
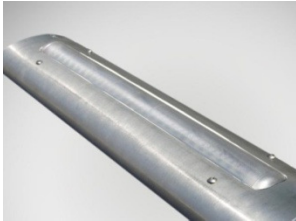
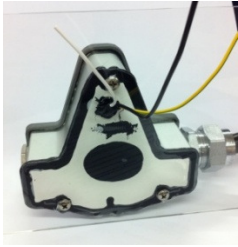

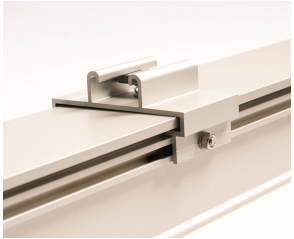
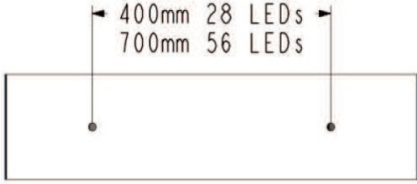
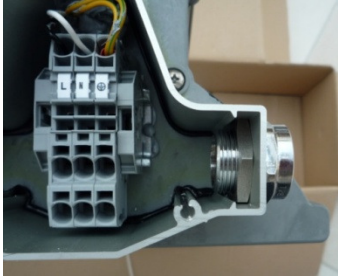
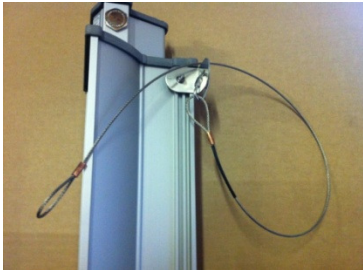






	TNAML 2x36W	SafeSite® Series LED Linear Fixture 64W	
Design	Proven design and technology in the field	NEW design/product	
Energy consumption	68.58VA (measured)	64W consumption (from datasheet) Power factor: 0.9 = 71VA	<i>Many LED lighting fitting manufacturers claim significant energy savings compared with fluorescent luminaires. However, the information in the datasheet clearly shows that there is NO ENERGY SAVING compared with TNAML.</i>
Warranty	10 years with clear warranty statement	5 years	Details of SafeSite® Warranty statement unknown.
Warranty battery	10 years	Not specified	
Diffuser	Toughened glass 	Polycarbonate  <i>SPECIAL CONDITIONS OF CERTIFICATION:</i> <i>The equipment may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user should ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charge on non-conducting surfaces. Additionally, cleaning of the equipment should be done only with a damp cloth. (see IECEx certifcate)</i>	<i>Challenges with polycarbonate:</i> <ul style="list-style-type: none"> • <i>Yellowing</i> • <i>Permeation of water vapour causing water ingress</i> • <i>Static charge (must not be mounted very near to any probable location of fast moving stream of dry air, steam, etc.)</i> • <i>Cracking of surface</i> • <i>Pollution on the material</i> <i>Resulting in reduction of light output by 30 – 50%</i>

<p>Maintenance</p>	<p>Sealed-for-Life, 100% maintenance free. Visual inspection only is required in accordance with EN/IEC 60079-17</p> 	<p>NOT sealed-for-life, Exe construction. Visual, Close and Detailed inspection is required in accordance with EN/IEC 60079-17 In addition, the battery will need to be replaced from time to time.</p>	<p>Inspections are costly (i.e. permits, labour, scaffolding, etc.) and pose a risk of damaging the protection concept causing failures.</p>
<p>IP rating</p>	<p>IP66 according to Certificate. IP68 independently tested by DEKRA (Certificate: DEKRA 211978700; Can be submerged indefinite)</p> 	<p>According to the certificate: “It is recognised that, in addition to the IP 64 requirements needed to comply with the certifying standards, the ELA Series LED Linear Luminaires and Emergency variants have been independently tested according to the requirements of EN 60529 to meet IP 66 and IP 67”</p>	<p>The statement in Dialight’s certificate indicates that the IP66/67 rating only meets the requirements of EN60529 and NOT the more stringent requirements of the certification standard i.e. IP rating AFTER successfully passing the temperature aging test and the impact test.</p>
<p>Mechanical installation</p>	<p>Adjustable sliding fixings. Can be adjusted to any fixing centre.</p> 	<p>Fixed</p> 	<p>The use of adjustable mounting brackets will avoid many special constructions for mounting lighting fixtures. With TNAML you can easily adjust the bracket to the structure as opposed to adapting the structure to the fixed mounting brackets of the luminaire.</p>

