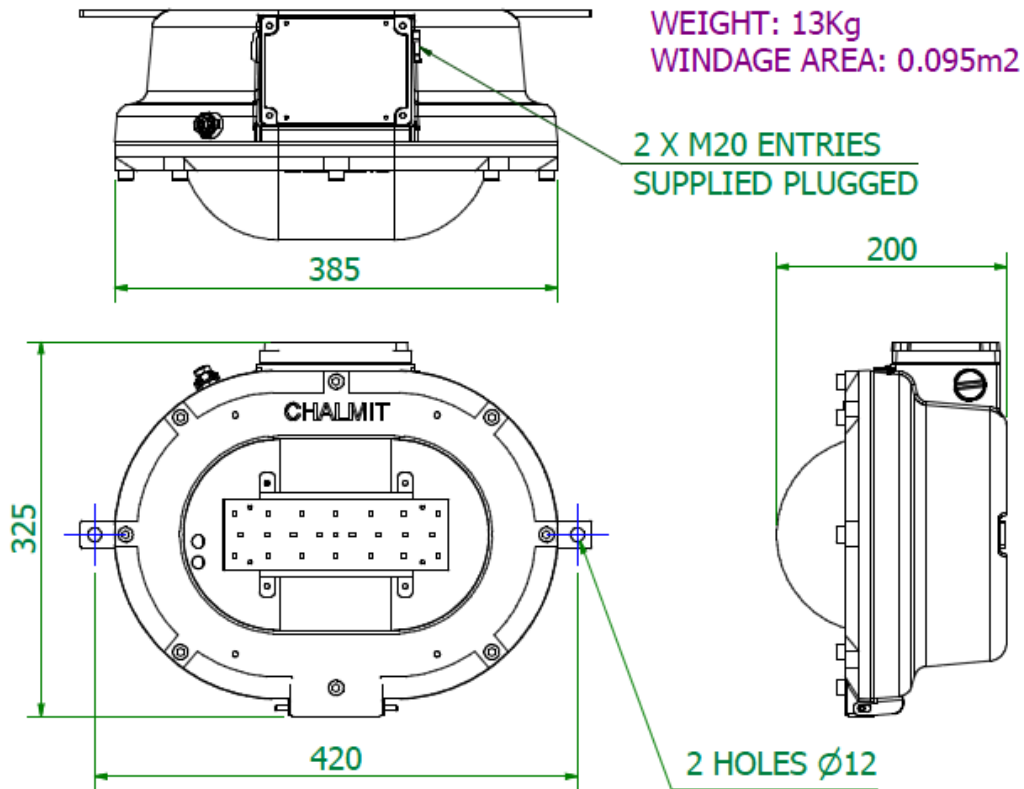


Nevis LED Bulkhead Luminaire


ATEX & IECEx

INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTIONS

Important: Please read these instructions carefully before installing or maintaining this equipment. Good electrical practices should be followed at all times and this data should be used as a guide only.





Type Of Protection	Ex de (flameproof and increased safety), Ex tD (dust)
Protection Standards	(IEC) EN 60079-0, (IEC) EN 60079-1, (IEC) EN 60079-7, (IEC) EN61241-0, (IEC) EN61241-1
Area Classification	Zone 1 and Zone 2 areas to (IEC) EN 60079-10-1 Zone 21 and Zone 22 areas to (IEC) EN 60079-10-2
Installation	(IEC) EN 60079-14
Certificate	IECEX Certificate of Conformity IECEX BAS08.0054 EC- Type Examination Certificate Baseefa08ATEX0178
Equipment Coding	Ex de IIB T6 Ex tD A21 IP66 T80°C -55°C ≤ Ta ≤ +55°C
ATEX Coding	Ⓜ II 2GD
Ingress Protection	IP66 to EN/IEC 60529
CE Mark	 <p>The CE marking of this product applies to "The Electrical Equipment (Safety) Regulations 2006", "The Electromagnetic Compatibility Regulations 2004", the "Waste Electrical and Electronic Equipment Regulations 2006" and the "Equipment and Protective Systems intended for use in Explosive Atmospheres Regulations 1996". [This legislation is the equivalent in UK law of EU directives 2014/35/EU, 2014/30/EU, 2012/19/EU and 2014/34/EU respectively].</p> <p>The Equipment is declared to meet the provisions of the ATEX directive (2014/34/EU) by reason of the EC Type Examination and compliance with the Essential Health and Safety Requirements. M Poutney Technical Manager</p>

