

# ALULED IP20

WHITE, BLUE AND RGB  
LED MODULES  
IN FLAT ALUMINIUM PROFILE



## ALULED IP20

AluLED IP20 is ideal for indoor protected applications. The slim and flat design is extremely flexible for low profile lighting design mounting.

A key advantage of AluLED is the extremely slim and flat design, which makes it suitable for illuminating complex structures or places where space is too limited to permit traditional light sources to be installed.

### Typical applications

- Indoor contour illumination
- Indoor facility lighting

### AluLED IP20

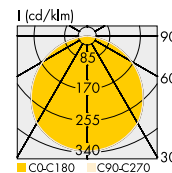
- **ALUMINIUM PROFILE WITH HIGH QUALITY LEDs**
- **PLUG & PLAY DUE TO PRE-WIRED CONNECTORS**
- **SUITABLE FOR INDOOR APPLICATIONS**
- **SLIM AND FLAT DESIGN**
- **INTEGRATED HEAT SINK FOR OPTIMAL THERMAL MANAGEMENT**
- **3 YEARS WARRANTY**  
Further infos see [www.vossloh-schwabe.com](http://www.vossloh-schwabe.com)
- **MADE IN GERMANY**



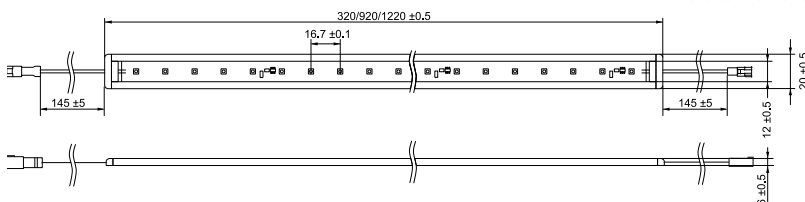
## AluLED IP20

### Technical notes

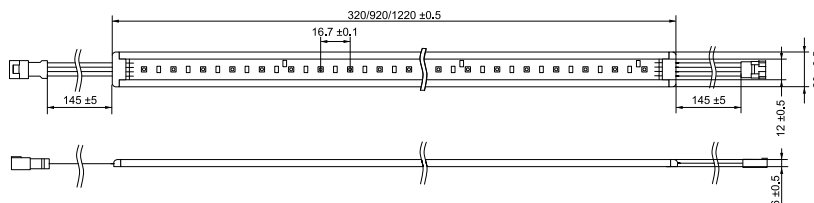
Voltage supply: 24 V DC  
 Beam angle: 120°  
 Allowed ambient temperature  $t_a$ : -30 to 85 °C  
 Allowed storage temperature: -40 to 85 °C  
 Degree of protection: IP20  
 Maximum bridging current load: 3 A  
 Lumen maintenance for white AluLED  
 L70/B20: > 50,000 hrs. at  $t_p/t_c = 50$  °C  
 Packaging unit: 20 pcs. including  
 mounting clips (brackets) and screws



### White / Blue AluLED



### RGB AluLED



### Optical characteristics

at  $t_p = 50$  °C

Type	Ref. No.	Length mm	No. of LEDs	Current mA	Colour	Colour temperature (K)	Luminous flux* lm	Power W	Cover
<b>White modules</b>									
AluLED-320-2700-IHP20-D	571142	320	18	140	warm white	2700 ±300	230	3.4	Diffuse
AluLED-920-2700-IHP20-D	571143	920	54	420	warm white	2700 ±300	690	10.1	Diffuse
AluLED-1220-2700-IHP20-D	571144	1220	72	560	warm white	2700 ±300	920	13.5	Diffuse
AluLED-320-3000-IHP20-D	571145	320	18	140	warm white	3000 ±300	230	3.4	Diffuse
AluLED-920-3000-IHP20-D	571146	920	54	420	warm white	3000 ±300	690	10.1	Diffuse
AluLED-1220-3000-IHP20-D	571147	1220	72	560	warm white	3000 ±300	920	13.5	Diffuse
AluLED-320-4000-IHP20-D	571133	320	18	140	neutral white	4000 ±300	250	3.4	Diffuse
AluLED-920-4000-IHP20-D	571134	920	54	420	neutral white	4000 ±300	750	10.1	Diffuse
AluLED-1220-4000-IHP20-D	571135	1220	72	560	neutral white	4000 ±300	1000	13.5	Diffuse
AluLED-320-6000-IHP20-D	571152	320	18	140	cool white	6000 ±300	260	3.4	Diffuse
AluLED-920-6000-IHP20-D	571153	920	54	420	cool white	6000 ±300	780	10.1	Diffuse
AluLED-1220-6000-IHP20-D	571154	1220	72	560	cool white	6000 ±300	1040	13.5	Diffuse

