

### Benefits

- Small height
- Minimal heat generation
- Wide viewing angle
- Easy connection with OSRAM Connect System

### Applications

- Path & contour marking
- Edge-lighting of transparent or diffused materials
- Emergency/Rescue signs

### Technical Operating Data

Product	Color	Number of LEDs	Voltage [V DC]*	Power [W]*	Current [A]*	Radiance Angle [°]*	Wavelength [nm] Color Temp [K]*	Lum. Flux [lm]*
OS-LM01A-W1-865	white	32	10	3,2	0,32	120	6500 K	29
OS-LM01A-W2-865	white	32	10	4,0	0,4	120	6500 K	57
OS-LM01A-W1-854	white	32	10	3,2	0,32	120	5400 K	29
OS-LM01A-W2-854	white	32	10	4,0	0,4	120	5400 K	57
OS-LM01A-W1-847	white	32	10	3,2	0,32	120	4700 K	29
OS-LM01A-W2-847	white	32	10	4,0	0,4	120	4700 K	57
OS-LM01A-S1	super red	32	10	4,0	0,4	120	633 nm	54
OS-LM01A-A1	red	32	10	4,0	0,4	120	617 nm	86
OS-LM01A-O1	orange	32	10	4,0	0,4	120	606 nm	98
OS-LM01A-Y1	yellow	32	10	4,0	0,4	120	587 nm	69
OS-LM01A-T2	green	32	10	4,0	0,4	120	525 nm	57
OS-LM01A-B1	blue	32	10	4,0	0,4	120	469 nm	10

\*) All Data are related to the entire module

Due to the special conditions of the manufacturing processes of LED the typical data of technical parameters can only reflect statistical figures and do not necessarily correspond to the actual parameters of each single product which could differ from the typical data.

### Technical Features

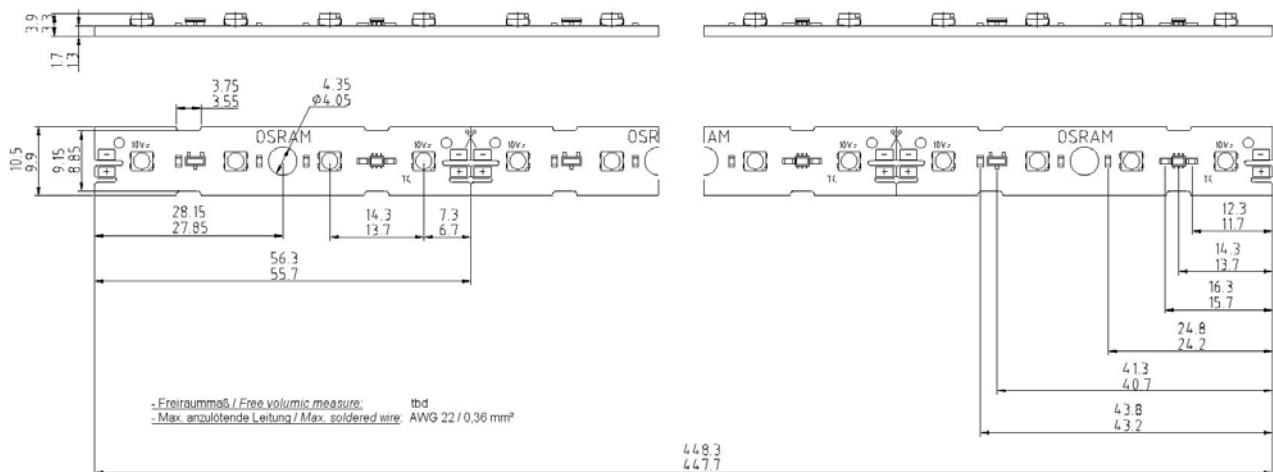
- Modules optimized for use with OSRAM OPTOTRONIC power supplies.
- Parallel connection up to three modules
- Only parallel connection allowed
- Smallest unit of 4 LEDs can be cut out at regular intervals without damaging the rest of the module
- Mounting hole (Ø 4 mm) allows easy installation with screws or standard circuit board support hardware
- Adaptable lense system OS-OP 4x1-20 available for viewing angle 20°
- Size of printed circuit board (LxWxH) 448 mm x 10 mm x 4 mm
- Size of smallest unit 4 LED (LxW): 56 mm x 10 mm
- Also available: LINEARlight Flex on flexible PCB for long applications : please refer to Datasheet OS-LM10A or OS-LM11A

## Minimum and Maximum Ratings

Product	Operating Temperature at Tc-Point [ °C ] *	Storage Temperature [ °C ] *	Voltage Range [ V dc ] *	Reverse Voltage [ V dc ] *
OS-LM01A-W1-865	-30 ... 75	-40 ... 85	10 ... 11	11,5
OS-LM01A-W2-865	-30 ... 75	-40 ... 85	10 ... 11	11,5
OS-LM01A-W1-854	-30 ... 75	-40 ... 85	10 ... 11	11,5
OS-LM01A-W2-854	-30 ... 75	-40 ... 85	10 ... 11	11,5
OS-LM01A-W1-847	-30 ... 75	-40 ... 85	10 ... 11	11,5
OS-LM01A-W2-847	-30 ... 75	-40 ... 85	10 ... 11	11,5
OS-LM01A-S1	-30 ... 85	-40 ... 85	10 ... 11	11,5
OS-LM01A-A1	-30 ... 85	-40 ... 85	10 ... 11	11,5
OS-LM01A-O1	-30 ... 85	-40 ... 85	10 ... 11	11,5
OS-LM01A-Y1	-30 ... 85	-40 ... 85	10 ... 11	11,5
OS-LM01A-T2	-30 ... 75	-40 ... 85	10 ... 11	11,5
OS-LM01A-B1	-30 ... 75	-40 ... 85	10 ... 11	11,5

