

LED LINE ALUFIX LUGA RX GEN. 2

LIGHTING MODULES WITH
HOLDER AND COVER



LED LINE ALUFIX LUGA RX GEN. 2

LED Line AluFix LUGA RX consists of an energy-efficient linear COB module, an aluminium holder and a clear cover or, alternatively, optics. The module was designed for integration into indoor luminaires providing direct or indirect light.

The light module is available with up to five pre-wired LUGA RX modules in lengths of 305 to 1429 mm.

The robust aluminium holder serves to optimise thermal management and is easy to attach using M3 screws. The clear or diffuse cover protects LED modules from environmental factors. The diffuse cover reduces glare and distributes light in a similar manner to a fluorescent lamp.

Enabling the kind of light distribution typically required in offices or shops, the optics versions facilitate luminaire designs that can do without an additional light guidance system. The high-quality optics consist of only one unit, regardless of its length, and therefore provide optimal protection for LED modules and ensure homogeneously illuminated surfaces without optical interruptions.

Typical applications

- Office and school lighting
- Retail lighting
- Industrial lighting
- For replacement of T5 and T8 lamps

LED Line AluFix LUGA RX Gen. 2

- **SLIM AND ROBUST DESIGN**
- **LONG SERVICE LIFETIME: 75,000 H (L80/B10)**
- **HIGHLY EFFICIENT: UP TO 180 LM/W AT $T_p = 65^\circ\text{C}$**
- **COLOUR TOLERANCES: 3 STEP MACADAM**
- **5 LENGTHS AVAILABLE: 305 MM / 586 MM / 867 MM / 1148 MM / 1429 MM**

LED Line AluFix LUGA RX Gen. 2

Aluminium profile equipped with LUGA Line LED modules

Technical notes

For one to five LUGA Line RX modules

On-board push terminal system: Electrical connection with lateral connection leads AWG22

Allowed operating temperature at t_c point:
-40 to 85 °C

Use of external LED constant-current drivers:
for drivers with $U_{OUT} < 150$ V DC

Efficiency up to 180 lm/W

Colour rendering index Ra: > 80

Colour accuracy initially: 3 SDCM;

after 50,000 hrs. operating time: 4 SDCM

Lumen maintenance L80/B10:

75,000 hrs. (IF 700 mA)



Optical characteristics of LUGA Line RX LED modules

at $t_p = 65$ °C | The following efficiency levels can be achieved when using a cover: see data sheet

Type	Number of LEDs pcs.	Colour	Correlated colour temperature K	Typ. luminous flux and efficiency, typical voltage ($U_{typ.}$) and power consumption (P_{el})*							
				350 mA		500 mA		700 mA		1050 mA	
				lm	lm/W	lm	lm/W	lm	lm/W	lm	lm/W
305 mm				$P_{el} = 5.9$ W $U_{typ.} = 16.8$ V		$P_{el} = 8.6$ W $U_{typ.} = 17.2$ V		$P_{el} = 12.4$ W $U_{typ.} = 17.8$ V		$P_{el} = 19.8$ W $U_{typ.} = 18.8$ V	
DML068C27GR	48	warm white	2700	920	156	1265	147	1695	137	2320	117
DML068C30GR	48	warm white	3000	945	160	1300	151	1740	140	2385	120
DML068C40GR	48	neutral white	4000	990	168	1370	159	1825	147	2505	127
586 mm (2 wired LED modules per aluminium profile)				$P_{el} = 11.8$ W $U_{typ.} = 33.6$ V		$P_{el} = 17.2$ W $U_{typ.} = 34.4$ V		$P_{el} = 24.8$ W $U_{typ.} = 35.6$ V		$P_{el} = 39.6$ W $U_{typ.} = 37.6$ V	
DML068C27GR	2x48	warm white	2700	1840	156	2530	147	3390	137	4640	117
DML068C30GR	2x48	warm white	3000	1890	160	2600	151	3480	140	4770	120
DML068C40GR	2x48	neutral white	4000	1980	168	2740	159	3650	147	5010	127
867 mm (3 wired LED modules per aluminium profile)				$P_{el} = 17.7$ W $U_{typ.} = 50.4$ V		$P_{el} = 25.8$ W $U_{typ.} = 51.6$ V		$P_{el} = 37.2$ W $U_{typ.} = 53.4$ V		$P_{el} = 59.4$ W $U_{typ.} = 56.4$ V	
DML068C27GR	3x48	warm white	2700	2760	156	3795	147	5085	137	6960	117
DML068C30GR	3x48	warm white	3000	2835	160	3900	151	5220	140	7155	120
DML068C40GR	3x48	neutral white	4000	2970	168	4110	159	5475	147	7515	127
1148 mm (4 wired LED modules per aluminium profile)				$P_{el} = 23.6$ W $U_{typ.} = 67.2$ V		$P_{el} = 34.4$ W $U_{typ.} = 68.8$ V		$P_{el} = 49.6$ W $U_{typ.} = 70.2$ V		$P_{el} = 79.2$ W $U_{typ.} = 75.2$ V	
DML068C27GR	4x48	warm white	2700	3680	156	5060	147	6780	137	9280	117
DML068C30GR	4x48	warm white	3000	3780	160	5200	151	6960	140	9540	120
DML068C40GR	4x48	neutral white	4000	3960	168	5480	159	7300	147	10020	127
1429 mm (5 wired LED modules per aluminium profile)				$P_{el} = 29.5$ W $U_{typ.} = 84$ V		$P_{el} = 43$ W $U_{typ.} = 86$ V		$P_{el} = 62$ W $U_{typ.} = 89$ V		$P_{el} = 99$ W $U_{typ.} = 94$ V	
DML068C27GR	5x48	warm white	2700	4600	156	6325	147	8475	137	11600	117
DML068C30GR	5x48	warm white	3000	4725	160	6500	151	8700	140	11925	120
DML068C40GR	5x48	neutral white	4000	4950	168	6850	159	9125	147	12525	127