\* Production tolerance for luminous flux: ±10%

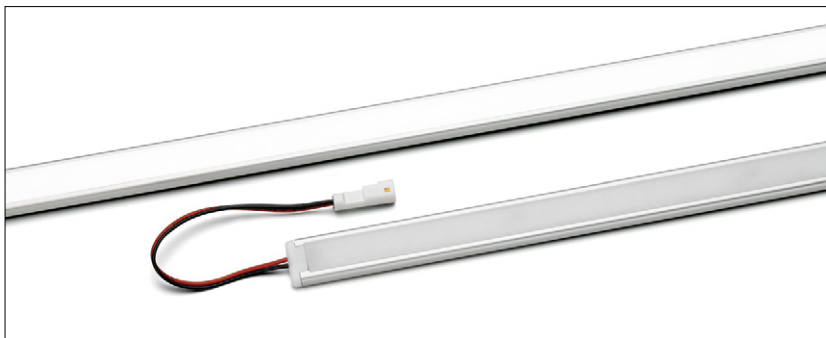
Type	Ref. No.	Length mm	No. of LEDs	Current mA	Luminous flux (lm)			Dom. wavelength (nm)			Power W	Cover
					red	green	blue	red	green	blue		
<b>RGB modules</b>												
AluLED-320-RGB-IHP20-D	571139	320	18	140	18	53	11	620-630	520-535	465-475	3.4	Diffuse
AluLED-920-RGB-IHP20-D	571140	920	54	420	53	158	32	620-630	520-535	465-475	10.1	Diffuse
AluLED-1220-RGB-IHP20-D	571141	1220	72	560	70	210	42	620-630	520-535	465-475	13.5	Diffuse
<b>Blue modules</b>												
AluLED-1220-BLUE-IHP20-D	571157	1220	72	560	—	—	42	—	—	465-475	8.4	Diffuse

Die Werte in diesem Datenblatt können sich aufgrund technischer Innovationen verändern und werden ohne gesonderte Benachrichtigung vorgenommen.

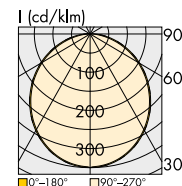
## AluLED-II-HLO IP20

### Technical notes

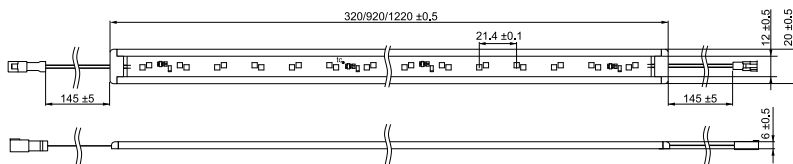
Voltage supply: 24 V DC  $\pm$  3%  
 Beam angle: 120°  
 Allowed ambient temperature  $t_a$ : -20 to 65 °C  
 Allowed storage temperature: -40 to 85 °C  
 Colour accuracy: 3 SDCM  
 Colour rendering index CRI  $R_G$ : 80  
 ESD protection: up to 2 kV  
 Degree of protection: IP20  
 Maximum bridging current load: 3 A  
 Lumen maintenance for white AluLED  
     L90/B10: > 50,000 hrs. at  $t_p/t_c = 65$  °C  
     L70/B10: > 50,000 hrs. at  $t_p/t_c = 80$  °C  
 Packaging unit: 20 pcs. including  
 mounting clips (brackets) and screws