\*) Exceeding maximum ratings for operation and storage temperature will reduce expected life time or destroy the LED Module.  
 Exceeding maximum ratings for operation voltage will cause hazardous overload and will likely destroy the LED Module.  
 The temperature of the LED module needs to be measured at the Tc-point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label (available e.g. at RS-Components). For exact location of the Tc-point see drawing below.

## Drawing



## Safety Information

- The LED module itself and all its components may not be mechanical stressed.
- Assembly must not damage or destroy conducting paths on the circuit board.
- When do you use the connector OS- LM-CONN pay attention that the modules are assembled in a level . No contact safety otherwise is given.
- The mounting of the module is carried out by attaching it at the mounting holes. Mounting screws should be treated with synthetic washers to prevent circuit board damage and possible short circuiting.

The LED Module incorporates no protection against short circuits, overload or overheating. Therefore it is absolutely necessary to operate the modules with a electronically stabilised power supply offering protection against the above mentioned safety risks. For dimming applications attention should be paid to specific references in "OPTOTRONIC Technical Guide".

### **OSRAM OPTOTRONIC power supplies are specifically designed with protection features for safe operation.**

When using power supplies other than OPTOTRONIC the following basic safety features are required, in addition to any other application specific concerns and local safety codes:

- Short circuit protection
  - Overload protection
  - Overheat protection
  - Correct output voltage, including consideration for ripple and spikes.
- 
- 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.
  - Correct electrical polarity needs to be observed. Wrong polarity may destroy the module!
  - 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.
  - A maximum of 3 Modules can be installed consecutively from any power feed. Operation with more than 3 LINEARlight modules will reduce photometric performance and exceed the current carrying capacity of the module.
  - The LINEARlight can typically survive transient current levels of up to 2 Amperes. As a general design precaution, if the maximum output current of the power supply is more than 2 Amperes, fast- blow fuses should be incorporated into the wiring plan.
  - Pay attention to ESD steps when mounting 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 complete 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  $15\text{-}30 \cdot 10^{-6} \text{ cm/cm/K}$
    - low permeability of steam for all climatic conditions
    - resistance against corrosive environmentThe lacquer APL of the company Electrolube <http://www.electrolube.com> met the conditions for the LINEARlight in our tests.

## Assembly Information

- Solder connections should only be performed on designated solder pads ( marked "10V +/-"). During soldering, do not exceed the maximum soldering time of 10 seconds and the maximum soldering temperature of 260°C.
- Each module can be separated into submodules of 4 LEDs each by carefully sawing or cutting at the marked lines
- For the connection we also offer the OSRAM Connect System: Feeder OS-LM-2PIN with cables of 500 mm and the Connector OS-LM-CONN for the connection of 2 modules. The feeder and the connector can be used for the connection at the ends and the submodules.

## Ordering Guide

Productgroup	Productname	EAN *	S-Unit *
LINEARlight	OS-LM01A-W1-865	4008321015945	10
LINEARlight	OS-LM01A-W2-865	4050300887043	10
LINEARlight	OS-LM01A-W1-854	4008321015921	10
LINEARlight	OS-LM01A-W2-854	4050300887081	10
LINEARlight	OS-LM01A-W1-847	4008321015907	10
LINEARlight	OS-LM01A-W2-847	4008321015983	10
LINEARlight	OS-LM01A-S1	4050300888002	10
LINEARlight	OS-LM01A-A1	4050300887128	10
LINEARlight	OS-LM01A-O1	4050300888040	10
LINEARlight	OS-LM01A-Y1	4008321015969	10
LINEARlight	OS-LM01A-T2	4050300887845	10
LINEARlight	OS-LM01A-B1	4050300888088	10

\*) EAN: Ordering number per single module  
S-Unit: Modules per shipping unit

Note: Typical performance data are subject to change without any further notice, particularly as LED technology evolves.

## Sales and Technical Support

### OSRAM Opto Semiconductors GmbH

Wernerwerkstrasse 2  
D - 93049 Regensburg  
Germany  
[www.osram-os.com](http://www.osram-os.com)

### OSRAM GmbH

Hellabrunner Strasse 1  
D - 81536 München  
Germany  
[www.osram.com](http://www.osram.com)  
+49 (0)89 6213-0

See website for local phone numbers

## Related and Further Information

- The new dimension of light 53 S006 GB
- New creativity in lighting design 153 S07 E  
LED Modules for illuminated signs
- OPTOTRONIC Technical Guide 130 T08 E
- OPTOTRONIC Data Sheets [www.osram.com](http://www.osram.com)