

LINEARlight Advanced – LR14A Overall Module

Preliminary Datasheet



Benefits

- Broad portfolio (Eco, Advanced, Power) with the same form factor offering high variety in luminous flux and color temperatures while being simply exchangeable
- Modules can be joined together in series to make seamless strip lighting, without any further accessory
- Intermateable with LINEARlight Power & Eco
- Low maintenance costs thanks to a lifetime of up to 50k hours
- Module efficacy up to 75 lm/W

Application

- Furniture / shelf lighting
- Coves lightning

Technical Operating Data

Product	Color	Number of LEDs	Voltage [V]*	Power [W]*	Radiance Angle [°]*	Color Temp. [K]	Lum. Flux typ. [lm]	Lum. Intensity typ. [cd]
LR14A-W2F-830-L30	White	14	24	4.7	30	3000	350	1100
LR14A-W2F-830-L30	White	14	24	4.7	30	3000	350	1100
LR14A-W2F-840-L70	White	14	24	4.7	70	4000	350	280
LR14A-W2F-840-L70	White	14	24	4.7	70	4000	350	280

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

*) Preliminary Data

Technical Features

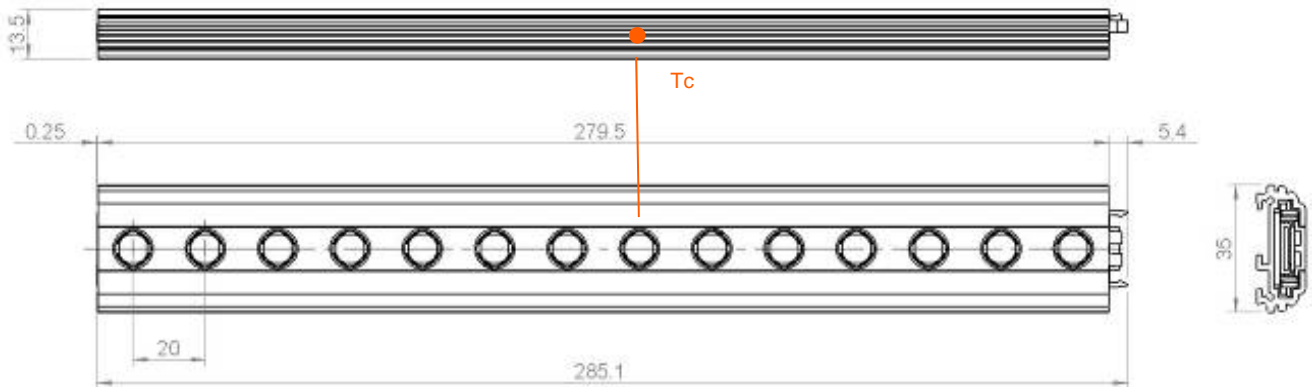
- Module equipped with 14 LEDs, adapted heat sink and intergrated optics with 30° or 70°
- Luminous flux 1250 lm/m
- Intergrated SMD-4Pin plug connector (male/female) on both module sides
- Fine white Binning
- Color rendering index Ra typ. 85
- Connecting cables (CONNECTsystem LR-4x) as well as endcaps optional available (see page 4)
- Mounting by optional clips LT-MB-KiT or LT-KiT
- Seamless concept with up to 10 modules in series
- Lifetime 50.000 h @L70 @t_{max} 65°C
- Best efficiency in combination with OSRAM OPTOTRONIC® 24 V control gear (recommended control gears see page 2)
- Optional end caps ensure strain relief function in combination with CONNECTsystem LR-4x (see page 4)

Minimum and Maximum Ratings

Product	Operating Temperature at Tc-Point [C°]*	Storage Temperature [C°]*	Voltage Range [V dc]*	Reverse Voltage [V dc]*
LR14A-W2F	-30 ... 65	-30 ... 90	23 ... 25	25

*) Exceeding maximum ratings for operating and storage temperature will reduce expected life time or destroy the LED Module.
 Exceeding maximum ratings for operating current 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.

