LINEARlight FLEX Tunable White

– LED modules for professional and industrial applications

Product family features

- 24 V LED strips flexible and cuttable
- Luminous flux: up to 3,800 lm/m
- Up to 60,000 h L90/B10 with SDT technology, tested acc. to IEC 62717 on real LED strips
- Adjustable color temp. via Tunable White: 2200…3500 K, 2500…4000 K, 2700…5700 K CRI90
- Adjustable color temp. via Tunable White: 2200…3500 K, 2500…3500 K, 2700…6500 K CRI80
- CRI80, CRI90 options available
- Stable light flux over length: active constant current regulators (ICs), PWM safe
- Embedded automatic quick protection against accidental miswiring up to 25 V
- Fully PWM dimmable from zero up to 2.5 kHz, audible noise free, suitable for quite places
- Designed, engineered and manufactured and tested in Italy (ISO9001, ISO 17025, ACCREDIA, VDE)

Product family benefits

- Color uniformity better than 3 SDCM on the entire LED strip and between strips
- LED lifetime acc.to IES LM-80 and IES TM-21 standards, and also internal OSRAM LAB tests
- Excellent robustness: single reel manufacturing technology (no solder joints on strip)
- Easy mounting on many smooth surfaces thanks to self-adhesive tape at the back
- Extraordinary design and high quality materials
- Pre-soldered wires

Areas of application

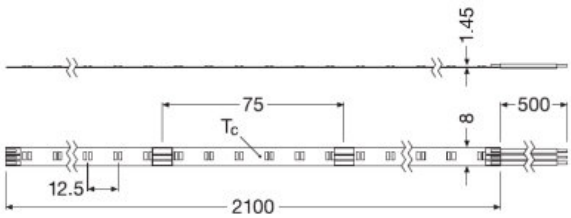
- Cove lighting
- Shop lighting
- Offices

Technical data

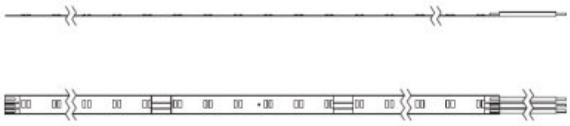
	Electrical data	Photometrical data				Dimensions & weight
Product description	**Nominal wattage per meter**	**Color rendering index Ra**	**Luminous flux per meter**	**Luminous efficacy**	**Standard deviation of color matching**	**Cable length**
LF4000TW -G1-827.865-02 L1	36.4 W	>80	3800 lm	104 lm/W	≤4 sdcm	500.0 mm
LF3000TW -G1-827.865-03 L1	27.7 W	>80	3000 lm	108 lm/W	≤4 sdcm	500.0 mm
LF2000TW -G1-827.865-04 L1	17.8 W	>80	2000 lm	112 lm/W	≤4 sdcm	500.0 mm
LF1200TW -G1-827.865-09 L2	10.3 W	>80	1200 lm	117 lm/W	≤4 sdcm	500.0 mm
LF3000TWW G1-822.835-02 L1 [1)]	33.3 W	>80	3000 lm	90 lm/W	≤4 sdcm	500.0 mm
LF3000TWW -G1-825.835-02 L1 [1)]	31.0 W	>80	3000 lm	97 lm/W	≤4 sdcm	500.0 mm
LF3400TW-G5 -927.957-03 L1	30.2 W	90	3400 lm	113 lm/W	≤3 sdcm	500.0 mm
LF3400TW-G5 -925.940-03 L1	32.4 W	90	3400 lm	105 lm/W	≤3 sdcm	500.0 mm
LF3400TW-G5 -922.935-03 L1	34.7 W	90	3400 lm	98 lm/W	≤3 sdcm	500.0 mm
LF1100TW-G5 -927.957-09 L2	9.8 W	90	1156 lm	118 lm/W	≤3 sdcm	500.0 mm
LF1100TW-G5 -925.940-09 L2	10.4 W	90	1156 lm	111 lm/W	≤3 sdcm	500.0 mm
LF1100TW-G5 -922.935-09 L2	10.9 W	90	1111 lm	102 lm/W	≤3 sdcm	500.0 mm