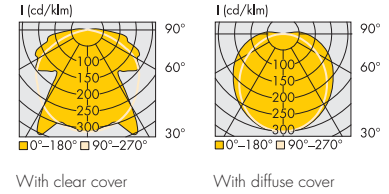
* Production tolerance of luminous flux, efficiency, voltage and power consumption: $\pm 10\%$

The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

LED Line AluFix LUGA RX Gen. 2

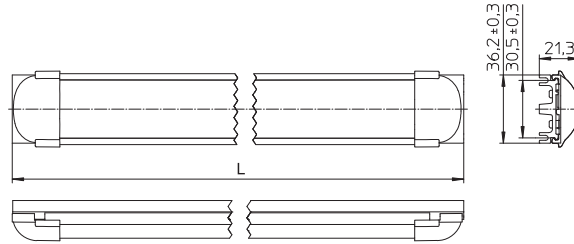
Technical notes

Material: Aluminium profile and PMMA cover
 Rear connection leads AWG22,
 lead length: module length + 8 cm
 Degree of protection: IP40
 Rear slots for screws M3
 Tightening torque: 0.5 Nm



LED Line AluFix LUGA RX Gen. 2 – Cover

Type	Dimensions (LxWxH) in mm			Packaging unit pcs.	Weight g
	L	W	H		
89001	305	36.2	21.3	15	171
89002	586	36.2	21.3	15	330
89003	867	36.2	21.3	15	495
89004	1148	36.2	21.3	15	650
89005	1429	36.2	21.3	15	815



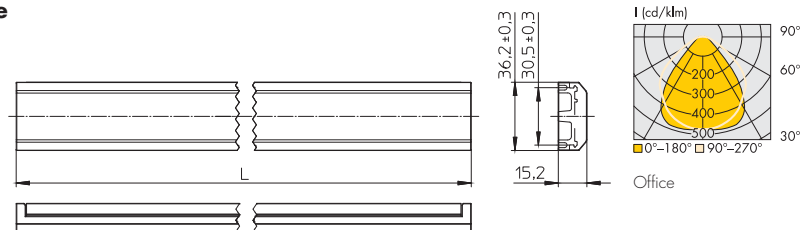
Reference numbers – LED Line AluFix LUGA RX Gen. 2 – Cover

The following efficiency levels can be achieved when using a cover: clear (97%), diffuse (90%)

Type / Total length	89001 / 305 mm		89002 / 586 mm		89003 / 867 mm		89004 / 1148 mm		89005 / 1429 mm	
	Clear	Diffuse	Clear	Diffuse	Clear	Diffuse	Clear	Diffuse	Clear	Diffuse
DML068C27GR	565244	565260	565269	565278	565287	565296	565305	565314	565322	565331
DML068C30GR	565245	565261	565270	565279	565288	565297	565306	565315	565323	565332
DML068C40GR	565255	565264	565273	565282	565291	565300	565309	565318	565326	565335