SPECIAL CONDITIONS FOR SAFE USE

None

1.0 Introduction – NEVIS BULKHEAD

The Nevis LED Bulkhead Luminaire operates from mains voltage as a maintained light fixture.

Voltage Range: 100 - 277 Vac
110 – 390 Vdc

WATTS	Hz	VOLTS	AMPS	INRUSH	LUMENS
48	50/60	100-277	0.49 - 0.18A	60A	4058

2.0 Storage

Luminaire and led driver are to be stored in cool dry conditions preventing ingress of moisture and condensation.

3.0 Installation and Safety

3.1 General

There is no health hazards associated with this product whilst in normal use. However, care should be exercised during the following operations. Installation should be carried out in accordance with *EN/IEC 60079-14* or the local hazardous area code of practice, whichever is appropriate, and fitting of specified insulating material to be adhered to where a specific fire resistance rating is required.

In the UK the requirements of the *'Health and Safety at Work Act'* must be met.

Handling and electrical work associated with this product to be in accordance with *the 'Manual Handling Operations Regulations'* and *'Electricity at Work Regulations, 1989'*. Your attention is drawn to the paragraphs

- (i) 'Electrical Supplies',
- (ii) 'Electrical Fault Finding and Replacement' and
- (iii) 'Inspection and Maintenance'. The luminaires are Class 1 and should be effectively earthed.



The luminaires are quite heavy and suitable means of handling on installation must be provided.

Maximum Insulation Resistance Test 500V dc.

Guards can be supplied with or fitted retrospectively to protect glass if there is a higher than normal risk of mechanical damage.

This bulkhead luminaire has passed thermal shock testing during certification, it is still advisable to mount the bulkhead in locations to reduce the possibility of thermal shock.

Certification details on the rating plate must be verified against the application requirements before installation.

The information in this leaflet is correct at the time of publication. The company reserves the right to make specification changes as required.

3.1.1 Use in Combustible Dust Atmospheres

Where the equipment is used in ignitable dust atmospheres reference must be made to the selection and installation standards in order that the equipment is used correctly. In particular this applies to the de-rating of surface temperature for use where dust clouds may be present. Dust layers should not be allowed to accumulate on the fitting surface and good housekeeping is required for safe operation. Dust in layers has the potential to form ignitable clouds and to burn at lower temperatures.

Refer to EN/IEC 60079-10-2 & EN/IEC 60079-14 for additional details of selection and installation.

3.1.2 Hybrid Mixtures – Gas plus Dust.

Where Hybrid mixtures exist as defined in EN1127 as a potentially explosive atmosphere, consideration should be given to verifying that the maximum surface temperature of the luminaire is below the ignition temperature of the hybrid mixture.

3.1.3 Floodlight Orientation in the presence of combustible dust.

As the build up of the dust layer can never be guaranteed not to occur, the luminaire must not be mounted in an orientation where the dust could lie on the glass. The temperature on the glass is the hottest point on the luminaire and any obstruction of the radiation from the luminaire would cause the surface temperature to increase.

3.2 Tools

6, 3mm A/F socket keys

3mm and 5mm flat blade screwdriver

Suitable spanners for installing cable glands

Pliers, knife, wire strippers/cutters

3.3 Electrical Supplies

A maximum voltage variation of +6%/-6% on the nominal is expected. The safety limit for T rating is +10%.

