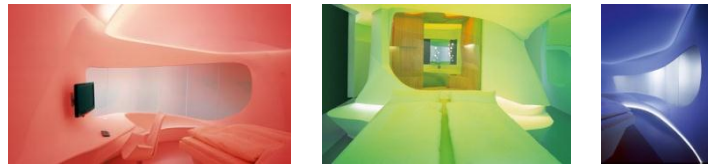


LINEARlight Flex ADVANCED – LF05A2 (Monochrome Versions)

Technical Datasheet

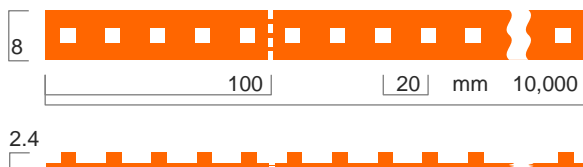


Benefits

Flexible LED strip
Adjust the length: cuttable after every 10 cm

Applications

Decorative applications
Signage
Orientation lighting



Quick reference

Product	Order Code	Color	Dominant Wavelength	W/m	lm/m	LED/m	Shipping Units
LF05A2-B3	4052899924123	BLUE	467	7,2	85 ¹ / 80 ²	50	8
LF05A2-R3	4052899924086	RED	625	8,3	2301 / 1202	50	8
LF05A2-T3	4052899924116	GREEN	525	4,9	2001 / 1802	50	8
LF05A2-Y3	4052899924109	YELLOW	587	8,3	2101 / 1102	50	8
LF05A2-O3	4052899924093	ORANGE	602	8,3	2301 / 1302	50	8

Technical features

Dimmable	Pulse width modulation (PWM)
Lifetime (L70B50 / L60B50³)	50,000 h
Adhesive tape on backside	3M VHB 9460
Complementary systems	SLIMCONNECTsystem, SLIM TRACK, OPTOTRONIC

¹ Instant on value

² Steady state value in working conditions

³ For blue and green version

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Technical operating data (for overall module)

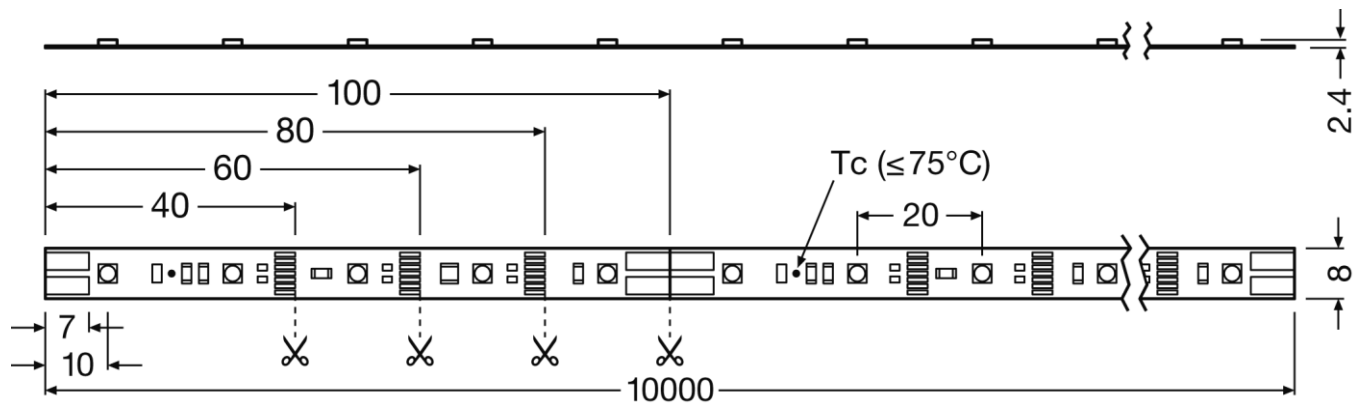
Product	Order Code	Voltage [V]	Power [W]	Current [A]	Luminous Flux [lm]	Radiance Angle [°]	Overall Length
LF05A2-B3	4052899924123	24	72	3,0	850 ¹ / 770 ²	120	10 m
LF05A2-R3	4052899924086	24	83	3,5	23301 / 12102	120	10 m
LF05A2-T3	4052899924116	24	49	2,0	19901 / 17802	120	10 m
LF05A2-Y3	4052899924109	24	83	3,5	20601 / 10702	120	10 m
LF05A2-O3	4052899924093	24	83	3,5	23301 / 13102	120	10 m

