

DRAGONeye® - DE1

Data Sheet



Benefits

- Compact High-Flux LED Minispotlight
- Slim metallic housing for optimum heat dissipation
- IP65 Protection for use in outdoor lighting

Applications

- Small luminaire head for mini spotlights
- Orientation and accent lighting
- Museum lighting of UV sensitive exhibits
- Illumination of shelves and display cases

Technical Operating Data

Product	Color	Number of LEDs	Current [mA]*	Power [W]*	Radiance Angle [°]*	Wavelength [nm] Color Temp [K]*	Lum. Intensity [cd]*
DE1-W4F-854	white	1	350	1,2	15	5400 K	650
DE1-W3F-830	white	1	350	1,2	15	3000 K	485
DE1-A2 **	red	1	350	0,8	18	616 nm	380
DE1-Y2 **	yellow	1	350	0,8	18	589 nm	265
DE1-T2 **	green	1	350	1,2	15	531 nm	135
DE1-B2 **	blue	1	350	1,2	15	468 nm	32

*) 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.

+) Preliminary Data

**) Discontinued

Technical Features

- Dimensions DRAGONeye: H: 32 mm, Ø: 23 mm
- Easy assembly due to integrated thread M10 x 1.5
- Factory installed 500 mm / AWG20 for white modules and 200mm / AWG 22 for colored modules double pole cable.
- Operation only with OPTOTRONIC® constant current devices (see page 3)
- A crank at the bottom of the housing (Ø: 12 mm) allows perfect centering.
- Protection class IP 65 according to DIN EN 60529
- Metallic housing for optimum heat dissipation
- Narrow beam angle for use as a point light source
- Only serial connection of modules allowed
- Up to 70,000h lifetime

Minimum and Maximum Ratings

Product	Operating Temperature at Tc-Point [°C] *	Storage Temperature [°C] *	Max. Current [A dc] *	Reverse Voltage [V dc] *
DE1-W4F-854	-30 ... 65	-40 ... 65	0,5	0
DE1-W3F-830	-30 ... 65	-40 ... 65	0,5	0
DE1-A2 **	-30 ... 65	-40 ... 65	0,5	0
DE1-Y2 **	-30 ... 65	-40 ... 65	0,5	0
DE1-T2 **	-30 ... 65	-40 ... 65	0,5	0
DE1-B2 **	-30 ... 65	-40 ... 65	0,5	0

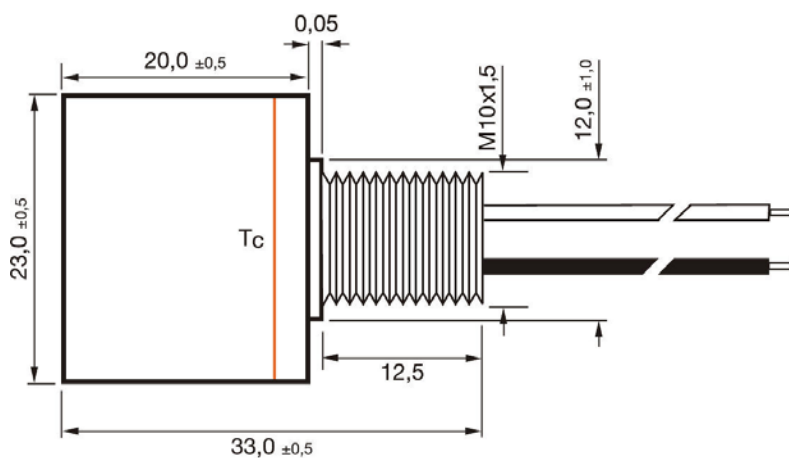
The module is designed to work with current sources. The maximum output voltage may not exceed 100 V DC. Reverse operation is not allowed and may destroy the module.

*) 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. Several modules may be connected in series up to the maximum voltage of 100 V DC (outside SELV limits).

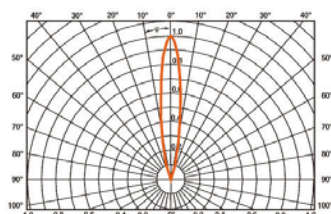
The temperature of the LED module must be measured at the Tc-point according to EN60598-1 in a thermally constant status with a temperature sensor or a temperature sensitive label. For exact location of the Tc-point see drawing below.

Drawings



Abstrahlcharakteristik Radiation Characteristic

$$I_{rel} = f(\varphi); T_A = 25\text{ °C}$$



Alle Angaben in mm
All values in mm

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.

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 61374-2-13, EN 55015, IEC 61547 and IEC 61000-3-2 - ENEC: 61374-2-13 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)
- Serial connection is highly recommended as safe electrical operation mode.
Parallel connection is not recommended. Unbalanced voltage drop can cause hazardous overload and damage the LED module.
- Pay attention to standard ESD precautions when installing the module. For further information see the ESD application notes, you can find them in the internet.
- Recommended power supply:
 - OT 9/200-240/350 or OT 9/100-120/350(E) for 350 mA constant current operation
 - OT 9/10-24/350 DIM, OT 9/10-24/350 DIM(E) for 350 mA constant current, 1..10V interface (dimming with PWM)
 - OT 9/200-240/350 DIM for 0-350 mA constant current operation, 1..10 V interface (dimming) and strain relief
 - OT 18/200-240/700 DIM for 0-500 mA constant current operation, 1..10V interface (Dimming with PWM) and strain relief
- The OT18 comes with preset limitation to 500mA, thus giving 12W due to SELV ($\leq 25V$)
- Maximum number of DE1 for all OT9 or OT18: White/Blue/Green: 6; Red/Yellow: 9
- For 500 mA the maximum power is 1.7 W. Luminous flux increases to 130%.

Assembly Information

- Please planely mount the rear side to the mounting surface (thermal contact).
- Pay attention to pull relief for the cable.
- In environments with significant vibrations we recommend to add a securing of the mount.
- A borehole of Ø 12 mm and a M10 x 1.5 screw nut must be taken into consideration for the assembly.
- To assure the IP protection of the module the ends of the wires must be protected according to IP65 as well.

Ordering Guide

Productgroup	Productname	EAN *	S-Unit *
DRAGONeye®	DE1-W4F-854	4008321364999	264
DRAGONeye®	DE1-W3F-830	4008321365361	264
DRAGONeye®	DE1-A2 **	4008321909732	264
DRAGONeye®	DE1-Y2 **	4008321909756	264
DRAGONeye®	DE1-T2 **	4008321909763	264
DRAGONeye®	DE1-B2 **	4008321909749	264

*) 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

- OSRAM LED systems www.osram.com/led-systems
- The new dimension of light 153 S006 GB www.osram.com/led-systems-downloads
- OPTOTRONIC® Technical Guide 130 T008 GB www.osram.com/ecg-downloads
- OPTOTRONIC® Data Sheets <http://catalog.myosram.com>
- Eulumdat Files www.osram.com/led-systems-downloads
- New standards for LED control gear 130 W011 GB www.osram.com/ecg-download