	Logistical data
Product description	**Commodity code**
LF4000TW -G1-827.865-02 L1	940540399000
LF3000TW -G1-827.865-03 L1	940540399000
LF2000TW -G1-827.865-04 L1	940540399000
LF1200TW -G1-827.865-09 L2	940540399000
LF3000TWW G1-822.835-02 L1 [1)]	940540399000
LF3000TWW -G1-825.835-02 L1 [1)]	940540399000
LF3400TW-G5 -927.957-03 L1	940540399000
LF3400TW-G5 -925.940-03 L1	940540399000
LF3400TW-G5 -922.935-03 L1	940540399000
LF1100TW-G5 -927.957-09 L2	940540399000
LF1100TW-G5 -925.940-09 L2	940540399000
LF1100TW-G5 -922.935-09 L2	940540399000

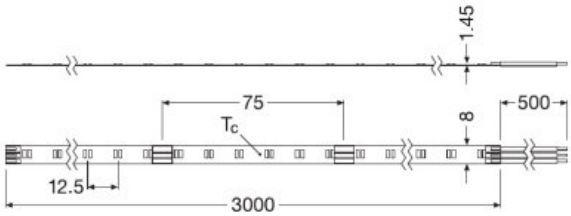
[1)] Modules perfectly matched to OSRAM OPTOTRONIC LED drivers (see relevant table)/For current photometric data and important safety, installation and application information (see www.osram.com/led-systems)./All the technical parameters apply to the entire module. In view of the complex manufacturing process for light emitting diodes, the typical values given above for the technical LED parameters are merely statistical values that do not necessarily correspond to the actual technical parameters of an individual product; individual products may vary from the typical values/Pre-soldered wires 500 mm long on one end/In development, data preliminary



LF4000TW-G1-827.865-02 L1



LF4000TW-G1-827.865-02 L1



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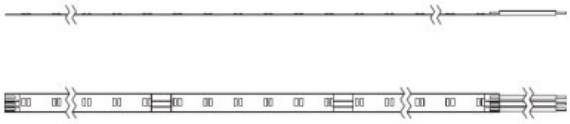
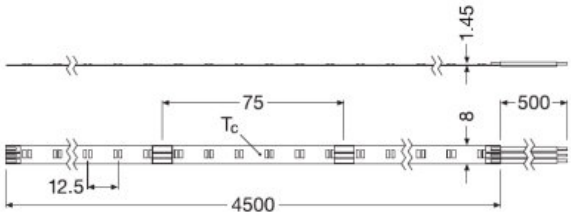
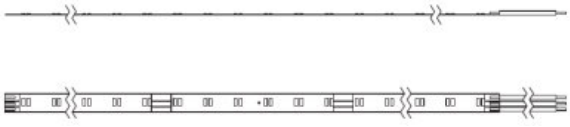


LF3000TW-G1-827.865-03



LF2000TW-G1-827.865-04 L1



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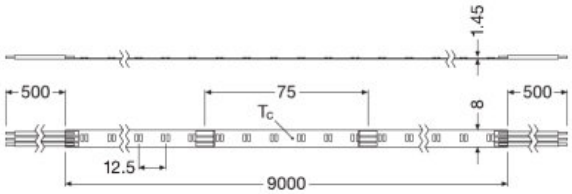
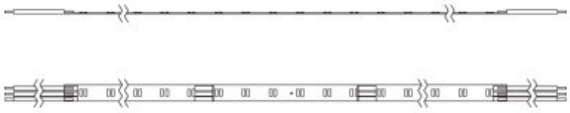
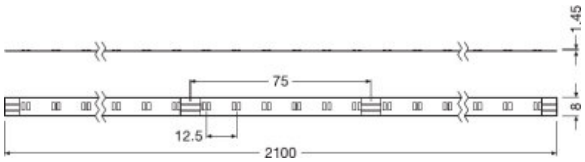