RoHS



### AluLED-II-HLO



### Optical characteristics

at  $t_p = 50$  °C

Type	Ref. No.	Length mm	No. of LEDs	Current (mA)		Colour	Colour temperature [K]	Luminous flux* lm	Power [W]		Cover
				25 °C	50 °C				25 °C	50 °C	
AluLED-320-3000-II-HLO-IP20-D	<b>571291</b>	320	28	292	262	warm white	3000	580	7	6.3	Diffuse
AluLED-920-3000-II-HLO-IP20-D	<b>571292</b>	920	84	876	786	warm white	3000	1740	21	18.9	Diffuse
AluLED-1220-3000-II-HLO-IP20-D	<b>571293</b>	1220	112	1168	1048	warm white	3000	2320	28	25.2	Diffuse
AluLED-320-4000-II-HLO-IP20-D	<b>571300</b>	320	28	292	262	neutral white	4000	720	7	6.3	Diffuse
AluLED-920-4000-II-HLO-IP20-D	<b>571301</b>	920	84	876	786	neutral white	4000	2160	21	18.9	Diffuse
AluLED-1220-4000-II-HLO-IP20-D	<b>571302</b>	1220	112	1168	1048	neutral white	4000	2880	28	25.2	Diffuse

\* Production tolerance for luminous flux:  $\pm$ 10%

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## AluLED IP20

### EasyConnect Cable for AluLED

Max. permissible current: 3 A

Number of strands: 2/4

(Strand diameter: 0.35 mm<sup>2</sup>/22 AWG)

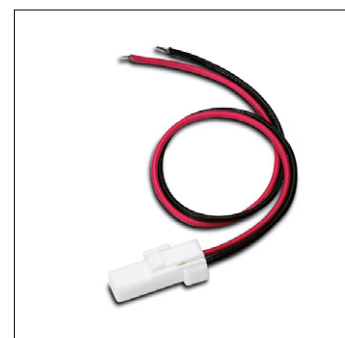
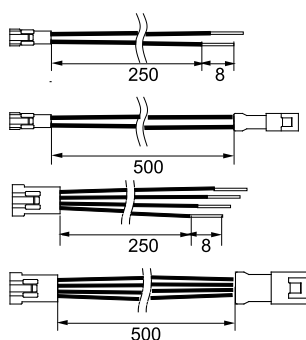
For monochrome modules with 2 strands

**Ref. No.: 543426** 25 cm, feed cable for power supply

**Ref. No.: 543427** 50 cm, PCB to PCB connector  
For RGB modules with 4 strands

**Ref. No.: 543428** 25 cm, feed cable for power supply

**Ref. No.: 543429** 50 cm, PCB to PCB connector



### Shrink caps

For sealing exposed connection wires

(Strand diameter: 0.35 mm<sup>2</sup>/22 AWG)

Adhesive coating on the inside

**Ref. No.: 571150** transparent

**Ref. No.: 571151** black

### Magnetic holder for AluLED

For easy fixation with springs and magnet

(scope of supply: 2 pcs.)

**Ref. No.: 143208**

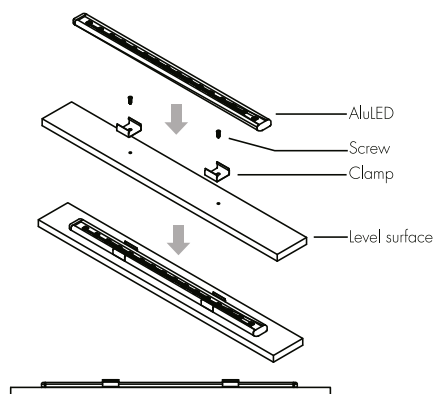


### Safety Instructions

- AluLED products may only be installed and commissioned by authorised and qualified staff.
- Please read these instructions carefully prior to installing and commissioning the system since this is the only way to ensure safe and proper system operation. You are recommended to keep these instructions in a safe place for possible future reference.
- Any work undertaken on a device must only be performed after disconnection from the mains.
- Relevant safety and accident prevention measures must be observed.
- Products must never be improperly opened since electrical voltage poses a risk to life. Repairs must only be performed by the manufacturer.
- Connecting feeder/supply lines to external voltage, e.g. 230 V mains voltage, can destroy individual system components.

