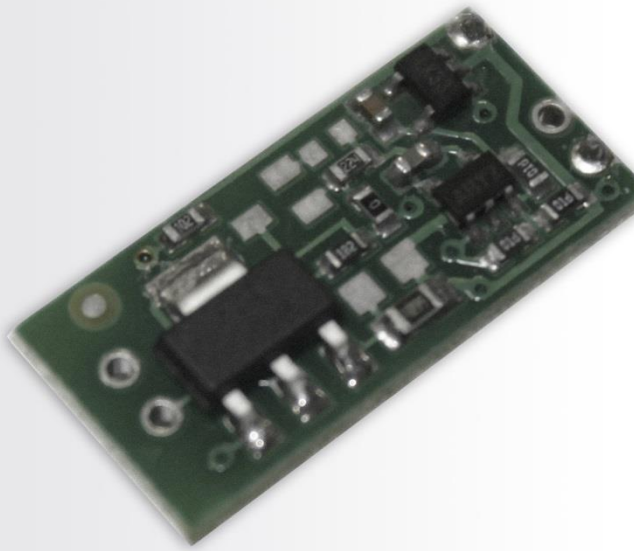
LED Microsensor NT

mD-1p
Pulse LED MiniDriver
Instruction Manual



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Application

mD-1p driver is designed for power supply of standard one-element Mid-IR LEDs.

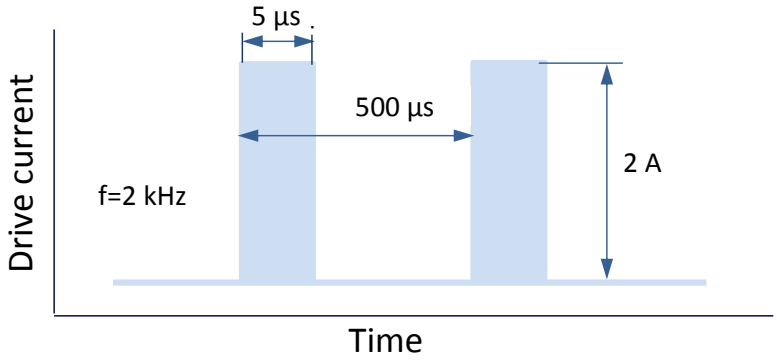
Features

- **Pulse mode operation** (mode that provides **maximum peak optical power**) with fixed signal data parameters (amplitude, repetition rate and pulse duration).
- Possibility of **synchronisation** with an **external device** (such as **LMSNT SDM 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

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.

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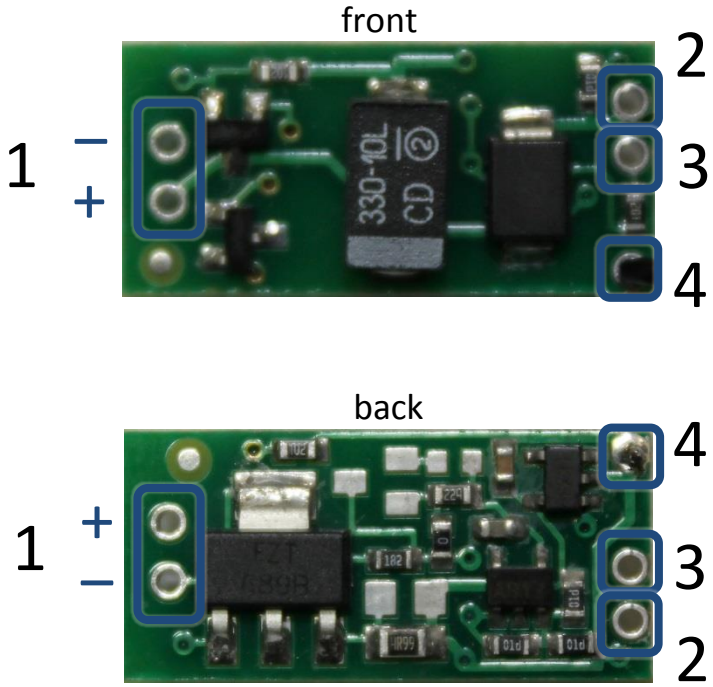
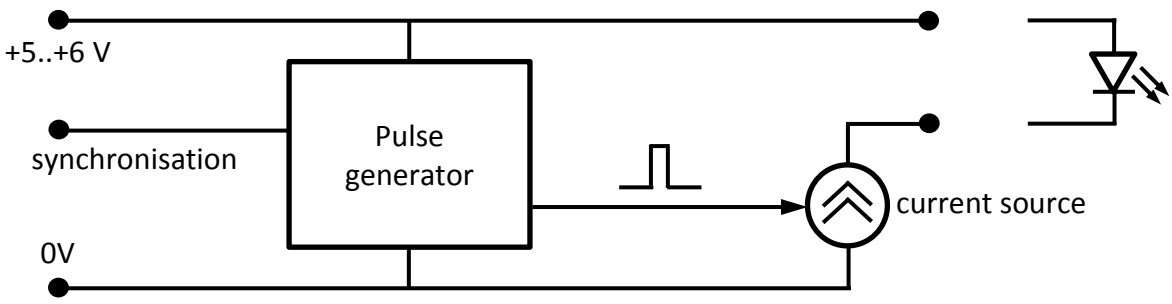
Driver Layout



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



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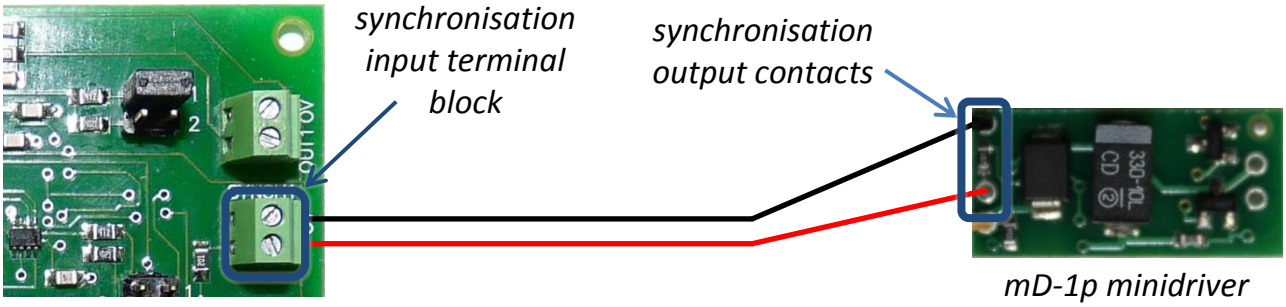
1. Securely solder the appropriate pins of the LED with LED connection contacts (1).

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 LMSNT SDM synchronous detector, connect the mD-1p 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).

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Main Parameters	
Input voltage	+5..+6 V, stabilized
Voltage tolerance	-5..+5 %
Power consumption	max. 4 W
Board dimensions	24×12 mm
Signal Data	
Pulse duration	5 µs
Frequency	2 kHz
Output current amplitude	2 A

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