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IZI-LC6 mkIII LED driver

The **IZI-LC6 mkIII** is a powerful **6 channel Constant Voltage LED driver**. This versatile DIN-rail LED driver can be used to drive and control constant voltage LED-modules or Flexible LED-lines as **single colour, RGB, RGBW and Tunable White** versions.
It offers a wide variety of configurable user modes such as Channel configurations, PWM Frequency, DMX Start address and DMX-start and fail modes.

This driver is also suitable for **studio applications** due to the very high selectable PWM frequency up to 4kHz.

With the Windows based **IZI-Manager** software tool, all configurations can be done via the DMX line and a dedicated USB dongle or DIN-Rail USB interface module

Features

High power
480 Watt

Multi channel
6 channels

IZI-Link
Remote configurable

Adjustable refresh rate
Up to 4kHz

Technical specifications

Power

Input voltage:	2 x 12~24VDC +/- 10%
Output voltage:	2 x 12~24VDC
Input current:	2 x 10A max.
Output power:	240W @ 12VDC / 480W @ 24VDC
Current per channel:	3.3A max. / Channel (All channels overcurrent protected)
Power output per channel:	40W @ 12VDC / 80W @ 24VDC
LED-Drive outputs:	6 Channels
Ref output voltage:	5VDC, max 100mA floating

Control

DMX512 input:	DMX-512 / IZI-Link (Optically isolated)
DMX512 Output / Thru:	DMX-512
Dimming:	PWM 16bit
Dimming curve:	Curved / Lineair
Refresh rate:	100Hz, 250Hz, 500Hz, 750Hz(default), 1kHz 1.5kHz, 2kHz, 2.5kHz, 3kHz, 4kHz

Miscellaneous

Housing:	DIN-rail (4 module width, 71mm)
DMX Input / Output connector:	Print connector / 8 pin RJ45 (optional) Wire diameter: 1.5mm² max.
Screw terminal power inputs:	Wire diameter: 2.5mm² max.
Screw terminal power outputs:	Wire diameter: 2.5mm² max.
Mounting:	DIN-rail
Lifespan:	>50.000 hours
Ambient temperature:	0~40°C non-condensing

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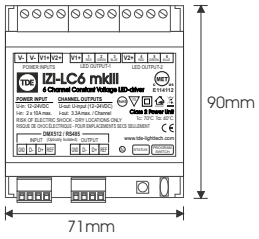
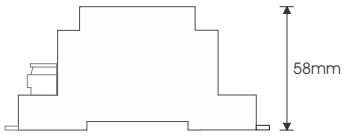
IZI-LC6 mkIII LED driver

Dimensions



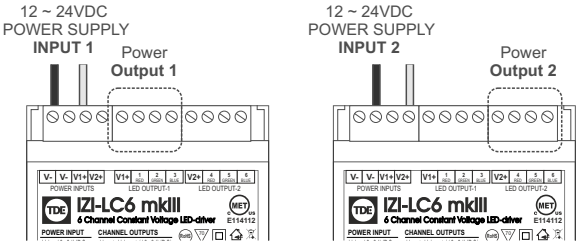


Order Code

TDEL-4010395	IZI-LC6 MK3; 6 Channel Constant Voltage LED-driver; 24VDC; 480W; DMX

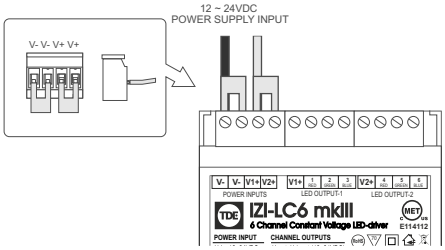
Power input

The IZI-LC6 mkIII LED driver has two power inputs. Each power input has three outputs. Power supply input 1 is connected to LED output channels 1-3 and power supply input 2 is connected to LED output channel 4-6.



