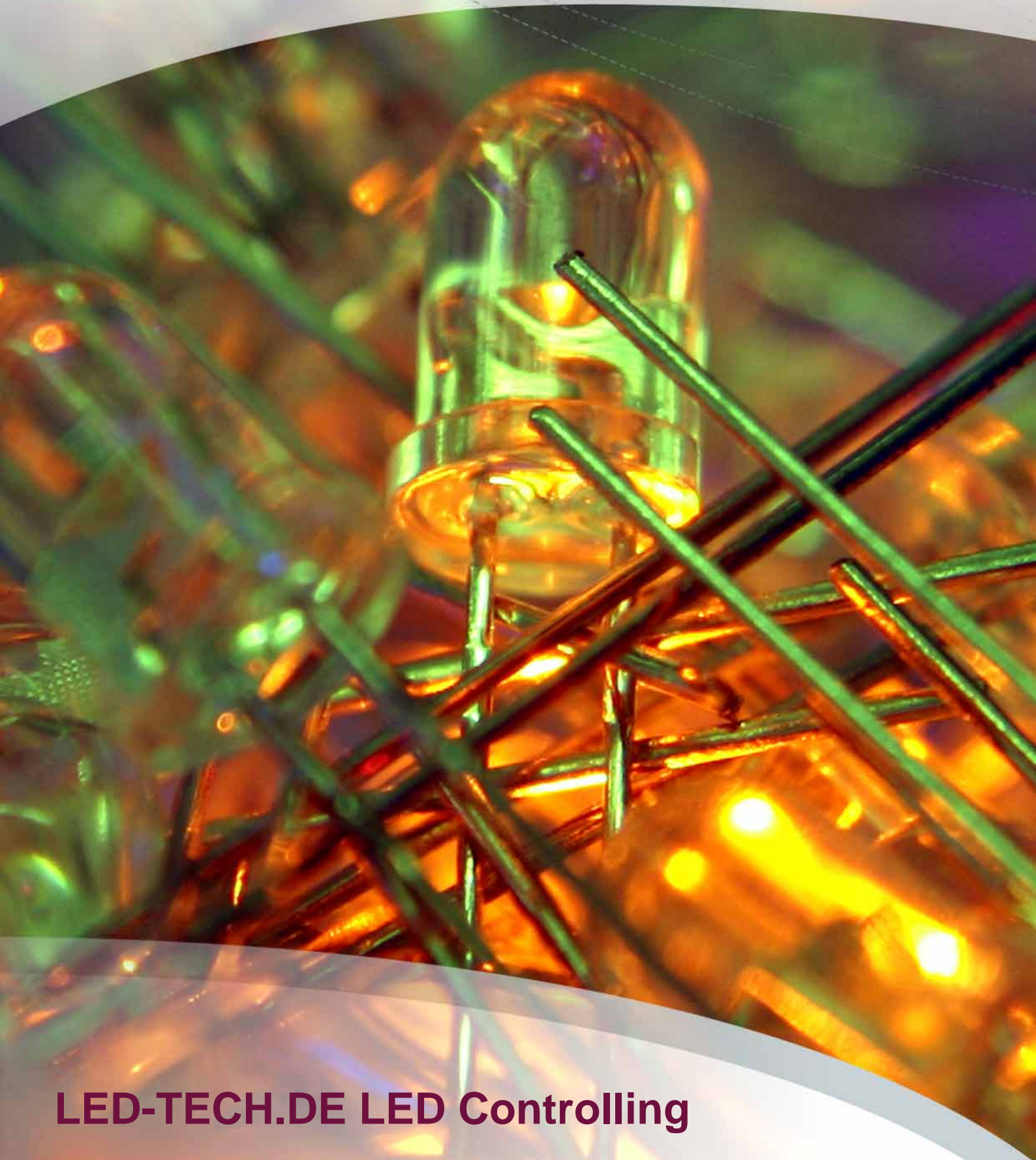


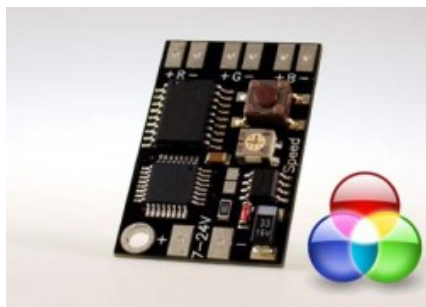
LED-TECH.DE

OPTOELECTRONICS



LED-TECH.DE LED Controlling

MultiLine RGB Mini Controller V2.0



Part Number: LT-0215

Housing Color: black

V typ.: 7-24 V

New upgrade version with 800mA/channel!

