



PYROIS
TECH

COBe-User Manual

LED driver for LEDe
modules



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0. Introduction

Thank you for purchasing this **COBe LED driver for LEDe modules** from Pyroistech.SL. This document describes the COBe LED driver and provides you with instructions for its correct operation. Please do not hesitate to contact us through info@pyroistech.com if you have any questions or doubts about this manual.

With **COBe driver**, you can easily connect various **LEDe modules** to the same driver and position the LED emission wavelength anywhere you desire.

COBe is equipped with manual and external PWM signal adjustment options, providing great stability and a robust design for all your needs. Whether you're working in optics, chemistry, or biology, COBe is an indispensable LED driver that delivers optimal power to your LEDe modules. Upgrade your LED setup today with COBe LED Driver.

1. Technical Specifications

Electrical characteristics

Power input	V_{IN}	10 - 18 V
	I_{IN}	1.5 A max
	Connector type	DC female 2.1mm
Signal input for pulsed mode	V_{IN}	5V
	I_{IN}	5 mA typ.
	Connector type	SMA female

Other characteristics

LEDe module connector	3.0 mm male 4 pin single angled
Working T	0 - 50 °C
Humidity	< 80% RH
Size	10.5 x 11.5 x 8 cm
Weight	500 g

2. Operation

2.1 Package Content

- Requested COBe driver.
- Power source: input 100 - 240 V~, 50 - 60 Hz; output 18 V, 2 A; 99 x50 x33 cm, cord length 1.5 m.
- Power cord 1.85 m long
- Connector cable
- User's manual

Inspect carefully the devices and make sure there is no damage. On the contrary, do not employ the light source and please contact us through **info@pyroistech.com** for repair or replacement information.

2.2 Before use

Connect the LEDe module to the COBe. Insert the plug of the power cord into the power supply and connect the power cord to the power outlet. Then, introduce the plug of the power supply into the light source power input (DC female type).

The COBe is designed to have intensity control in continuous and modulation modes. The easy user interface permits to select the desired mode (see section **2.3**).

2.3 COBe-series diagrams

1	Intensity regulator (20% - 100%) in CW mode
2	LED indicator
3	Switch (ON-OFF-PWM)
4	PWM input (5V max)
5	Power input (10 – 18 V, 1.5 A max)
6	Connector to LEDe module
7	COBe connector
8	LEDe module connector



2.4 Operation Modes

COBe LED drivers are intended for operation with LEDe modules. The utilization of LEDe modules with COBe LED driver requires the prior connection of a cable (included with COBe driver) between the COBe LED driver (7) and the LEDe module (8).

The controls feature a three way switch (3) to select the operation mode: continuous, pulsed or off. A second control (1) is used to manually adjust the drive current in continuous mode. A connector allows (4) to introduce a control signal in the PWM mode.

• OFF mode

The switch (3) on the right of the frontal face of the LED driver has to be on the middle position ('OFF'). It is suggested to have the switch in this position when connecting the power supply to the light source through (5).

• CW mode

To select the continuous mode, please move the switch (3) to the left position ('ON'). In this mode, the left knob (1) controls the LEDe module intensity. The intensity can be adjusted between 20% (fully counter-clockwise) and 100% (fully clockwise) of maximum intensity.

• PULSED mode

To work in pulsed mode, please move the switch (3) to the right position (pulsed signal drawing). In this mode, the LEDe module intensity can be adjusted between 0% and 100% of maximum intensity changing the duty cycle of the PWM signal introduced through the PWM input connector (4) of SMA female type.

The PWM signal must vary between 0 and 5 V. Voltages out of this range can damage the PWM input and disable the PWM mode. Voltages below 1.5 V will be recognized as low level while tensions above 2.8 V will be considered high level. A pulsed frequency of 500 Hz or lower is recommended to achieve the maximum resolution. However, higher frequencies, up to 100 kHz, can also be used.

Whenever the LED driver is on, either in CW mode or in pulsed mode; the green LED indicator (2) located on the front face of the light source will be on. In case of being in pulsed mode, the LED indicator will blink in the same way as the light source.

3. Important Notes

Before operation

- Do not remove or alter any installed safety device on this equipment. Doing so will cancel your warranty and create an unsafe operating environment.
- There are NO user serviceable parts inside. Dangerous currents are present in this device. Only allow qualified personnel to service this unit.
- Inspect this unit and its power supply before using it for the first time. Do not use the unit if it is damaged in any way. Contact us for repair or replacement information.

During operation

- Do not cover the source or obstruct the air flow for its refrigeration. Avoid exposure to direct sun light. A rise in the light source's temperature could affect its operation or even damage its components.
- The equipment should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the equipment should be observed to verify normal operation in the configuration in which it will be used.

Electromagnetic Compatibility

- Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of this equipment. Otherwise, degradation of the performance of this equipment could result.
- The use of cables, power supplies, transformers and accessories other than those specified by Pyroistech S.L., in addition to not being covered by the warranty, may lead to increased emissions and/or decreased electromagnetic compatibility.

4. Warranty

Pyroistech's general warranty for a product has a 1 year duration.

This warranty includes repairs and replacement of damaged parts due to a malfunction of the COBe LED driver, as long as said malfunction can be attributed to errors made in the manufacture of it by Pyroistech SL, not to a punctual misuse of the source or to a continued incorrect employment of it by the user, whether conscious or unconscious, due to not having followed the operation recommendations indicated by Pyroistech SL

There is the possibility of extending this guarantee. For more information, contact Pyroistech S.L.

5. Compliance

This device complies the following standards:



EMC 2014/30/EU
RoHS-compliant



Federal
Communications
Commision

Contact Pyroistech S.L. if you require more information about the electromagnetic compatibility of the product.



WEEE
Compliance

If you consider that the product has reached the end of its useful life and you want to dispose of it, you can contact Pyroistech S.L. so that it is in charge of its management.

Version	Date	Description
1.0	15 Marzo 2023	First Document

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