



**II 2G Ex d IIC T6 Gb**  
**II 2D Ex tb IIIC T80°C Db**

- **For mounting on sight glass fittings;** ideal for spotlighting processes on machines and reactors where space is restricted; suitable for use in potentially explosive operating areas.
- **This Lumistar luminaire has been specifically developed for light guide technology:**
  - extreme light efficiency thanks to high-power LEDs
  - low energy consumption
  - convenient to service due to long-life high-power LEDs
  - flexible light guide with stainless steel sheath
  - easy to clean
- **Application:**  
For illuminating special processes and/or the interior of reactors, containers and apparatuses in potentially explosive environments, zones 1 and 2 as well as zones 21 and 22.
- **Protection class:** IP 65 and IP 67 acc. to DIN EN 60529
- **Operating conditions:**  
Independent of vacuum/pressure in the vessel.  
Under no circumstances should a sight glass luminaire be used as a substitute for the cover flange or instead of the complete sight glass flange assembly, or on its own to close a vessel port.
- **Lumistar luminaires of this type are approved for use in ambient temperatures of between -20°C and +50°C.**
- **Technical data – Ex protection:**  
This luminaire fulfils the fundamental health and safety regulations by complying with the provisions for:
  - Gas**  
EN 60079-0: 2012 + A11: 2013 General requirements  
EN 60079-1: 2007 Flameproof encapsulation 'd'  
Explosion group: IIC (includes IIA and IIB)  
Temperature class: T6 at ambient temperature 50°C
  - Dust**  
EN 60079-0: 2012 + A11: 2013 General requirements  
EN 60079-31: 2009: Protection by enclosure 't'  
Explosion group: IIIC (includes IIIA and IIIB)  
Temperature class: T80°C at ambient temperature 50°C
- **EC type examination certificate:** BVS 14 ATEX E 172 X  
(X = The connecting cable must be protected against electrostatic discharge for applications in areas where there is a risk of dust explosions)
 

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- **Operating voltage:**

24 V	AC/DC	LED 7 W
120-230 V	AC/DC	LED 7 W

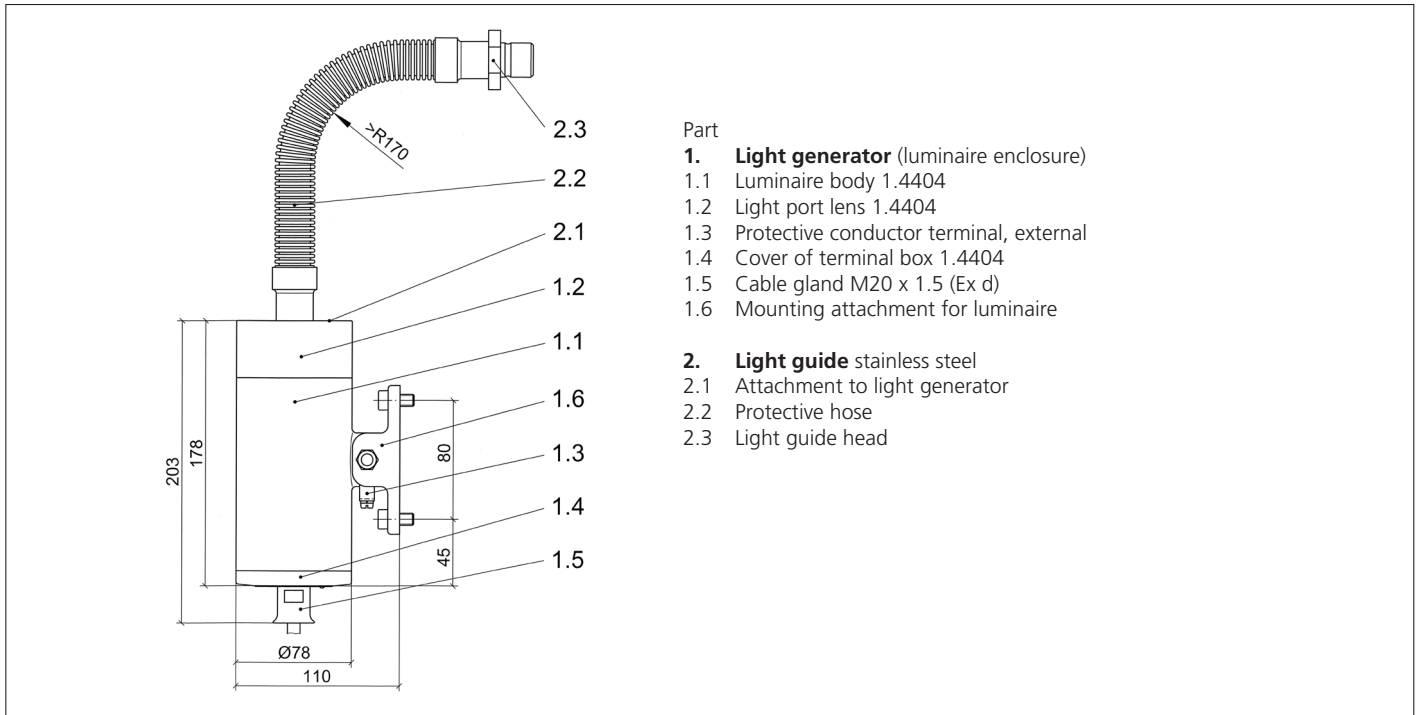
 Protected by internal micro-fuse.
- **Voltage type:** AC/DC
- **Simple electrical connection by integrated cable tail or by Ex d cable entry gland**