<p>Electrical installation</p>	<p>Easy to install due to the fact that the 2 locknuts are held in place (no tools required internally) and each screwless terminal has two(2) connections for looping.</p> 	<p>?</p>	
<p>Safety chain</p>	<p>(Optional) Two fixing points as standard. Content: 316ss 90° bracket, 316ss 4mm quick link, 316ss 1m long 3mm wire rope sling with soft eye loops</p> 	<p>Optional. Safety shackle with 1.5m cord (material unknown)</p>	
<p>Colour Rendering Index (CRI)</p>	<p>4000K: CRI >85</p>	<p>4000K: CRI >75 6000K: CRI >70</p>	<p><i>The CRI for LEDs does not necessarily mean the same as for fluorescent tubes. For LEDs, the R9 value is also required. However, a higher CRI value means less efficient LED's due to the addition of fluorescent powders.</i></p>
<p>Temperature classification</p>	<p>T6 @ -20°C to +40°C</p>	<p>T4 @ -20°C to +60°C</p>	

<p>Impact resistance</p>	<p>Tested to IK09 (10J)</p>	<p>SPECIAL CONDITIONS OF CERTIFICATION: The ELA Series LED Linear Luminaires shall only be installed in areas of low mechanical impact risk. – See IECEx certificate</p>	<p><i>“Low mechanical risk” means a reduced impact resistance of 2J only (equivalent to dropping a 1kg weight from a height of 20cm (8 inches)) for the diffuser and/or 4J only (equivalent to dropping a 1kg weight from a height of 40cm (16 inches)) for the body. The standard values are 4J and 7J respectively.</i></p>
<p>Vibration test</p>	<p>Standard: IEC60721-2-3 Ed1.0 IEC68-2-6, test Fc Frequency range: 1 – 150 Hz Amplitude: 5 mm (1 to 10 Hz) Acceleration: 2 g_n (10 to 150 Hz) Sweep rate: 1 octave per minute # sweep cycles: 10 # directions: 3</p> 	<p>?</p>	<p><i>Offshore, vibrations are likely to occur and the machinery on the installations has a tendency to create vibrations. It is important to have products that are designed and tested to confirm their resistance to vibrations, not just a perception because of the nature of the product.</i></p>
<p>Through wiring</p>	<p>Optional: Junction box on either side of the fitting.</p> 	<p>4 gland option (2 either side)</p> 	

New Exe standard	Compliant with new Exe standard	Compliance unknown	See Sira Tech Tip No 1:- Temperature Rise of LEDs in "Ex" Equipment - 1st October 2012
		<div data-bbox="949 233 2130 600" style="border: 1px solid black; padding: 10px;">  <p style="text-align: right; margin-top: 20px;"> Sira Test & Certification Ltd Tel: +44 (0) 1244 670900 Rake Lane, Eccleston, Fax: +44 (0) 1244 681330 Chester, CH4 9JN, England Email: info@siracertification.com </p> </div> <div data-bbox="949 600 2130 1286" style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <h3 style="margin-top: 0;">Tech Tips</h3> <p>We have started a Tech-Tips section in our website with the intention of bringing current and perhaps novel HazLoc related technical information to the attention of our readers. It is not intended to be a regular item but rather when we believe there is something of interest.</p> <p>Tech Tip No 1:- Temperature Rise of LEDs in "Ex" Equipment - 1st October 2012</p> <p>LED's are increasingly being used in hazardous area lighting. The main types of protection that are being targeted for certification are "Ex e", "Ex i" and "Ex m". However when the next edition of the "Ex e" standard (IEC 60079-7) is published it is very likely to be no longer available as an option.</p> <p>This will cause a problem for designers trying to comply with the standards, IEC 60079-11 (Ex i) and IEC60079-18 (Ex m). At least one fault for "Ex ib" and "Exmb" has to be applied and still achieve a suitable maximum surface temperature. For testing purposes the fault is mimicked by applying a worst case matched power to the LED to simulate failing to a theoretical worst case condition.</p> <p>Clearly this will cause an abnormally high temperature rise of the LED and most likely exceed any desirable temperature class.</p> <p>Clause 7.6 d) of IEC 60079-11:2011 states that diodes including LED's "operated within the requirements of 7.1 shall only be considered for the power they shall dissipate in the forward conducting mode, or Zener mode, if applicable."</p> <p>This means if the LED has a safety factor of at least 1.5 on its rated current, the maximum power dissipation is calculated from the product of the LED forward volt drop and its forward current. You could then describe it as an infallible LED. This will clearly give a much better result.</p> <p>For more information please contact Sira.</p> </div>	