We have re-designed our smallest RGB controller. For using high power LEDs 500mA were not adequate in every case. The new version 2.0 can now drive LEDs up to 800mA per channel. The module has the same dimensions as its forerunner.

The new module comes on a black PCB instead of green now and can also be driven in two different modes that can be changed by setting a little soldering bridge on the PCB:

A) The onboard potentiometer adjusts the fading times between two colors. This kind of fading is used by most of the common controllers and is the standart setting of this controller.

New B) The potentiometer can adjust the durability of colors which leads to less intensiv fading (mixed) colors. The fading sequence to the next color is done in a fixed time of 1-2 seconds and the main focus is set on HOLDING a color. A very nice effect.

Technical data:

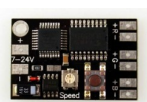
- Ready-to-use SMD PCB
- Input: 7–24V
- Charging rate (without charge): 20mA
- Time interval (1 flow path): 5 sec. up to 7min. (adjustable)
- Output current: 800mA per channel
- Dimensions: 40x26mm
- Uses common ANODE (Plus)

Completely new in version 2.0:

- Wrong polarity protection on input side
- Wrong polarity protection on output side
- Mounting hole (can also be glued)
- 2 operation modes
- Fading now also include WHITE mixed color
- hardware transparency for max. flexibility (read below)

Controller data:

- Controller: ATMEGA48
- Takt: 8MHz (internal resonator, internal reset)
- PWM channel RED: PD6
- PWM channel GREEN: PB1
- PWM channel BLUE: PB2
- Start-Stop-Pause-Button: PC0 (after GND, internal PullUp)
- Speed-Potentiometer: ADC7



Hardware transparency:

The bottom side of the module shows 8 record pads. Interested users with hardware for programming and flashing the IC with own software (BASCOS code) can use these pads for access. The 8 pads are connected as follows:

1. MISO
2. VCC
3. SCK
4. MOSI
5. RST
6. GND
- 7.+8. not used

When the module is stopped at a special color and gets switched off it will show the same color when switched on again. The same effect appears when the module was in fading mode.

Tipp 1: You can find a compatible housing [here](#).

RGB Controller Housing

Housing for RGB device LT-215. Dimensions: 44x30x15mm



Part Number: LT-0216

Housing Color: white

MultiLine RGBW Controller



Part Number: LT-1001

Housing Color: black

V typ.: 7-30 V

3. generation now available!

With RGB and RGBW mode!

New features:

- 3 and 4 channel mode
- alphanumeric display for more info feedback
- new high quality buttons
- optional remote control expands functionality

The MultiLine RGBW Controller is a powerful, cascadable controller with a wide range of features. If you want to know more please read below about ...

the technical data:

- Channels: 3/4
- Status LEDs: 4
- 16.000.000 colors
- PWM: 300Hz (no flickering!)
- Input: 7-30V DC
- PCB power consumption: 50mA
- Uses common anode (plus)
- Dimensions (LxWxH): 110x111x25mm
- Fading effects ex work: 1
- Fading effects with remote: 4
- Fading speed steps ex work: 1
- Fading speeds with remote: 16
- Power supply connection: Clamps
- Illuminants connection: Clamps
- Max. capacitance per channel: 10A
- Max. LED forward voltage: 30V DC
- Max. total capacitance of illuminants: 20A over soldering pads or 16A over clamps

the functional principle:

The latest generation of this controller can be switched from 3 to 4 channel by using an onboard jumper. When running in 3channel RGB mode the controller gets WHITE by mixing R+B+G. If the controller runs in 4channel mode instead it uses the fourth channel to get white. This allows the user to use WARM white LEDs too now!