Minimum & maximum ratings

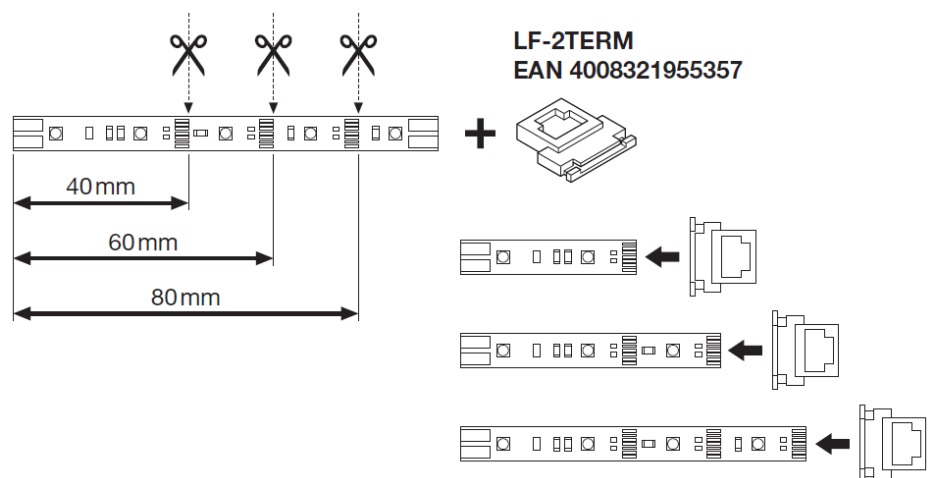
Operating temperature at Tc-Point	[°C]	-20 ... +75
Storage temperature	[°C]	-20 ... +80
Voltage range	[V dc]	23 ... 25
Reverse Voltage	[V dc]	25

- ▶ Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the LED Module.
- ▶ Exceeding maximum ratings for operating voltage will cause hazardous overload and will likely destroy the LED Module.
- ▶ The temperature of the LED module must be measured at the Tc-point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label. For exact location of the Tc-point see drawing below.

Technical drawings



Early cutting marks → using TERM (accessory)

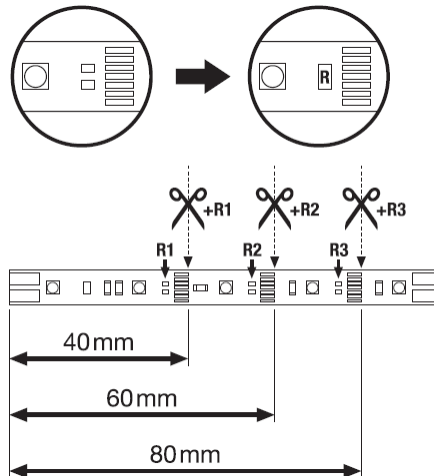


¹ Instant on value

² Steady state value in working conditions

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Early cutting marks → using resistor



Note:

$R \rightarrow$ package 1206 (0.5W)

LF05A-R3 / LF05A-O3 / LF05A-Y3	
R1	270 Ω
R2	180 Ω
R3	91 Ω

LF05A-B3 / LF05A-T3	
R1	360 Ω
R2	240 Ω
R3	120 Ω

Safety information

- ▶ The LED module itself and all its components must not be mechanically stressed.
- ▶ Assembly must not damage or destroy conducting paths on the circuit board.
- ▶ Installation of LED modules (with power supplies) needs to be made with regard to all applicable electrical and safety standards. Only qualified personnel should be allowed to perform installations.
- ▶ Observe correct polarity!
Depending on the product incorrect polarity will lead to emission of red or no light. The module can be destroyed! Correct polarity immediately! (see "reverse voltage", page 2).
- ▶ Parallel connection is highly recommended as safe electrical operation mode. Serial connection is not recommended. Unbalanced voltage drop can cause hazardous overload and damage the LED module.
- ▶ Please ensure that the power supply is of adequate power to operate the total load.
- ▶ When mounting on metallic or otherwise conductive surfaces, there needs to be an electrical isolation at soldering points between module and the mounting surface.
- ▶ The maximum length of a coherently operable unit is 10 m.
- ▶ Pay attention to standard ESD precautions when installing and handling the module.
- ▶ The module, as manufactured, has no conformal coating and therefore offers no inherent protection against corrosion. The ability to customize the length of the module by cutting at specifically marked points is a key feature of the product and hence the reason for no factory installed conformal coating. For these reasons, it is recommended that the user completes all module modifications first (cutting wiring) and then apply a conformal coating in the final stages of installation
- ▶ Damage by corrosion will not be honored as a materials defect claim. It is the user's responsibility to provide suitable protection against corrosive agents such as moisture and condensation and other harmful elements.
- ▶ For applications involving exposure to humidity and dust the module must be protected by a fixture or housing with a suitable protection class. The module can be protected against condensation water by treatment with an appropriate circuit board grade conformal coating. The conformal coating should have the following features:
 - Optical transparency
 - UV-resistance
 - Thermal expansion matching the thermal expansion of the module
 - Low permeability of steam for all climatic conditions
 - Resistance against corrosive environment.