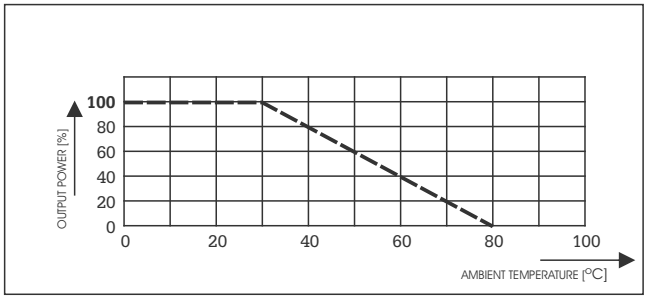
Both power connections on the power input need to be connected, when a single power supply is used. Place the two supplied jumpers on the power input.

Place the jumper between V- and V- and between V + and V + of the power input. See the illustration on the right.



Output power

The output of the LED driver depends on the current flow and the ambient temperature. The graphic shows the maximum amount of power and its derating when the operating temperature increases.



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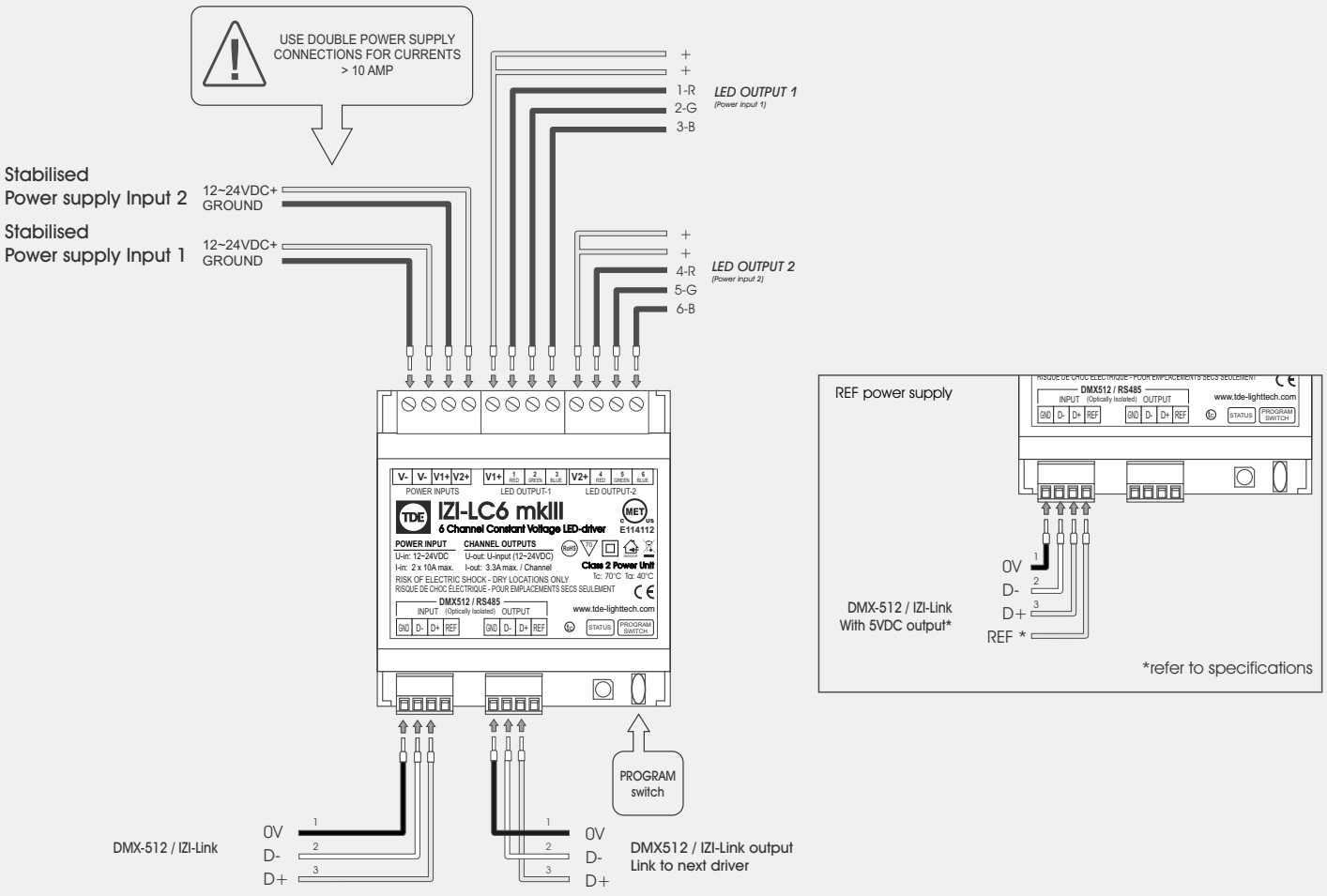
IZI-LC6 mkIII LED driver