Drawing



Driver

System recommendation OPTOTRONIC

LED Module	Power	lm/m	OT8 200-240/24	OT20 (S) 200-240/24	OT50* 200-240/24	OT75 (E) 200-240/24	OTi Dali 75 220-240/24
LINEARlight Advanced	4,7 W	1400	1 module	2 - 4 modules	5 - 9 modules	5 - 10 modules	5 - 10 modules
Length			280 mm	560 - 1120 mm	1400 - 2520 mm	1400 - 2800 mm	1400 - 2800 mm
Luminous flux			400 lm	200 - 600 lm	2000 - 3600 lm	2000 - 4000 lm	2000 - 4000 lm

System recommendation Light Management Systems

LED Module	Power	lm/m	OT DIM	OTi DALI DIM	OTi DALI DIM LI	OT DMX 3x2.5A DIM	OT DMX 9x2A DIM SO
LINEARlight Advanced	4,7 W	1400	10 modules	10 modules	10 modules	3x10 modules	9x7 modules

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.
- To avoid mechanical damage of the path on the circuit board the plastic washer should be inserted between the screw head and circuit board while the assembly with using of metal screws and plastic washers. Alternatively, the use of plastic screws is possible.
- To avoid mechanical damage to the connecting cables, the module should be attached securely to the intended substrate. Heavy vibration should be avoided.

In order to drive OSRAM LED-Modules safely, it is absolutely necessary to operate them with an electronically stabilised 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® electronic control gear complies to all relevant standards and guarantees safe operation.

- 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.
- Pay attention to ESD steps when mounting the module.
- Asymmetrical voltage drops can cause a strong overload and destruction of single modules.
- Use only LR-4PIN CONNECTsystem for electrical installation. Three types of connectors are available: LR-4PIN - Feeder with 500 mm cable length. LR-4CONN-45 - Connector for through wiring with 45 mm cable length. LR-4CONN-250 Connector for through wiring with 250 mm cable length.
- The LED module can typically survive levels of up to 4 Amperes. As a general design precaution, if the maximum output current of the power supply is more than 4 Amperes, fast-blow fuses should be incorporated into the wiring plan.
- Electrical contact is achieved with the contact cables. A maximum number of 10 modules can be installed consecutively from one power feed. Operation with more than 10 consecutive modules will reduce photometric performance and exceed the current carrying capacity of the module.
- While installation of up to 14 modules on one OPTOTRONIC® 75W .middle feeding has to be done.
- The module, as manufactured, has no conformal coating and therefore offers no inherent protection against corrosion.
- 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.
- If the IP assessment of the device should be higher than IP20, the design of the mounting should be accordingly to IP standards while the application.
- It's recommended that a person cannot look direct for a long time in the light by a distance of 30cm or less.

Mounting Information

- The housing of LINEARlight Advanced is already an optimal heat sink. Another heat sink is not required.
- Alternatively two mounting brackets LT MB can be used for the fastening. When the holding clamp are mounted on the desired place, the module can be fasten with snapping (not suitable for vertical mounting).
- To connect one module, the feeder LR-4PIN-500 must be plugged in the "INPUT" side of the module. While mounting of two or more boards please connect the "OUTPUT" side of the first board with the "INPUT" side of the following board using plug connector LR-4CONN-45 / 250. Please connect all the other possible modules as described above.

Ordering Number

Product group	Product	EAN*	S-Unit*
LINEARlight Advanced 30°	LR14A-W2F-830-L30	4008321 971678	8
LINEARlight Advanced 30°	LR14A-W2F-840-L30	4008321 971692	8
LINEARlight Advanced 70°	LR14A-W2F-830-L70	4008321 978424	8
LINEARlight Advanced 70°	LR14A-W2F-840-L70	4008321 978448	8
CONNECTsystem feeder	LR-4PIN-500	4008321 971852	16
CONNECTsystem	LR-4CONN-45	4008321 971814	16
CONNECTsystem	LR-4CONN-250	4008321 994400	16
LINEARlight Track Mounting bracket	LD-MB	4008321 225672	16
LINEARlight Track KiT	LT-Kit	4008321 813404	40

*) 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

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

On our world wide homepage all OSRAM subsidiaries are listed with complete address and phone numbers.

Related and Further Information

- A new approach to light 153 S006 GB
- OSRAM LED Systeme www.osram.de/led-systeme
- OPTOTRONIC® Technical Guide 130 T008 DE www.osram.de/evg-downloads
- OPTOTRONIC® Datasheets http://catalog.myosram.com
- Eulumdat Files www.osram.de/led-systeme-downloads
- New standards for LED control gear www.osram.de/evg-downloads