### Mounting

1. Screw the mounting clips firmly to the substrate.
  2. Click module into the mounting clips.
- Mounting clips (brackets) are used to attach AluLED IP20 modules to a solid, load-bearing substrate. The mounting clips must be attached to the substrate using screws. The space left between the mounting clips must ensure the module neither bends nor bows. Once properly mounted, the AluLED IP20 module must be firmly enclosed by the mounting clips.
  - The module can be installed any way up, but vertical wall mounting could lead to the module slipping out of the clips.
  - Sufficient clearance must be left to other neighbouring objects to allow for the longitudinal thermal expansion of the module.
  - To prevent corrosion, contact with base metals, aggressive fluids and gases must be avoided. Operation in environments that are chemically enriched with (aggressive) chemical substances can impair functionality and can even result in total module failure. Detailed information as well as examples of hazardous environments and chemical substances can be found in the document "Chemical Incompatibilities Affecting LEDs", published by Vossloh-Schwabe Deutschland ([www.vossloh-schwabe.com](http://www.vossloh-schwabe.com)).



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## AluLED IP20

### Installation Instructions

1. When using several modules, the connector of a feed-out line must be attached to the connector of the following module's feed-in line.
  2. The final feed-out line must be protected against humidity and water ingress with a connector.
  3. Connect control gear's feed-in line to the control gear unit (24 V constant current driver with a constant output voltage of  $24\text{ V} \pm 0.5\text{ V}$ ).
  4. Check the polarity of the control gear's feed-in line (red + /black -).
  5. Attach the control gear's feed-in line to the connector of the (first) AluLED IP20 module's feed-in line.
  6. Calculate the total power uptake of the connected AluLED IP20 modules and compare the value with the data supplied for the connected control gear. Should the control gear's permissible total power uptake be exceeded, the equipment needs to be replaced with an adequately rated control gear unit.
  7. Connect the control gear to the power supply in accordance with the installation instructions.
- Each AluLED IP20 module is fitted with a pre-assembled feed-in line with a connecting terminal as well as with a feed-out line with a connector for looping the supply voltage through to the next AluLED IP20 module.
  - Should this not be necessary, the spare connector must be protected against the ingress of humidity.
  - Alternatively, the connecting terminal can be removed and the exposed connecting wires sealed using shrink caps that are internally coated with adhesive (Ref. No.: 571150 (transparent) or 571151 (black)).
  - If only one such shrink cap is used to seal both connecting wires, care must be taken to ensure the wires are of differing lengths to prevent the internal metal conductors from touching one another.
  - The connecting terminals and connectors of the pre-assembled connecting leads prevent any reversal of polarity. Only the polarity of the control gear's requisite feed-in line (Ref. No.: 543426) can be reversed when connecting it to the control gear.
  - Prior to commissioning, care must be taken to ensure the polarity of the control gear's feed-in line is correct. The red cable is "+" and the black cable is "-".
  - A 24 V constant current driver with a constant output voltage ( $24\text{ V} \pm 0.5\text{ V}$ ) must be used for control gear purposes. To ensure safe operation this 24 V constant current driver should also be fitted with protection against overvoltages, short-circuiting and over-heating.
  - The maximum 3 A current load on the voltage supply line, the control gear's feed-in line and the extension lead must not be exceeded. The resulting maximum number of AluLED IP20 modules that can be connected is additionally dependent on the maximum output current of the 24 V constant current driver with a constant output voltage as well as the voltage drop caused by the AluLED IP20 modules and their leads.

### Further Information

- If the distance between the control gear and the (first) AluLED IP20 module is too great to be bridged using the feed-in lines of the control gear and the AluLED IP20 module, a VS extension lead (Ref. No.: 543427) must be used to close the gap.
- Should an extension lead additionally be used to connect AluLED IP20 modules that are farther away, the unavoidable electrical resistance of the extension lead will cause a more pronounced voltage drop, which in turn can impair the functionality of the AluLED IP20 modules. AluLED IP20 modules are designed for operation with a constant voltage of  $24\text{ V} \pm 0.5\text{ V}$ .

### Complies to following standards

EN 62031:2008 / A1:2013 / A2:2015  
LED modules for general lighting – Safety specifications

EN 60529:1991 / A1:2000 / A2:2013  
Degrees of protection provided by enclosures (IP Code)

EN 61547:2009  
Electrostatic discharge immunity test (ESD):  
4 kV direct contact discharge – 8 kV air discharge

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