Screw terminals

The screw terminals of the power inputs and LED-drive output channels allow a maximum cable core diameter of 2.5mm².
When connecting the wiring of the LED product to the IZI-LC6 mkIII make sure to use flexible cable with ferrules to ensure a proper connection.
Please note when fastening the wires, make sure not to overtighten the screws.

Connection overview



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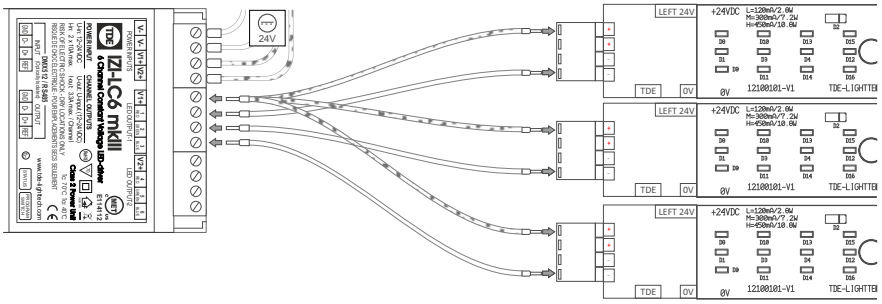
Typical applications

All TDE-lighttech's Constant Voltage (12~24VDC) products have been extensively tested with the IZI-LC6 mkIII LED driver. In the illustrations below are a few of the possible configurations. There are numerous other configurations possible. Please refer to the usermodes for more information about the different usermode possibillities.

[M1] 3 x Single colour LED module

In M1 each individual output is controllable, in this example only the first three outputs are used. Which corresponds with

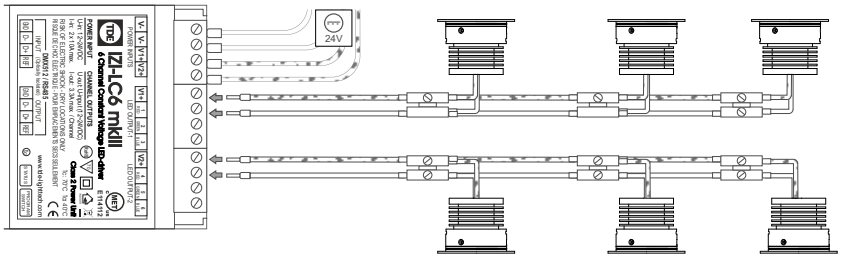
DMX1 - Output 1
DMX2 - Output 2
DMX3 - Output 3



[M3] Constant voltage LED spot

Mode M3 is a two channel mode where DMX channel one outputs 1-3 and DMX channel 2 outputs 4-6.