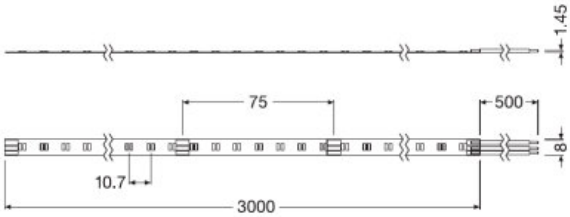
LF1200TW-G1-827.865-09 L2



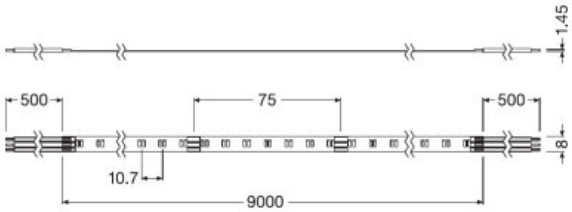
LF1200TW-G1-827.865-09 L2



LINEARlight Flex Power Turnable White - G3



LINEARlight Flex Tunable White IP00 L1 drawing



LINEARlight Flex Tunable White IP00 L2

Equipment / Accessories

- Flexessories: a complete set of aluminum channels with diffusers and lenses
- Simplified connection with optional matching CONNECTsystem
- Perfectly matched with OPTOTRONIC OTi DALI 50/220…240/24 TW
- Perfectly matched with OPTOTRONIC OTi DALI 80/220…240/24 TW

Application advice

For more detailed application information and graphics please see product datasheet.

Additional product information

- Some LED modules are equipped with a self-adhesive tape for attaching the LED module to suitable materials, such as aluminum profiles, which must be clean and free of oil or silicone coatings, as well as other dirt/dust particles. The adhesive tape is intended for single use and if removed may damage the material to which it is stuck and the LED module itself, which must then be scrapped. Use the adhesive tape when the installation material temperature is in the 18 °C...35 °C range. Complete adhesion takes up to 72 h.
- LED modules are designed for static installations in accordance with IPC 6013C – Use A. Take material vibrations, repetitive torsion, and elongation/compression into account.
- If the operating environment covers a broad temperature range (e.g. outdoor applications) and the operating length is longer than 2 m, the use of adequate mounting surfaces is required. The use of an additional thicker adhesive tape between LED module and mounting surface is also recommended in order to absorb the stress of any mismatch in expansion. Assure enough space for module expansion with increasing temperature.
- The manufacturer is not responsible for damage due to chemical corrosion. The user must provide suitable protection against corrosive agents such as moisture and condensation and any other harmful elements/compounds. Make certain to avoid corrosive atmospheres. According to the current state of LED technology, hydrogen sulfide (H2S) causes accelerated corrosion which leads to shortened lifetime or premature failure. Sources of H2S may be rubber, foam rubber, soft-foam tapes, rubber-based sealing, natural sources (e.g. sulfur springs), etc. To avoid H2S from sulfur-vulcanized rubber use silicon-based materials or peroxide-crosslinked rubber instead. Follow the recommendations in the material datasheet of the rubber supplier.
- IP00 LED modules, as manufactured, have no conformal coating and therefore offer no inherent protection against corrosion. Conformal coating treatment is possible, however materials must be selected properly in order to avoid product damage or impaired performance; the user must also completely seal the cut parts (ends/edges).
- For applications involving exposure to humidity and dust the module must be protected by a fixture or housing with a suitable IP protection class.
- Consult OSRAM Technical Service for further advice.
- Only a qualified electrician may install the module.
- Handle with care and ensure that there is no mechanical product damage, including damage to invisible internal electronics parts.
- Exceeding maximum operating and storage temperature ratings can reduces the expected lifetime or even destroy the LED module. The temperature of the LED module must be measured at the Tc-point in accordance with EN 60598-1 under steady-state conditions, considering the worst case; drive all channels at 100 % power. Refer to the product drawing for the exact location of the Tc-point.
- Exceeding the maximum ratings for the operating voltage causes hazardous overload and will likely destroy the LED module.
- Installation of LED modules and connection to the power supply must comply with all applicable electrical and safety standards.
- Observe correct polarity and wiring diagrams! Incorrect polarity or wrong wiring can cause unpredictable permanent damage or even failure of the product.
- Never exceed the maximum operable length, including daisy-chaining connections.
- Always ensure electrical isolation between the LED module and the mounting surface, especially in the vicinity of connections or cut ends.
- IP00 LED modules are ESD-sensitive; take adequate precautions during installation and operation of the products.
- Use only SELV LED drivers in accordance with applicable lighting standards and LED module ratings. In order to safely operate OSRAM LED modules it is necessary to supply them with an electronically stabilized power supply providing protection against short circuits, overload and overheating. To simplify the approval process of the luminaire/installation, the electronic power supplies control gear for LED modules must bear the CE and ENEC marking. In Europe the Declarations of Conformity must include at least the following standards: EN 61347-2-13, EN 55015, EN 61547 and EN 61000-3-2. ENEC certification will be based on EN 61347-2-13 and EN 62384. OSRAM OPTOTRONIC LED drivers comply with all relevant standards and guarantee safe operation; see the relevant brochure for more detailed information about OSRAM OPTOTRONIC.
- Avoid installations in rural and urban areas with high industrial activity and heavy traffic (higher than class than 4C1 according IEC 60721-3) and as well as installation in spa, areas with chlorine atmosphere, direct exposure to blown sand.