In order to drive OSRAM LED-Modules safely, it is absolutely necessary to operate them with an electronically stabilized power supply protecting against short circuits, overload and overheating.

To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the CE mark and be ENEC certified. In Europe the declarations of conformity must include the following standards:

CE: EC 61347-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61347-2-13 and IEC/EN 62384.

Also check for the mark of an independent authorized certification institute.

Please see the relevant brochure for more detailed information (see "Related and Further Information")

OSRAM OPTOTRONIC® control gear complies to all relevant standards and guarantees safe operation.

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Assembly Information

- ▶ Connection with soldering wires on unmounted module:
Do not pre-tin the solderpads but pre-tin the wires and solder for max 4 s at 300°C. Allow solderpoints to completely cool down before the next soldering. Prevent shear- or peel forces.
- ▶ Soldering of wires with the module mounted on a heatsink:
Pre-tin solderpads and wires and solder for max 3 s at 350 °C. Allow solderpoints to completely cool down before the next soldering. Prevent shear- or peel forces.
- ▶ The smallest unit (100 mm- 5 LEDs) can be removed by cutting with scissors between the designated solder pads.
- ▶ Mounting of the module is facilitated by the double-sided adhesive tape on the back-surface of the module.
- ▶ Mounting surface must be clean and dry, free of oils or silicone coatings as well as dirt particle.
- ▶ The mounting substrate must have sufficient structural integrity. Take care to completely remove the protective backing. Once the module is appropriately positioned, pre on the module with about 20N/cm² (refer to application techniques of 3M adhesive transfer tapes). In difficult cases the use of a prime may help.
- ▶ The minimum bending radius is 2 cm. The module may be bent over a smaller radius but only in regions of the circuit board containing electronic components and such bends should be made once and fixed in position to avoid cyclic fatigue.
- ▶ When installing in environments with large variations in temperature (e.g. outdoor applications) and operating length of more than 2 m, the use of adequate mounting surfaces is necessary . Otherwise it is advisable to use an additional thicker adhesive tape to absorb the stress of any mismatch in expansion.
- ▶ LED modules emitting monochromatic light other than white are not intended to serve as general and household illumination, where white emitting light sources are needed:



Complementary systems and accessories

Accessories

Type	Product	EAN	Shipping units
SLIMCONNECTsystem			
2pin Feeder	LF-2PIN Flex SC	4008321832436	10 / 250
Jumper (board-to-board)	LF-CONN Flex SC	4008321832467	25 / 250
Extension wire 30mm	LF-WIRE-30 FLEX SC	4008321875587	100 / 10,000
Extension wire 150mm	LF-WIRE-150 FLEX SC	4008321875563	50 / 5,000
CONNECTsystem			
Early cutting Terminator	LF-2TERM FLEX	4008321955357	10 / 200
SLIM TRACK System			
SLIM TRACK	LF-LTS-2100 SLIM TRACK	4008321978981	40
Mounting Bracket for SLIM TRACK	LF-LTS-MB	4008321979025	35 / 280
Clear SLIM TRACK Cover	LF-LTS COVER C	4008321790187	40
Diffuse SLIM TRACK Cover	LF-LTS-COVER-DIFFUSE	4008321979001	40
Endcap for Diffuse Cover	LF-LTS-ENDCAP	4008321979049	20 / 160
Semi-Diffuse SLIM TRACK Cover	LF-LTS COVER S	4008321790200	40

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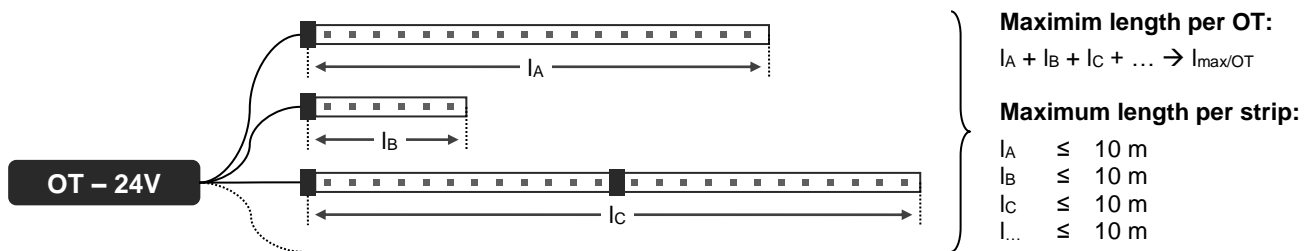
OPTOTRONIC & recommended max. lengths per power supply

► Please consider that lengths may differ if further controls are installed.