3.4 Light Source

The luminaire is fitted with LEDS that can last 50,000 hours depending on ambient temperatures. Therefore depending on the functionality of the fitting replacement of LED's will be rare /unnecessary. If the LED assembly needs replaced refer to **(4.2 LED Replacement)**.

3.5 Mounting

Luminaires should be installed where access for maintenance is practical and in accordance with any lighting design information provided for the installation. This will usually consist of aiming points and aiming angles. Mounting arrangements should be secured with lock washers or self-locking nuts and bolts.

3.6 Cabling and Cable Glands

3.6.1 Cable Glands

The installer and user must take responsibility for the selection of cables, cable glands and seals.



The product is certified for ATEX and to comply with the certification for installation and use within the EU, cable glands and sealing plugs must be ATEX certified.

For installation outside the EU, suitable cable glands in accordance with EN/IEC 60079-0 will meet the technical requirements.

Cable glands for entry into Ex e enclosures when fitted with any gland to body sealing method and the supply cable must reliably maintain the IP rating of the enclosure (IP66) with a minimum value of IP54.

The cable gland must withstand an impact value of 7Nm where the risk of mechanical damage is high or 4Nm where the risk of mechanical damage is low.

Sealing plugs must be similarly rated and a tool must be used for their removal. Where the cable is not reliably clamped externally to the apparatus, the cable gland must clamp the cable against a pull in Newtons of 20x the cable OD in mm for non-armoured cable and 80x the cable OD for armoured cable. Where brass cable glands are used in a corrosive environment cadmium or nickel plating should be used. Two tapped cable entries are provided, one with a plug and seal suitable for permanent use, the other has a travelling plug. M20 x 1.5 entries are standard, other sizes are available on request.

3.6.2 Cable

The temperature ratings of the entries are suitable for ordinary PVC cable (70°C). Users may wish to use fire resistant cables of 1.5mm²).

3.6.3 Cable Connection

The cable connections are made by removing the terminal chamber cover. The retaining screws are captive and should be re-greased as required. The conductors should be bared back so that they make full contact in the terminals, but the bare conductor should not be more than 1mm beyond the terminal. Unused terminal screws should be tightened. The core must be identified by polarity and connected in accordance with the terminal markings. Before re-fitting the cover, a final check on the correctness of connections should be made. Ex e cover bolt torque 6Nm.

4.0 Inspection and Maintenance

Individual organisations will have their own procedures for inspection and maintenance. What follows are guidelines based on *EN/IEC 60079-17* and on our experience. Maintenance work and fault finding must be performed by competent personnel under an appropriate permit to work and with the apparatus isolated. Frequency of maintenance will depend on experience and the operating conditions.

Luminaire should not be opened when an explosive atmosphere is present.

Maximum Insulation Resistance Test 500V dc.

- 1 Check if any LED's have failed (do not light).
- 2 If there is 7 or more not working the light output will have dropped to a level the LED assembly may need replaced.
Refer to 4.2 LED Replacement.
- 3 Check the terminal chamber bolts for tightness. Torque 6Nm.
- 4 Check the cable gland for tightness and re-tighten if necessary.
- 5 Check any external earthing.
- 6 Examine the lampglass for any signs of damage and for any signs of sealant damage, cracking or discoloration. If thought necessary, the silicone weather seal can be re-sealed with a proprietary brand of clear RTV silicone, but only if the underlying sealant is in good condition.
- 7 Check all cover bolts for tightness. Torque 16Nm.
- 8 Check for signs of corrosion between the lampglass cover and the main housing. Evaluation of this will be a matter for judgement gained by experience, as there may be little evidence on the outside. If there is any sign of corrosion, remove the cover and wipe the flameproof paths with a clean cloth and non-metallic scraper. Examine the surfaces for pitting; any pitted component should be replaced. A damaged or non-resilient gasket* must be replaced. The cord is 4mmØ. The cover should be re-greased with silicone (Dow Corning 'Molykote III' or similar) or other non-setting grease suitable for high temperatures, and re-fitted with all bolts fully tightened. Any replacement bolts must be identical to the original. All are 18/8 stainless steel, ISO262 grade A4-70. With this type of flameproof path all bolts must be in place and tight. The maximum gap for IIB in this case is 0.15mm. It will be unusual for any luminaire to have a gap of more than 0.1mm when tried with a feeler gauge. If 0.1mm is exceeded, check that no foreign bodies or debris at the bottom