Sales and Technical Support

Sales and Technical Support www.osram.com

Download Data

	File
	User instruction LINEARlight FLEX Tunable White
	Product Datasheet LINEARlight FLEX TW & TWW Specification Sheet (EN)
	Brochures Light is freedom of design (EN)
	Certificates EAC Certificate
	Certificates UL Certificate
	Certificates ENEC+_VDE Certificate
	Certificates CB TEST CERTIFICATE DE1-57844
	Declarations of conformity Declaration of conformity
	Declarations of conformity Manufacturer declaration
	Eulumdat 727228_LF4000TW-G3-827-865-02_LDT
	Eulumdat Eulumdat LF4000TW-G3-827-865-02
	IES data 727227_LF4000TW-G3-827-865-02_IES
	IES data 727226_LF4000TW-G3-827-865-02_IES
	IES data IES data LF4000TW-G3-827-865
	Eulumdat 727215_LF3000TW-G3-827-865-03_LDT
	Eulumdat Eulumdat LF3000TW-G3-827-865-03
	IES data 727214_LF3000TW-G3-827-865-03_IES
	IES data IES data LF3000TW-G3-827-865
	Eulumdat 727189_LF2000TW-G3-827-865-04_LDT

Product family datasheet

	Eulumdat Eulumdat LF2000TW-G3-827-865-04
	IES data 727188_LF2000TW-G3-827-865-04_IES
	IES data IES data LF2000TW-G3-827-865
	Eulumdat 727163_LF1200TW-G3-827-865-09_LTD
	Eulumdat Eulumdat LF1200TW-G3-827-865-09
	IES data 727162_LF1200TW-G3-827-865-09_IES
	IES data IES data LF1200TW-G3-827-865
	User instruction LINEARlight FLEX POWER
	Certificates ENEC10_VDE Certificate
	Certificates CB TEST CERTIFICATE DE- 60834
	Declarations of conformity EU declaration of conformity
	Declarations of conformity Manufacturers declaration of conformity - 3632536
	Eulumdat Eulumdat LF3000TWW-G1-822.835-02
	IES data IES data LF3000TWW-G1-822-835
	Eulumdat Eulumdat LF3000TWW-G1-825.835-02
	IES data IES data LF3000TWW-G1-825-835
	User instruction LINEARlight FLEX, Tunable White
	Product Datasheet LINEARlight Flex Tunable White CRI90 Specification Sheet (EN)
	Certificates LF(P)-Uniformity ENEC 181120
	Certificates LF(P) TW G5 CB 180121
	Declarations of conformity LFTWG5 CE 4249165 241120
	Eulumdat LF3400TW-G5-927.957-03 L1 LTD 130421
	IES data LF3400TW-G5-927.957-03 L1 IES 130421

	Eulumdat LF3400TW-G5-925.940-03 L1 LTD 130421
	IES data LF3400TW-G5-925.940-03 L1 IES 130421
	Eulumdat LF3400TW-G5-922.935-03 L1 LTD 130421
	IES data LF3400TW-G5-922.935-03 L1 IES 130421
	Eulumdat LF1100TW-G5-927.957-09 L2 LTD 130421
	IES data LF1100TW-G5-927.957-09 L2 IES 130421
	Eulumdat LF1100TW-G5-925.940-09 L2 LTD 130421
	IES data LF1100TW-G5-925.940-09 L2 IES 130421
	Eulumdat LF1100TW-G5-922.935-09 L2 LTD 130421
	IES data LF1100TW-G5-922.935-09 L2 IES 130421

Logistical Data

Product code	Product description	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Volume	Gross weight
4062172032605	LF4000TW -G1-827.865-02 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1193.00 g
4062172032629	LF3000TW -G1-827.865-03 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1269.00 g
4062172032643	LF2000TW -G1-827.865-04 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1397.00 g
4062172032667	LF1200TW -G1-827.865-09 L2	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1861.00 g
4052899563339	LF3000TWW G1-822.835-02 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1397.00 g
4052899563353	LF3000TWW -G1-825.835-02 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1397.00 g
4062172189354	LF3400TW-G5 -927.957-03 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1213.00 g
4062172189330	LF3400TW-G5 -925.940-03 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1213.00 g
4062172189316	LF3400TW-G5 -922.935-03 L1	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm^3	1213.00 g