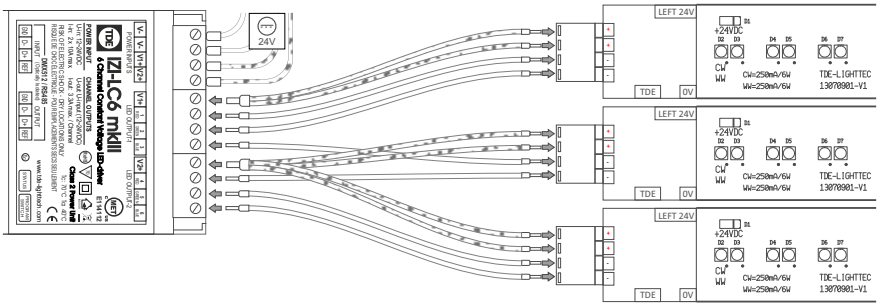
The outputs have a combined power, please consult the specifications for this.



[M8 & M9] Three Tunable White LED modules

Mode M8 & M9 are tunable white / Warm dimming modes. In the following example three tunable white modules are attached and are invidually controllable.

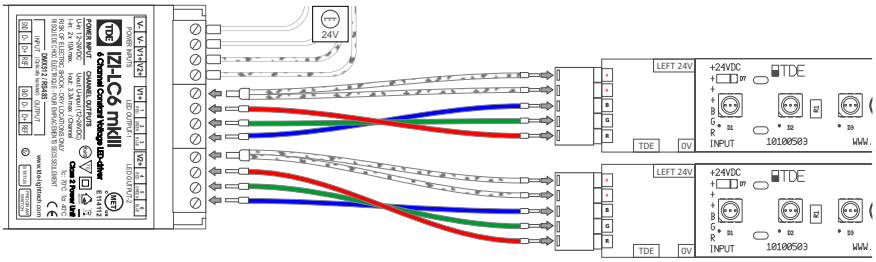
In mode M8 the tunable white modules are used as tunable white (2 DMX channels) in M9 the modules are warm dimming and only 1 DMX channel is needed.



[M10] 2 x RGB LED module

Mode M10 uses three DMX channels for both the outputs. In the example here two RGB modules are connected where:

DMX1 - Output 1 & 4
DMX2 - Output 2 & 5
DMX3 - Output 3 & 6



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IZI-LC6 mkIII LED driver

[M11- M14] RGBW4260 LED module connection

Modes M11 through M14 are all RGBW modes.

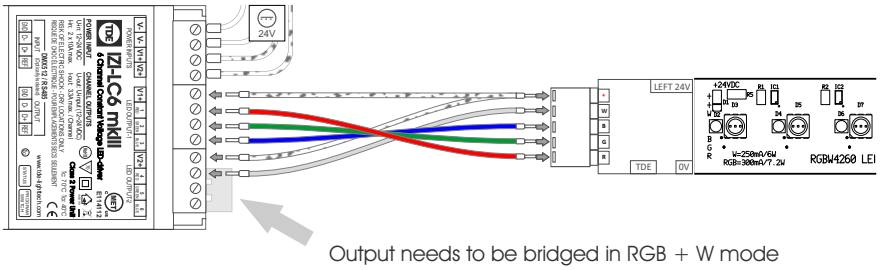
M11 is the tradition RGBW mode where 4 DMX channels are used to control the RGBW module.

M12 uses the RGBW module to create a tunable white simulation

M13 uses the RGBW module to create a warm dimming simulation

M14 combines the above modes into one mode. With DMX channel 4 and 5 either RGBW or Tunable white/Warm dimming is selected.

The channels response is based on the mode selected



Output needs to be bridged in RGB + W mode

LED Indication

RED continuous	: No Data
Green flashing	: Valid Data Present
Red flashing	: Output protect due to: Overcurrent, Overvoltage or Undervoltage
Orange Flashing	: Testmode, activated by Switch or Identify (Activated by IZI-Manager)

Switch Functionality

Short push	: Testmode runs through each channel, mode dependent LED flahses Red/Green. Times out after 5 minutes.
Hold for 2 sec	: LED goes Green: SceneRecord Mode. