



Art.-No.: 0029410103

FEATURES

Input voltage: 12 V DC  
LED Type: SMD 2835 (20mA)  
Power consumption per meter (nom.): 11.04 W  
Color rendering index (CRI): 90  
CCT:4000 K



ECOLine plus LED Flex Modul 138 4000K 12V

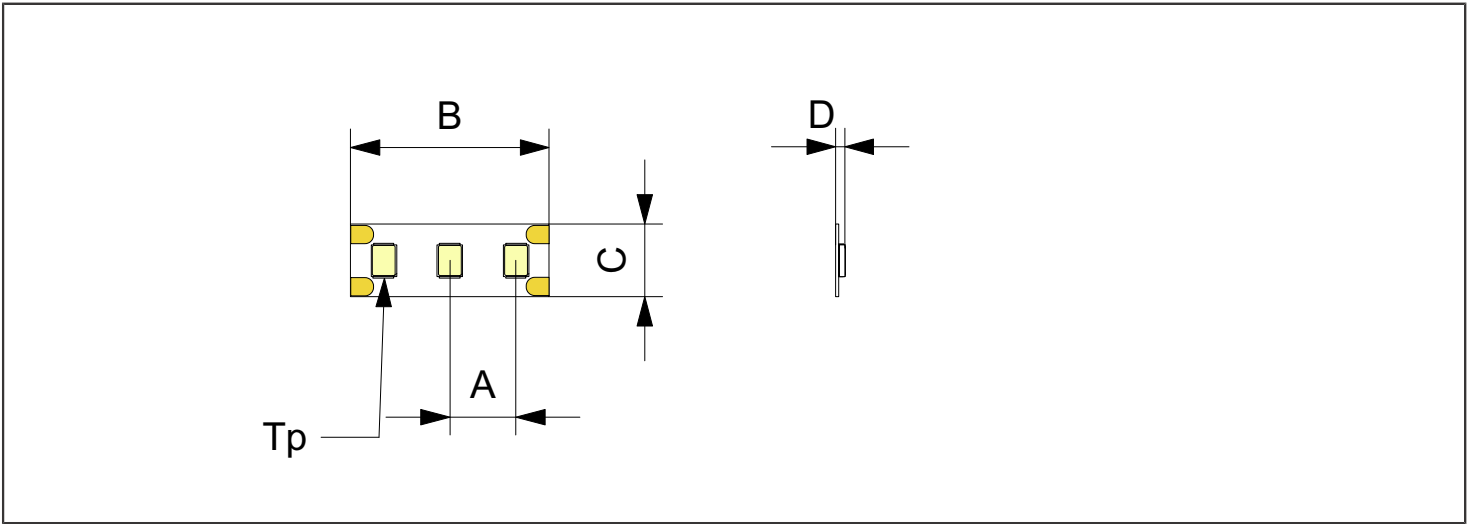
MECHANICAL FEATURES

LED quantity per cutting unit		3 LED
LED quantity per meter		138 LED
LED pitch	A	7.25 mm
length of LED module		500 mm
length of cutting unit	B	21.75 mm ±0.5 mm
Dimension - length (roll)		5000 mm ±25 mm
Dimension - width	C	8 mm ±0.2 mm
Dimension - height	D	1.3 mm ±0.2 mm

MECHANICAL FEATURES

Gross weight and tolerance with all accessories	145 g ±25g
IP-Protection class	IP20
Type of protection	-
PCB Type	FPC
PCB Colour	RAL 9003/9010
Tape on Backside (type)	3M 300LSE
Connection wire	150mm Twincable AWG22

DRAWING



## ELECTRICAL FEATURES

Modul driving method		Constant voltage
Input voltage		12 V DC
Power consumption per meter (nom.)		11.04 W
Power consumption per unit	Typ.	5.5 W
ESD Protection		2000 V
Switching cycle		> 1000000

## PHOTOMETRIC FEATURES

Color temperature	Typ.	4000 K
Luminous flux per meter	Typ.	920 lm
Luminous flux per unit	Typ.	460 lm
Efficiency based on unit		84.00 lm/W
Color Rendering Index typ. (CRI)		90
Beam angle		120 °
Rated life time (@Tp=55°C)		54000 h
Associated rated lumen maintenance (Lx) failure rate (Bx)		L70/B50

## ENVIRONMENTAL CONDITIONS

Performance Temperature range (Tp)	-20 °C - 60 °C
Rated Temperature (Tc)	60 °C

\* The information about the energy consumption labeling refer to one LED module.  
 These values can not be linearly extrapolated to a series of modules and must be defined by measurement in the installation situation.