The controller can operate 10A (max.) per channel. As the output voltage complies with the input voltage (7-30V) it can control a lot of different illuminants. If the project gets larger and more resources are needed the controller can be expanded by further



AMPLIFIER circuit boards. Each booster is as powerful as the controller itself.

Because of the 300Hz PWM technology you do not see any kind of flickering when the colors change. That makes the applications possible to be used for wellness or videocams.

If the modul gets disconnected from its energy source the last conditions get reactivatet when reconnected. If the controller was in fading mode it goes on fading and if it showed a (mixed) color it goes on with that. This is very useful for all applications that shall run without human administration.

the buttons:

The controller has different onboard buttons for manual control:

1) Alphanumeric display: This gives you visual feedback on controller status, button press, remote signals and running programs.

2) Two intensity buttons per channel (Up/Down)

The status LEDs are already diffused in the color tey control. One push changes the intesity up or down.

New: Id the controller is used in RGB mode a press on the white channels buttons will lower/increase R, G and B channel untill 100% so that white appears as mixed color. Of course you can also use the R, G and B buttons to reach white but this lasts longer.

3a) Starting a program (without remote control)

The ex-work fading program kann be startet (and stopped) by pressing the PAUSE button.

3b) Starting a program (with remote control)

If you have the optional remote control you have access to all four fading/blinking effects. You can start/change them by using the four grey button on the roght of the remote control. You can also control the speed (16 steps) by using the two white button on the top of the remote.

4) Pause button

This button stop and continous the current fading effect.

the remote controlling / upgrading:

The MultiLine controller uses the same IR remote control (LT-600/1002) like all other LED-TECH RGB/W components. If you already have such a remote you do not have to buy it especially. A detailed description of all buttons of the remote can be found in the remote part description.

With the optional remote you upgrade the MultiLine controller for only 10,- Euros to a professional controller thats range of features can mess with competitive products that are 3-4 timmes more expensive. But the controller does not only get the possibility of wireless communication it also gets the features

- 1 more fading effect
- 2 more flashing effects
- wireless On / Off switching
- direct choice of different colors
- Dimmable single colors
- Speedadjustment of fading/flashing effects

(Above linked video shows some sample adjustments)

The onboard infrared sensor is mounted in a way that it is able to receive signals even in the below mentioned MultiLine IP65 housing. The transparent cap ensures that the signals can be received by the IR sensor. If you want to mount the controller invisibly you can use the external MultiLine IR sensor LT-1003 with integrated anti-jamming technic.

The onboard pics show and explain the two different jumper settings. We intendingly designed the jumper settings in a way that the jumper has to be set anyway because these little things often like to get lost as every PC friend may confirm ...

the flexibility (amplifier):

The MultiLine RGB/W controller can be extended by any number of amplifiers so the application gets cascadeable. A simple, money saving and efficient possibility to built (really) big applications and control them centrally. The PWM signal is transported by wire (LT-1016) by using the central 10 pole socket on the controller. This socket is also on each amplifier PCBs twice. The first one to receive the signal, the second one to transport it to other possible amplifier PCBs.

The amplifier can be ordered [here](#).

useful supply / help:

Dedicated MultiLine IP65 housing made from plastic with transparent sealed cap (120x120x55mm)

the individuality (project service):

If you are interested in special onboard printings (reseller versions), different speed times or other modifications please do not hesitate to contact our support to tell us your special wishes.

MultiLine IR Remote Control



Part Number: LT-1002

Housing Color: white

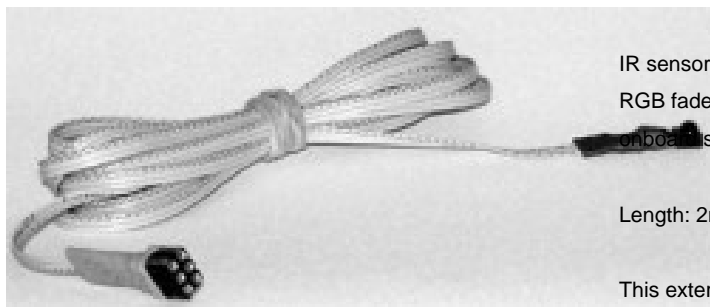
This IR remote is made for

a) the MultiLine RGB controller. It also extends the controllers functional features enormously. Please have a look at the above linked RGB controllers description for detailed information.

b) the MultiLine RGB fader that is now remote controlable, too in addition with IR remote module LT-1289. Please have a look at the above linked RGB controllers description for detailed information.