Logistical Data

4062172189293	LF1100TW-G5 -927.957-09 L2	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm³	1765.00 g
4062172189279	LF1100TW-G5 -925.940-09 L2	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm³	1765.00 g
4062172189255	LF1100TW-G5 -922.935-09 L2	Shipping carton box 8	241 mm x 195 mm x 205 mm	9.63 dm³	1765.00 g

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit.

Accessories Optional

Product description	Accessory name	Accessory code
LF3400TW-G5 -927.957-03 L1	CORNER-FLEX -4P-003 KIT 10PCS	4062172179638
LF3400TW-G5 -927.957-03 L1	CORNER-FLEX -4P-015 KIT 10PCS	4062172179676
LF3400TW-G5 -927.957-03 L1	CONN-FLEX -3P-050 KIT 10PCS	4062172179690
LF3400TW-G5 -927.957-03 L1	CONN-FLEX -3P-200 KIT 10PCS	4062172179720
LF3400TW-G5 -927.957-03 L1	FX -SC08-G2-CT4PJ	4052899464858
LF3400TW-G5 -925.940-03 L1	CORNER-FLEX -4P-003 KIT 10PCS	4062172179638
LF3400TW-G5 -925.940-03 L1	CORNER-FLEX -4P-015 KIT 10PCS	4062172179676
LF3400TW-G5 -925.940-03 L1	CONN-FLEX -3P-050 KIT 10PCS	4062172179690
LF3400TW-G5 -925.940-03 L1	CONN-FLEX -3P-200 KIT 10PCS	4062172179720
LF3400TW-G5 -925.940-03 L1	FX -SC08-G2-CT4PJ	4052899464858
LF3400TW-G5 -922.935-03 L1	CORNER-FLEX -4P-003 KIT 10PCS	4062172179638
LF3400TW-G5 -922.935-03 L1	CORNER-FLEX -4P-015 KIT 10PCS	4062172179676
LF3400TW-G5 -922.935-03 L1	CONN-FLEX -3P-050 KIT 10PCS	4062172179690
LF3400TW-G5 -922.935-03 L1	CONN-FLEX -3P-200 KIT 10PCS	4062172179720
LF3400TW-G5 -922.935-03 L1	FX -SC08-G2-CT4PJ	4052899464858
LF1100TW-G5 -927.957-09 L2	CORNER-FLEX -4P-003 KIT 10PCS	4062172179638
LF1100TW-G5 -927.957-09 L2	CORNER-FLEX -4P-015 KIT 10PCS	4062172179676
LF1100TW-G5 -927.957-09 L2	CONN-FLEX -3P-050 KIT 10PCS	4062172179690
LF1100TW-G5 -927.957-09 L2	CONN-FLEX -3P-200 KIT 10PCS	4062172179720
LF1100TW-G5 -927.957-09 L2	FX -SC08-G2-CT4PJ	4052899464858
LF1100TW-G5 -925.940-09 L2	CORNER-FLEX -4P-003 KIT 10PCS	4062172179638
LF1100TW-G5 -925.940-09 L2	CORNER-FLEX -4P-015 KIT 10PCS	4062172179676
LF1100TW-G5 -925.940-09 L2	CONN-FLEX -3P-050 KIT 10PCS	4062172179690
LF1100TW-G5 -925.940-09 L2	CONN-FLEX -3P-200 KIT 10PCS	4062172179720
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LF1100TW-G5 -922.935-09 L2	CORNER-FLEX -4P-003 KIT 10PCS	4062172179638
LF1100TW-G5 -922.935-09 L2	CORNER-FLEX -4P-015 KIT 10PCS	4062172179676
LF1100TW-G5 -922.935-09 L2	CONN-FLEX -3P-050 KIT 10PCS	4062172179690
LF1100TW-G5 -922.935-09 L2	CONN-FLEX -3P-200 KIT 10PCS	4062172179720
LF1100TW-G5 -922.935-09 L2	FX -SC08-G2-CT4PJ	4052899464858

Disclaimer

Subject to change without notice. Errors and omission excepted. Always make sure to use the most recent release.