## ELECTRICAL FEATURES

Startup time	< 2 ms
Reverse polarity protection	no
max. strip length for one side feeding	5000 mm
Dimmable	yes
Dimming method	PWM

## PHOTOMETRIC FEATURES

Chromaticity coordinate x	0.380
Chromaticity coordinate y	0.380
Color consistency	3 SDCM
Photobiological risk group (EN62471)	Free group
Energy efficiency labeling (A-G)	G
Weighted energy consumption (per Module)	5.00 kWh/1000h

## ENVIRONMENTAL CONDITIONS

Ambient temperature range (Ta)	-20 °C - 40 °C
Related humidity	< 90 %

## GENERAL INFORMATION

This datasheet is part of the product. It contains important notices for operating and handling this product. Retain this datasheet for later reference or forward it if you give this product to a third party.

## APPROPRIATE USAGE AND EXCLUSION OF LIABILITY

The LED module serves as a component to be used in lighting fixtures. Please pay attention to the intended use and the current regulations. The electrical, mechanical as well as the optical properties and limit values can be found in the datasheet for the LED module. Only use the LED Module as stated in the datasheet. An other usage as assigned is not permitted and can damage the product severely. Furthermore this can also cause a high risk of a short circuit, an electric strike, etc. For all property and personal damage, which occur out of inappropriate usage, the operator will be liable. Operational and connection errors are not in the range of our influence, therefore we can not take any responsibility for damages caused by this. For inappropriate or improper usage, reconstruction of the LED Module, improper transportation, changes on the LED Module the warranty claim expires. Technical data can be changed anytime without prior notice. Liability or warranty for completeness, currency and correctness of the stated data is excluded.

## GENERAL INSTALLATION AND SAFETY INFORMATION FOR LED MODULES / ELECTROSTATIC DISCHARGE (ESD)

The LED modules can be cut with a suitable tool (e.g.: scissors) at the marked points. All modules are factory-made electrical connected. The module is equipped with soldering pads at the cutting points. The LED module is lead-free/RoHS-compliant and equipped with an adhesive tape, which is specified in this datasheet. Electrostatic discharge (ESD) can damage or destroy the LED Module. Static charges must be discharged when working with the LED module. We recommend to wear a grounded wristband to discharge appearing electrostatic charge in a controlled way. The LED modules can be cut with a suitable tool (e.g.: scissors) at the marked points. All modules are factory-made electrical connected. The module is equipped with soldering pads at the cutting points. The LED module is lead-free/RoHS-compliant and equipped with an adhesive tape, which is specified in this datasheet. Electrostatic discharge (ESD) can damage or destroy the LED Module. Static charges must be discharged when working with the LED module. We recommend to wear a grounded wristband to discharge appearing electrostatic charge in a controlled way. Static charges may arise when removing a protection sheet or while cleaning plastic surfaces. Only anti-static materials are suitable when packing this product. The LED modules can be cut with a suitable tool (e.g.: scissors) at the marked points. All modules are factory-made electrical connected. The module is equipped with soldering pads at the cutting points. The LED module is lead-free/RoHS-compliant and equipped with an adhesive tape, which is specified in this datasheet. Electrostatic discharge (ESD) can damage or destroy the LED Module. Static charges must be discharged when working with the

LED module. We recommend to wear a grounded wristband to discharge appearing electrostatic charge in a controlled way. Static charges may arise when removing a protection sheet or while cleaning plastic surfaces. Only anti-static materials are suitable when packing this product.

## PROCESSING NOTES

The LED modules can be cut at the marked points. The bonding takes place while soldering the wire to the designated soldering pads. Please pay attention to the correct assignment of the wires (+/-/R/G/B). While soldering the soldering time of <10 seconds with a max. soldering temperature of 260°C or <4 seconds with a max. temperature of 310°C must be adhered to. The fixation of the LED module takes place with the on the backside mounted double sided adhesive tape. The surface must be free from fat, oil, silicon, dust and dirt. Further advices regarding the characteristics of the tape and the processing you can gather from the manufacturer datasheet, which we will gladly forward to you on request. While mounting this LED module on electric leading surfaces an isolation has to be fixed at the end of the module between the LED module and the leading surface. When connecting the wire to the LED module an appropriate wire-cross-section has to be chosen. The lead wire should have a strain relief. Please pay attention to appropriate operating devices. Avoid mechanical strain on to the components of the LED module.

## IMPORTANT NOTES

The technical data and the energy efficiency of the LED modules resulting from this data are partially dependant on ambient conditions in the application. The data stated in this datasheet are based on a not processed module. During processing the LED module has to be cooled adequately. Inadequate cooling can lead to a change of the parameters that are stated in the datasheet. It can also cause a massive degradation of the lifetime. The exceedance of the stated operating voltage can cause an overload of the LED module and will reduce the lifetime, in the worst case it can destroy the LED module. The conducting path on the LED modules shall not be damaged or interrupted during processing. In an application with an increased humidity or dustpollution the LED module needs to be implemented in an extra casing with the appropriate protection level. Please note the in the data sheet stated temperatures for the installation situation. For flexible LED modules the smallest bending radius is 50mm. To avoid a damage to the electrical components, the LED module shall not be strongly curved or kinked. Repeated bending should be avoided.

**Status: 26.09.2023**

**The technical data was correct at time of printing and is subject to change without prior notice or warning.**