- of the blind tapped holes is keeping the surfaces apart and, if not, a workshop overhaul should be carried out to bring the apparatus to as new condition. Periodically, when the lampglass is removed, the opportunity should be taken to remove the reflector, check the lampholder connections for signs of over-heating and similarly check the control gear.
- 9 The terminal chamber should be opened periodically and checked for moisture and dirt ingress. The cable connections should be checked for tightness. The gasket* should be checked for cracks or lack of elasticity, and if necessary, replaced. (It may well be practical to also replace the gasket* on each occasion if this is at a 3-year interval). Torque 6Nm.
 - 10 If painting operations have taken place around the luminaire, ensure that coatings have not entered the flameproof path or been deposited on the lampglass. If they have, dismantle and clean carefully.
 - 11 Check that mountings are secure.
 - 12 Cover the bolt heads with silicone grease to prevent corrosion and accumulation of dirt in the screw threads.
 - 13 Clean the lampglass.
 - 14 If there is suspicion that the luminaire has suffered mechanical damage, a stringent workshop check should be made.

Important: Where spares are needed, these must be replaced with manufacturer parts. No modifications should be made without the knowledge and approval of the manufacturer.

*EPDM Gasket not to be fitted below -20°C.

4.1 Electrical Fault Finding and Replacement

Any fault finding must be done by a competent electrician with the luminaire isolated and if carried out with the luminaire in place, under a permit to work. Fault finding is by substitution with known good components.

4.2 LED Replacement.

The need and frequency of replacing LED's be dependent on the functionality of the fitting. If it is continually running at high ambient temperatures it will affect the frequency of LED replacement. If it is necessary to replace the LED's, all the LED's will be replaced as an assembly mounted on an aluminium back plate. The full assembly supplied by Chalmit.

The area should be gas free, (this is because there are un-assessed electronic components in the unit and these could retain stored energy).

Removal of LED assembly is as follows:

1. Disconnect supply to LED array by lightly pressing on push-button terminals then withdrawing conductors.
2. Unscrew 4 off M4 screws that secure the flat aluminium plate to the casting.
3. Carefully lift the plate allowing it to hang off the hanging strap.
4. Unscrew the led plate from the gear tray then slide it to remove.

Replacement of LED assembly is the reverse of the removal. Take care that the + and – wires from the assembly are connected correctly into the terminal block.

The flameproof path should have a generous coat of silicone (*Dow Corning Molykote III* or similar), or other protective non-setting grease. Replace all bolts and fully tighten. Torque to 16Nm.

5.0 Disposal of Material


The unit is mostly made from incombustible materials. The control gear contains electronic components and synthetic resin. All these may give off noxious fumes if incinerated. Care must be taken to render these fumes harmless and avoid inhalation. Any local regulations concerning disposal must be complied with. Any disposal must satisfy the requirements of the WEEE directive [2012/19/EU] and therefore must not be treated as commercial waste.



To comply with the Waste Electrical and Electronic Equipment directive 2012/19/EU the apparatus cannot be classified as commercial waste and as such must be disposed of or recycled in such a manner as to reduce the environmental impact.





Chalmit Lighting is a leading supplier of Hazardous Area lighting products

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For technical support, please contact: techsupport@chalmit.com

Note: Chalmit Lighting reserves the right to amend characteristics of our products and all data is for guidance only.