LED Line AluFix LUGA RX Gen. 2 – Optics Office

Type	Dimensions (LxWxH) in mm			Packaging unit pcs.	Weight g
	L	W	H		
89011	305	36.2	15.2	15	165
89012	586	36.2	15.2	15	316
89013	867	36.2	15.2	15	466
89014	1148	36.2	15.2	15	617
89015	1429	36.2	15.2	15	767



Reference numbers – LED Line AluFix LUGA RX Gen. 2 – Optics Office

Efficiency optics: 94%

Type / Total length	89011 / 305 mm	89012 / 586 mm	89013 / 867 mm	89014 / 1148 mm	89015 / 1429 mm
DML068C27GR	565341	565350	565359	565368	565377
DML068C30GR	565342	565351	565360	565369	565378
DML068C40GR	565345	565354	565363	565372	565281

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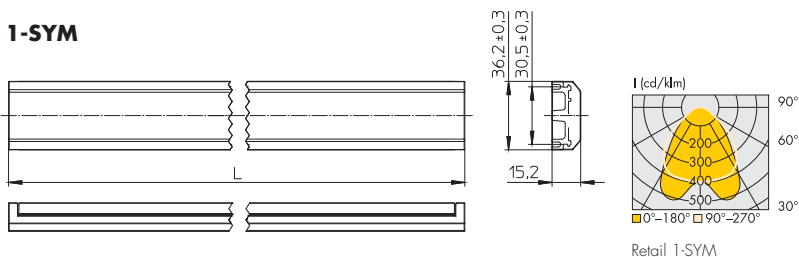
LED Line AluFix LUGA RX Gen. 2

Technical notes

Material: Aluminium profile and PMMA cover
 Rear connection leads AWG22,
 lead length: module length + 8 cm
 Degree of protection: IP40
 Rear slots for screws M3
 Tightening torque: 0.5 Nm

LED Line AluFix LUGA RX Gen. 2 – Optics Retail 1-SYM

Type	Dimensions (LxWxH) in mm			Packaging unit pcs.	Weight g
	L	W	H		
89021	305	36.2	15.2	15	165
89022	586	36.2	15.2	15	316
89023	867	36.2	15.2	15	466
89024	1148	36.2	15.2	15	617
89025	1429	36.2	15.2	15	767



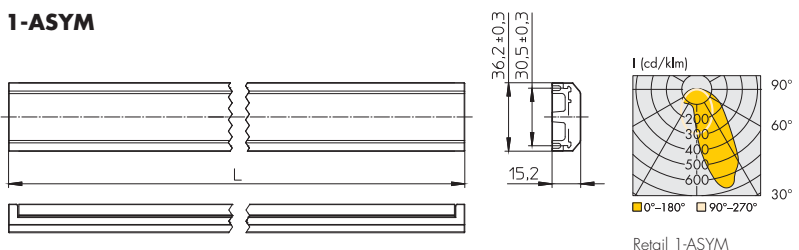
Reference numbers – LEDLine AluFix LUGA RX Gen. 2 – Optics Retail 1-SYM

Efficiency optics: 94%

Type / Total length	89021 / 305 mm	89022 / 586 mm	89023 / 867 mm	89024 / 1148 mm	89025 / 1429 mm
DMLO68C27GR	565384	565393	565402	565411	565420
DMLO68C30GR	565385	565394	565403	565412	565421
DMLO68C40GR	565388	565397	565406	565415	565424

LED Line AluFix LUGA RX Gen. 2 – Optics Retail 1-ASYM

Type	Dimensions (LxWxH) in mm			Packaging unit pcs.	Weight g
	L	W	H		
89031	305	36.2	15.2	15	165
89032	586	36.2	15.2	15	316
89033	867	36.2	15.2	15	466
89034	1148	36.2	15.2	15	617
89035	1429	36.2	15.2	15	767



Reference numbers – LEDLine AluFix LUGA RX Gen. 2 – Optics Retail 1-ASYM

Efficiency optics: 94%

Type / Total length	89031 / 305 mm	89032 / 586 mm	89033 / 867 mm	89034 / 1148 mm	89035 / 1429 mm
DMLO68C27GR	565429	565438	565447	565456	565465
DMLO68C30GR	565430	565439	565448	565457	565466
DMLO68C40GR	565433	565442	565451	565460	565469

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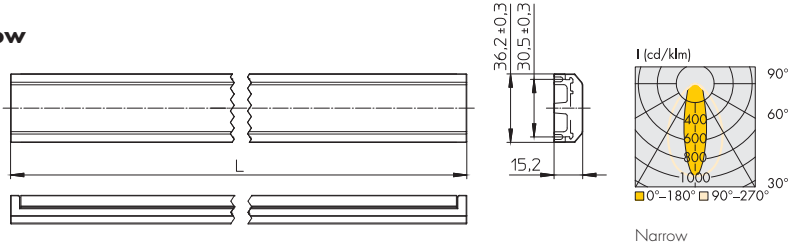
LED Line AluFix LUGA RX Gen. 2