Lumistar luminaire 'Lumiflex' ESL55LED-ALF-Ex

- **Electrical connection – alternative options:**
  - Using the factory-fitted, pressure-tight encapsulated power lead (standard length 2 m), which is temperature-resistant up to 110°C, complete with screwed gland. Other cable length available on request: 10 m
  - By way of cable gland in compliance with EN 60079-14/ Section 10.
  - Other types of cable glands and cables are shown in the table overleaf.

• **Dimensions and electrical data for Lumistar luminaire 'Lumiflex' ESL55LED-ALF-Ex**



- Part
- 1. Light generator** (luminaire enclosure)
    - 1.1 Luminaire body 1.4404
    - 1.2 Light port lens 1.4404
    - 1.3 Protective conductor terminal, external
    - 1.4 Cover of terminal box 1.4404
    - 1.5 Cable gland M20 x 1.5 (Ex d)
    - 1.6 Mounting attachment for luminaire
  - 2. Light guide** stainless steel
    - 2.1 Attachment to light generator
    - 2.2 Protective hose
    - 2.3 Light guide head

• **Description and materials:**

- **Light generator:** non-corrosive stainless steel 1.4404
- **Light aperture:** unit consisting of stainless steel ring, glass and O-ring
- **Fastening elements for light generator:** bracket (included in

- scope of supply), stainless steel 1.4301, part no. 0354.031.00
- **Light guide** (please specify length!) stainless steel attachment for light guide head (part no. 1947.005.00
- **Weight:** 3.9 kg (excl. light guide)

• **Connecting data for Lumistar luminaire 'Lumiflex' ESL55LED-ALF-Ex:**

ESL55LED-ALF-Ex	Part No.	Mains voltage	Temperature class at ambient temperature -20°C to +50°C
24 V 7 W	3541.367.00	24 V AC/DC	T6 / T80°C
120 V-230 V 7 W	3541.368.00	120 V-230 V AC/DC	T6 / T80°C

• **The following cable glands and cables should only be used in combination:**

Cable gland types	Cable types
HSK-M-Ex-d, part no. 9103.124.00 M20x1.5, 1.4404 (from Hummel)	EVA sheathed cable, Sinotherm 110, part no. 3403.017.00, 3x1.5 qmm, ø 8.5 mm
	Ölflex Heat 180, part no. 3403.045.00, 3x1.5 qmm, ø 8.9 mm
	Ölflex Heat 180, Silflex UR-AWG18, part no. 3403.044.00, 5x1.0 qmm, ø 10.3 mm
KU1BPM20-Ex-d-Alpha X part no. 9103.131.00 M20x1.5, Edelstahl (from RST)	Ölflex Classic 110 Black, part no. 3403.051.00, 3x1.5 qmm, ø 10.1 mm

• **Straightforward mechanical installation using special fixture for practical application:**

- Caution: avoid looking into the light source – risk of damage to the eyes!
- The light generator is mounted at a suitable place on the reactor, apparatus, etc., using the fastening element provided. The light guide must be mounted free of tension or twisting with a bending radius of at least 170 mm, together with the holder bracket of the light guide head.
- The light guide head is screwed to the place to be illuminated using the relevant stainless steel fastening unit.

• **Accessories:**

- Light guides are available in the following standard lengths:
  - 0,5 m part no. 3383.021.00
  - 1,0 m part no. 3383.022.00
  - 1,5 m part no. 3383.023.00
  - 2,0 m part no. 3383.024.00
  - 3,0 m part no. 3383.026.00
 Other light guide lengths can be supplied as special accessories.

• **Order data:**

- e. g. Lumistar luminaire 'Lumiflex' ESL 55-LED-ALF-Ex, 230 V/7W, part no. 3541.368.00
- light guide, length 1.5 m, part no. 3383.023.00
- bracket for light guide head, part no. 1947.005.00