Battery is (of corse) included.

MultiLine IR sensor



IR sensor for MultiLine RGB controller LT-1001. Very useful additional part when the RGB fader shall receive the signals through this external receiver instead of the onboard sensor. That makes the user able to mount the RGB fader invisible!

Length: 2m

This external sensor also includes anti-jamming electronic components!

Part Number: LT-1003

MultiLine Connection Cable



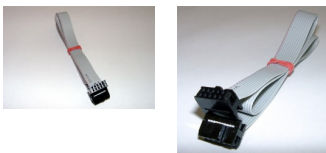
40cm 10poled flat cable for MultiLine RGB/W controller LT-1001. This cable either

- the controller and a booster PCB or
- one booster PCB with another

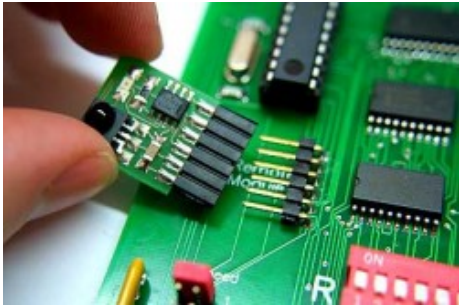
Very useful with big applications.

Also available in custom length. Just ask our support and tell us your wished length.

Part Number: LT-1016



MultiLine IR Module

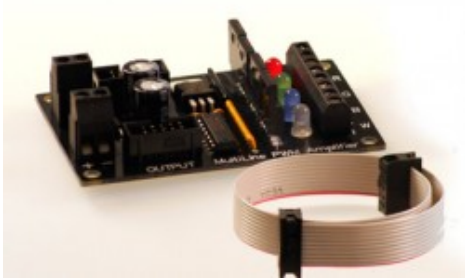


Optional plugon IR module for RGB fader LT-1000 that makes appropriate MultiLine controller remote controlable.

Part Number: LT-1289



MultiLine RGBW Amplifier



Part Number: LT-1617
 Housing Color: black
 V typ.: 7-30 V

The RGBW amplifier is a boost PCB for the RGBW controller LT-1001. The amplifier automatically checks if the main controller runs on 3channel or 4channel use and chooses the same mode.

The advantages:

The price: Common systems use controllers that can be run as master or slave. The disadvantage is that the user has to buy cost expensive controllers which are only used for its amplifier functions. Our controller-amplifier-system reduces costs dramatically because the special amplifiers cost only about half as much as the main controller.

The usage: We developed the amplifiers as intelligent as possible so that the user do not has to make any adjustments. The system adjusts itself fully automatically. The user only has to make his settings to the main controller. The amplifier also has status LEDs that show the current activities of the four channels. A big help if you have separate points of use of the components.

The space: The amplifiers are only half as large as the controller PCBs. This saves spaces and controlling equipment of even big applications does not need too much space anymore.

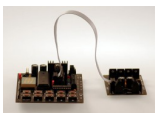
The connectivity:

All members of the MultiLine RGBW family help building small, medium or large RGB(W) applications very easily. The amplifier can be connected in series connection to the LT-1001 main controller to enlarge the applications power. The controller has one output that connects to the first amplifier. Each amplifier has one input and one output to get signals and to forward them to the next amplifier.

The amplifiers have the same technical data as the LT-1001. Please read below:

The technical data:

- Channels: 3/4 (autom.)
- Status LEDs: 4
- 16.000.000 colors
- PWM: 300Hz (no flickering!)
- Input: 7-30V DC
- PCB power consumption: 50mA
- Uses common anode (plus)
- Dimensions (LxWxH): 86x56x25mm
- Power supply connection: Clamps
- Illuminants connection: Clamps



- Max. capacitance per channel: 10A
- Max. LED forward voltage: 30V DC
- Max. total capacitance of illuminants: 20A over soldering pads or 16A over clamps

The RGBW amplifier comes with ~25cm flat cable already to be easily connected to your RGBW controller LT-1001. Longer cables can be order seperatly in this product category.

Imprint



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