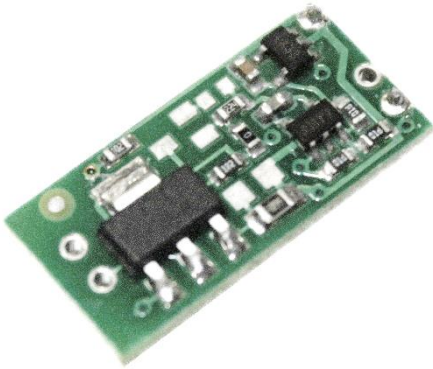


GENERAL INFORMATION



Application

LDB-qCW driver is designed for power supply of IR LEDs produced by MicroTech BG.

Features

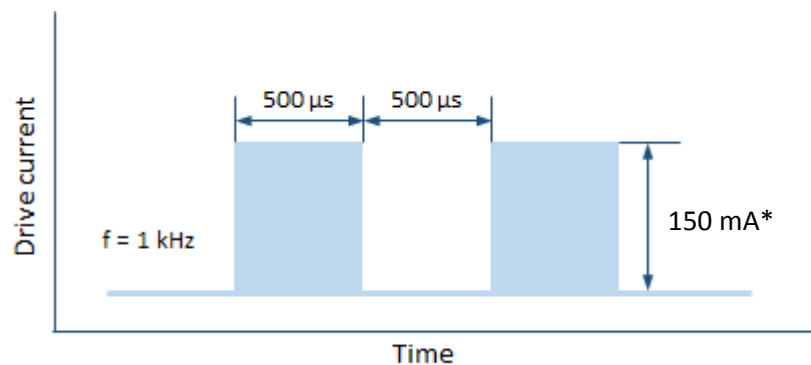
QCW mode of operation (mode that provides maximum average optical power) with fixed current amplitude, frequency and pulse duration.

Possibility of **synchronisation** with an **external device** (such as synchronous detector) with the help of synchronisation output.

Operation Conditions

Indoor operation only. Ingress Protection Rating IP00.

Operation Mode Description



Signal waveform generated by the driver

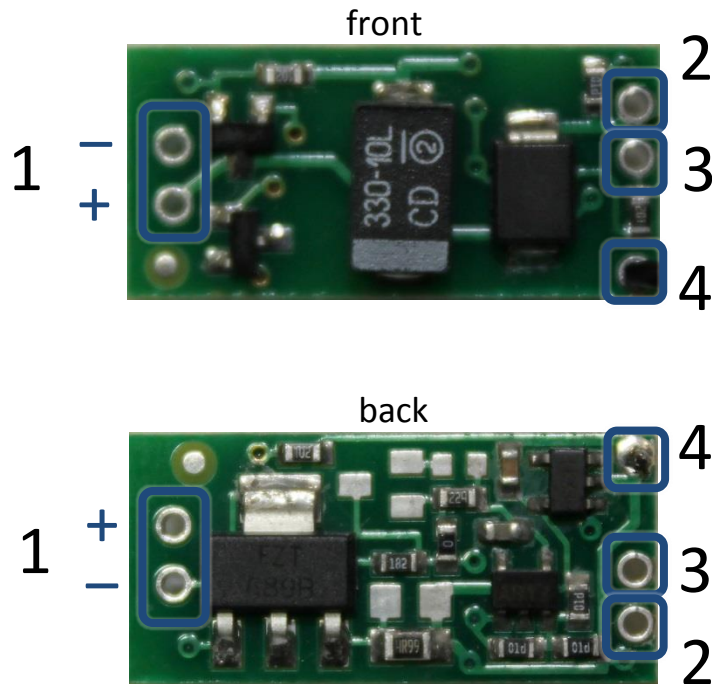
**Current value can be changed for enabling the most optimal performance with the exact LED-photodiode pair.*

Precautions

- Turn on the power supply of the LED Driver only after all connections are made and tested.
- Mount or dismount the LED Driver in power-off state only, otherwise it can lead to breakdown.
- Ingress protection rating of the LED Driver is IP00, so please assure the protection of the driver.
- Do not use multimeter to control and adjust current of the LED.

Note! Please refer to your provider if you have any questions.