Technical notes

Material: Aluminium profile and PMMA cover
 Rear connection leads AWG22,
 lead length: module length + 8 cm
 Degree of protection: IP40
 Rear slots for screws M3
 Tightening torque: 0.5 Nm

LED Line AluFix LUGA RX Gen. 2 – Optics Narrow

Type	Dimensions (LxWxH) in mm			Packaging unit pcs.	Weight g
	L	W	H		
89041	305	36.2	15.2	15	165
89042	586	36.2	15.2	15	316
89043	867	36.2	15.2	15	466
89044	1148	36.2	15.2	15	617
89045	1429	36.2	15.2	15	767



Reference numbers – LEDLine AluFix LUGA RX Gen. 2 – Optics Narrow

Efficiency optics: 94%

Type / Total length	89041 / 305 mm	89042 / 586 mm	89043 / 867 mm	89044 / 1148 mm	89045 / 1429 mm
DMLO68C27GR	566519	566537	566555	566573	566590
DMLO68C30GR	566520	566538	566556	566574	566591
DMLO68C40GR	566523	566541	566559	566577	566594

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LED Constant Current Drivers

Please visit our homepage for details for suitable
LED constant current drivers: www.vossloh-schwabe.com

Assembly and Safety Information

Installation must be carried out under observation of the relevant regulations and standards. The LED Line AluFix are designed for operation within a casing or luminaire. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains). The following advice must be observed; non-observance can result in the destruction of the LED fixing units, fire and/or other hazards.

- ESD (electrostatic discharge) protection measures must be observed when handling and installing the LED Line AluFix. See VS's application notes on ESD protection.
- Adequate anti-static electricity measures, including the use of conductive shoes, ionizers, work bench grounding, wrist straps, flooring and stools could be used.
- LED fixing units must not be subjected to any undue mechanical stress, e. g.:
 - do not treat as bulk cargo
- Safe operation only possible by the use of external constant current sources (I_{max} , see table "Electrical Characteristics").
- Safety regulations acc. to EN 60598 (or further standards) has to be observed if the maximum output voltage exceed the permitted touchable value.
Max. output voltage mustn't exceed 150 V DC.
- Power supply units must be used for operation, in which the following protective measures are ensured:
 - Short-circuit protection
 - Overload protection
 - Overheating protection
- Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Max. number of modules connected in series: 5
- The following points must be observed when connecting LED fixing units in parallel:
 - All LED strings that are wired in parallel must contain the same number of LED Line AluFix (symmetrical loading).
 - Owing to differing forward biases, there can be a difference of up to 10% in brightness between modules connected in parallel.
 - All modules that are wired in parallel must be thermally connected (same temperatures at all LED Line AluFix).

- To ensure problem-free operation, the specified maximum temperature at the t_c point (see "Operating Life") must be observed (and measured in accordance with EN 60598-1). To satisfy this point, it may be necessary to put measures in place to ensure any heat is dissipated from the PCB to the environment.
- M3 screws are required to fix the aluminium profile for the screw fitting. A torque of 0.5 Nm is recommended.
- In the event of outdoor applications or applications in damp locations, care must be taken to protect LED Line AluFix against humidity, splashes and jets of water. Any corrosion damage resulting from humidity or contact with condensation will not be recognised as a defect or manufacturing fault. Linear LED Line AluFix with a cover feature an IP40 degree of protection. Depending on the type of application, further protection must be ensured to prevent dust and foreign bodies from entering.
- For optimal load of used constant current driver the modules can be connected in series. The quantity of LED modules is limited by the sum of forward voltage and the capacity of used constant current driver. Safety regulations acc. to EN 60598 has to be observed if the sum of forward voltage exceed the permitted touchable value.
- The photobiological safety of the LED Line AluFix must be classified into risk groups in accordance with EN 62471: 2008.
 - general lighting: exempt group
 - other applications: exempt group

Further detailed safety and installation instructions on VS LED modules and LED drivers can be found in the product data sheets at www.vossloh-schwabe.com.

Product Guarantee

- 5 years
- The conditions for the Product Guarantee of the Vossloh-Schwabe Group shall apply as published on our homepage (www.vossloh-schwabe.com).
We will be happy to send you these conditions upon request.

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