PRODUCT DATASHEET
LFD400S -G1-840-06

LINEARlight FLEX® DIFFUSE Side White | LED modules for professional and industrial applications

Areas of application

- Individual and customized luminaires
- Organic shaped luminaires
- Architectural Integration – e.g. coves, walls
- Object integration – e.g. handrails
- Signage and illuminated advertising

Product benefits

- IP67 protection with high performance silicone
- Reliable connection over long periods of time: IP67 connector with built-in protection against liquids penetrating through the wires into the LED strip
- Outdoor use possible: UV and salt mist resistant (UV acc. to ISO 4892-2 - Method A, salt mist acc. to IEC 60068-2-52 severity 1)

Product features

- Diffused light lines without visible spots
- Flexible and cuttable module to support design freedom
- Long operational length per single power feed possible (up to 6m)
- Ideal for luminaire designs
- Extra strong self-adhesive backside for easy mounting
- 24 V technology for easy dimensioning

- Recommended in system use with OPTOTRONIC
- Increased reliability due to single piece reel-to-reel technology
- Dimmable with PWM technology

TECHNICAL DATA

Electrical data

Nominal wattage	43.20 W
Construction wattage	43.20 W
Nominal wattage per meter	7,2 W
Nominal voltage	24 V
Input voltage range	23…25 V
Reverse Voltage	25 V
Type of current	DC
Nominal current	1800.000 mA

Photometrical data

Total useful luminous flux [PICOS]	2460 lm
Luminous efficacy	57 lm/W
Luminous flux	2460 lm
Luminous flux per meter	410 lm
Color temperature	4000 K
Color rendering index Ra	> 80
Light color LED	White
Light color (designation)	4000 K
Standard deviation of color matching	≤3 sdcm
Lumen main.fact.at end of nom.life time	0.70

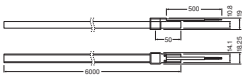
Light technical data

Beam angle	120 °
Rated beam angle (half peak value)	120.00 °
Starting time	< 0.5 s
Warm-up time (60 %)	0.00 s

LED MODULE INFORMATION

Number of LEDs per meter	140
Number of LEDs per module	840
Number of LEDs per smallest unit	7

Dimensions & Weight



Length	6000 mm
Length – smallest unit	50,0 mm
Cable length	500.000
Width	11.00 mm
Height	14.00 mm
Cable cross-section, input side	1 mm²
Conductor cross section	1.0 mm²
LED pitch	7.2 mm
Product weight	1040.00 g

Colors & materials

Cover material	Silicone

Temperatures & operating conditions

Ambient temperature range	-30…+50 °C
Maximum temperature at tc test point	65 °C
Temperature range in operation	-20…65 °C [1)]
Performance temp. acc. to IEC 62717	32 °C [2)]

1) Exceeding the maximum ratings will reduce expected life time or destroy the LED strip.

2) Tp rated. Tp point coincides with Tc point - marked on device

Lifespan

Number of switching cycles	≥ 15000

Additional product data

Product remark	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

Capabilities

Dimmable	Yes
Dimming interface	PWM
Type of installation	Surface mounting
Lowest bending radius	100 mm
Self-adhesive	Yes

Certificates & Standards

Standards	CE; ENEC 10 VDE / EAC / UL Recognized component according UL 8750
Type of protection	IP66/IP67
Energy consumption	48.00 kWh/1000h
Energy efficiency class	A+

LOGISTICAL DATA

Temperature range at storage	-20…85 °C

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.

DOWNLOAD DATA

	Documents and certificates
PDF	User instruction
PDF	Declarations Of Conformity CE
PDF	Certificates

	Photometric and lighting design files
	IES file (IES)
	LDT file (Eulumdat)

LOGISTICAL DATA

Product code	Packaging unit (Pieces/Unit)	Dimensions (length x width x height)	Gross weight	Volume
4052899953635	Folding box 1	506 mm x 502 mm x 37 mm	1310.00 g	9.40 dm^3
4052899954823	Shipping box 6	519 mm x 246 mm x 525 mm	13358.00 g	67.03 dm^3

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.

DISCLAIMER

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