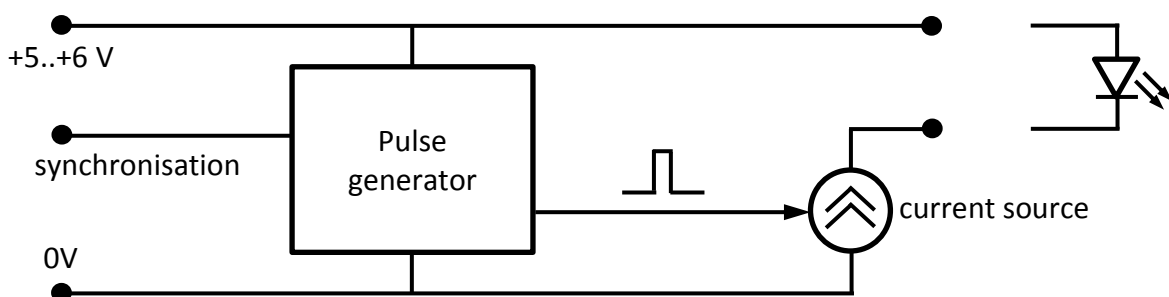
Driver Layout



1. LED connection contacts.
2. Power input (+5V) contact*.
3. Synchronization output contact*.
4. GND contact.

* Power input and synchronisation output contacts have common GND contact (4).

Driver Block Diagram



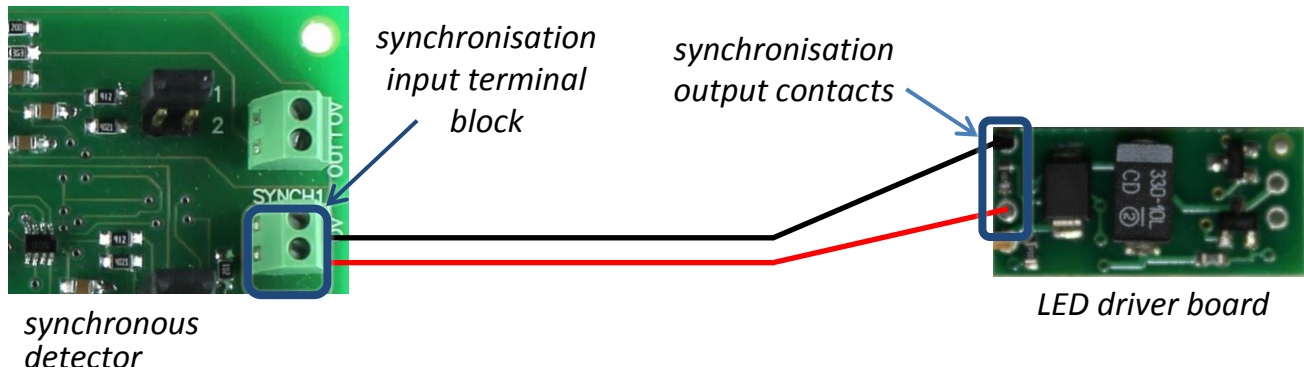
OPERATING INSTRUCTIONS

1. Securely solder the appropriate pins of the LED with LED connection contacts (1).

Note! Contact marked with “LED +” must be connected to the appropriate pin of an LED (marked with a red dot). Improper connection may cause LED damage.

Note! LED case must be electrically isolated from the ground.

2. If you use MicroTech BG synchronous detector, connect the LDB-qCW minidriver’s synchronization output contacts (2) with synchronization input terminal block.



3. If necessary, make all the connections of other boards (synchronous detector etc.) following the appropriate instructions manuals. Before turning them on check the required connections and modes:

Synchronous detector:

- Photodiode input connection
- Preamplifier power output connection
- Averaging time and signal gain selection
- External signal observing device connection

4. Connect 5V stabilised power supply to the power input (3).

Main Parameters	
Input voltage	+5..+6 V, stabilized
Voltage tolerance	-5..+5 %
Power consumption	max. 0.4 W
Board dimensions	24×12 mm
Signal Data	
Pulse duration	500 μs
Frequency	1 kHz
Output current amplitude	150 mA*

* Current value can be changed for enabling the most optimal performance with the exact LED-photodiode pair.