

NBR

Available in
LED



Bulkhead

- Available with flat diffuser or dome diffuser
- Architecturally designed bulkheads for use with compact fluorescent lamps
- The clean modular design of these vandal-resistant bulkheads makes them ideal features to form interesting architectural lighting design elements along walkways, façades and stairs
- **IP65**

WVB

Available in
LED



Prison Fitting Light

- Heavy-duty luminaire designed to be used in areas subject to physical abuse with a view to vandalise and destroy
- Available in 304 and 316 marine grade stainless steel
- Also available in galvanised steel
- Require a special tool to open luminaire
- 4 mm-thick clear polycarbonate lens, with internal rib to limit glare
- Mechanically fixed and then sealed into the fabricated frame
- The combination is designed for impact strength, and appearance
- **IP54**

NCP

Available in
LED



Prison Fitting Light

- Heavy-duty luminaire based on the JB Polycarbonate diffuser with sheet-steel fabricated body and lens frame
- Available in 304 and 316 marine grade stainless steel
- Also available in galvanised steel
- Require a special tool to open luminaire
- 1,2 mm-thick clear polycarbonate lens, with internal linear prism to limit glare
- Sealed into the fabricated frame
- The combination is designed for impact strength, and appearance
- **IP54**

Area Classification

GENERAL: Zone 1 and Zone 2 locations are those in which flammable gases or vapours are or may be present in the air in quantities sufficient to become hazardous.

Zone 1 Locations

These are locations:

- a) in which hazardous concentrations of flammable gases or vapours occur intermittently or periodically under normal operating conditions, or
- b) in which hazardous concentrations of flammable gases or vapours may occur frequently because of repair or maintenance operations or leakage, or
- c) in which breakdown or faulty operation of equipment or processes, which release dangerous concentrations of flammable gases or vapours, might also cause simultaneous failure of electrical equipment.

NOTE: this classification usually includes locations where volatile flammable liquids or liquefied flammable gases are transferred from one container to another; interiors of spray booths and areas in the vicinity of spraying and painting operations where volatile flammable solvents are used; locations containing open tanks or vats of volatile flammable liquids; drying rooms or compartments for the evaporation of flammable solvents; locations containing fat or oil-extraction apparatus using volatile flammable solvents; portions of cleaning and drying plants where flammable liquids are used; gas generator rooms; inadequately ventilated pump rooms for flammable gases or for volatile flammable liquids and all other locations where hazardous concentrations of flammable vapours or gases may occur in the course of normal operations

Zone 2 Locations

These are locations in which operations concerned with flammable or explosive substances, gases, or vapours or volatile liquids are so well controlled that an explosive or ignitable concentration is only likely to occur under abnormal conditions.

NOTE: The following shall be regarded as the minimum requirements for a location to which this classification is applicable: a) The area is so well ventilated that, if abnormal conditions arise, ignitable concentrations of the gas or vapour are rapidly dispersed and their possible contact with electrical equipment is of minimum duration.

GENERAL: Zone 21 and 22 locations are those which are hazardous because of the presence of combustible dust and fibres.

NOTE: Locations that house only plant and machinery that become non-operative if they lose their dust-tightness or if their internal pressure ceases to be below atmospheric pressure and locations where combustible dust is stored in dust-tight containers only, need not be classified. The classification of locations where dust is not normally in suspension in the air, but where mechanical failure or abnormal operation of machinery or equipment might cause suspension of dust and might also provide a simultaneous source of ignition through failure of electrical equipment, operation of protective devices, etc., depends on the specific circumstances.

Zone 21 Locations

These are locations:

- a) in which, under normal operating conditions, combustible dust or fibre is (or is likely to be) in suspension in the air in quantities sufficient to produce an explosive or ignitable mixture,
- b) in which metallic dusts may be present.

NOTE: This classification usually includes, for example, rooms containing machines (such as grinders, pulverisers, cleaners, graders and scrapers that are not provided with suitable dust extraction or exhaust systems, open bins and hoppers, terminal points of open conveyors and spouts in grain processing plants, starch plants, sugar plants, malting plants, hay plants and coal plants); and all working areas where metallic dusts and powders are produced, processed, handled, packed, or stored (except when these are stored in sealed containers).

Zone 22 Locations

These are locations in which combustible dust or fibre will not normally be in suspension in the air, or will not be likely to be thrown into suspension by the normal operation of equipment or apparatus, in quantities sufficient to produce an explosive or ignitable mixture, but where:

- a) deposits or accumulations of such dust may be enough to interfere with the safe dissipation of heat from electrical apparatus, or
- b) deposits or accumulations of dust in, on, or in the vicinity of electrical apparatus might be ignited by arcs, sparks, or burning materials from such apparatus.

This may not be a stock item. Please speak to our sales representative about lead times. Lead times, price and availability can only be determined on receipt of an official quote from our supplier. This can sometimes take up to 3 days.

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