Recommended OPTOTRONIC® drivers	EAN	LF05A-R3 LF05A-O3 LF05A-Y3	LF05A-T3	LF05A-B3
Non-dimmable				
OPTOTRONIC OT 6/200-240/24 CE	4008321113269	max. 0,7 m	max. 1,2 m	max. 0,8 m
OPTOTRONIC OT 8/200-240/24	4008321040169	max. 0,9 m	max. 1,6 m	max. 1,1 m
OPTOTRONIC OT 20/220-240/24	4050300618111	max. 2,4 m	max. 4 m	max. 2,7 m
OPTOTRONIC OT 20/120-240/24 S	4050300662626	max. 2,4 m	max. 4 m	max. 2,7 m
OPTOTRONIC OT 30/220-240/24 P	4052899043497	max. 3,6 m	max. 6,1 m	max. 4,1 m
OPTOTRONIC OT 50/220-240/24	4052899905566	max. 6 m	max. 10,2 m (**)	max. 6,9 m
OPTOTRONIC OT 75/220-240/24	4050300817477	max. 9 m	max. 15,3 m (**)	max. 10,4 m (**)
OPTOTRONIC OT 75/220-240/24 E	4008321362476	max. 9 m	max. 15,3 m (**)	max. 10,4 m (**)
OPTOTRONIC OT 80/220-240/24 P	4008321981684	3,1 m (*) - 9,6 m	5,2 m (*) - 16,3 m (**)	3,5 m (*) - 11,1 m (**)
OPTOTRONIC OT 120/220-240/24 P	4008321981707	7,3 m (*) - 14,4 m (**)	12,3 m (*) - 24,4 m (**)	8,4 m (*) - 16,6 m (**)
OPTOTRONIC OT 240/220-240/24 P	4008321981721	14,5 m (*) - 28,9 m (**)	24,5 m (*) - 48,9 m (**)	16,7 m (*) - 33,3 m (**)
Dimmable				
OPTOTRONIC OT EASY 60 II	4008321187796	max. 7,2 m	max. 12,2 m (**)	max. 8,3 m
OPTOTRONIC OT EASY 80	4008321808363	max. 9,6 m	max. 16,3 m (**)	max. 11,1 m (**)
OPTOTRONIC OT 65/220-240/24 3DIM E	4008321964403	max. 7,8 m	max. 13,2 m (**)	max. 9 m
OPTOTRONIC OTi DALI 75/220-240/24 1-4 CH	4008321371560	max. 9 m	max. 15,3 m (**)	max. 10,4 m (**)
OPTOTRONIC OT 80/220-240/24 DIM P	4008321981677	3,1 m (*) - 9,6 m	5,2 m (*) - 16,3 m (**)	3,5 m (*) - 11,1 m (**)
OPTOTRONIC OT 120/220-240/24 DIM P	4008321981691	7,3 m (*) - 14,4 m (**)	12,3 m (*) - 24,4 m (**)	8,4 m (*) - 16,6 m (**)
OPTOTRONIC OT 240/220-240/24 DIM P	4008321981714	14,5 m (*) - 28,9 m (**)	24,5 m (*) - 48,9 m (**)	16,7 m (*) - 33,3 m (**)

(*) Operation with shorter length possible. Recommended minimum length to achieve optimum operating conditions.

(**) Total lengths per driver. Length of single strip must not exceed 10 m.



Contacts & information

German engineering meets Italian elegance – **creating a European product**
 All LINEARlight Flex® ADVANCED are Made in Italy by OSRAM, with over 100 years of experience in light solutions.



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Sales and technical support is given by the local OSRAM subsidiaries.

On the OSRAM website all subsidiaries are listed with complete address and phone numbers.

OSRAM LED Systems
 OSRAM catalogue
 General information

www.osram.com/led-systems
<http://catalog.osram.com>
www.osram.com

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