	EU-Declaration of conformity		
	UE-Déclaration de conformité		
	EU-Konformitätserklärung		
Manufacturer	Chalmit	Address	388 Hillington Road, Glasgow. G52 4BL Scotland UK
Product	Nevis LED Bulkhead Luminaire.		
EC - Type Examination Certificate	Baseefa08ATEX0178		
Notified Body	SGS Fimko OY 0598		
ATEX Coding	 II 2 GD	ATEX Classification	Group II Category 2 GD
Equipment Coding	Ex de IIB T6 , Ex tD A21 T80°C -55°C ≤ Ta ≤ +55°C		
Ingress Protection	IP66		
The technical basis, with respect to equivalence of			
La base technique, en ce qui concerne l'équivalence de			
Die technische Grundlage hinsichtlich der Normen			
Protection Standards EN 60079-0, EN 60079-1, EN 60079-7, EN 61241-0, EN 61241-1			
Area Classification EN 60079-10-1 and EN 60079-10-2			
of compliance with the EHSRs is valid as there are no changes which materially affect the state of technological progress of the product.			
en conformité avec les EESS est valide puisqu'il n'y a aucun changement qui affecte matériellement l'état de l'évolution technologique du produit.			
zur Erfüllung der GSGA ist gegeben, da keine Änderungen erfolgt sind, die einen Einfluss auf den technischen Stand des Produkts haben.			
Terms of the directive:		Standard & Date Certified to	Standards Date Declared to
Prescription de la directive:		Standard & date certifiée à	Normes date Déclaré
Bestimmungen der Richtlinie:		Standard & Datum Zertifiziert nach	Standards Datum erklärt
2014/34/EU	Equipment and protective systems intended for use in potentially explosive atmospheres.	EN 60079-0: 2006	2012
		EN 60079-1: 2004	2014
2014/34/UE	Appareils et les systèmes de protection destinés à être utilisés en atmosphères potentiellement explosibles.	EN 60079-7: 2006	2015
		EN61241-0: 2004	EN 60079-0: 2012
2014/34/EU	Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsfähigen Bereichen.	EN61241-1:2004	EN 60079-31: 2014
2014/30/EU	Electromagnetic compatibility	EN 55015 : 2013	
2014/30/UE	Compatibilité électromagnétique	EN 61547 : 2009	
2014/30/EU	Elektromagnetische Verträglichkeit	EN 61000-3-2 : 2014	
2014/35/EU	Low voltage equipment	EN 60598-1 : 2015	
2014/35/UE	Équipements électriques à bas voltage	EN 60598-2-5 : 2015	
2014/35/EU	Niederspannungsgeräte / -systeme	EN 60529 : 1992	
2012/19/EU	Waste of electrical and electronic equipment		
2012/19/UE	Déchets d'équipements électriques et électroniques		
2012/19/EU	Entsorgung der elektrischen und elektronischen Geräte / Systeme		
2011/65/EU	RoHS II Directive		



On behalf of the Chalmit, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms to all technical and regulatory requirements of the above listed directives.			
En tant que représentant du fabricant Chalmit, je déclare qu'à la date où les équipements accompagnant cette déclaration sont mis sur le marché, ceux-ci sont conformes à toutes les dispositions réglementaires et techniques des directives énumérées ci-dessus.			
Hiermit bestätige ich, im Namen von Chalmit, dass am Tag der Lieferung des Produkts/der Produkte zusammen mit dieser Erklärung das Gerät/die Geräte alle technischen und regulativen Anforderungen der oben aufgeführten Direktiven erfüllt.			
Name and Date	Mark Poutney	01/01/2021	Technical Manager
Nom et Date			Directeur technique
Name und Datum			Technischer Leiter
Quality Assurance Notification by:	SGS Fimko OY	Quality Management System Accreditation:	ISO 9001
Notification d'assurance qualité par:	0598	Système de Management Qualité Accréditation:	
Qualitätssicherungsnotifikation durch:		Qualitätsmanagementsystem Akkreditierung:	
		Environmental Management System.	ISO 14001
		Système de gestion de l'environnement.	by/par/durch
		Umwelt kontroll system.	Lloyd's Register
		Certificate No./Certificat N°/Zertifikat Nr.	LRQ 4005876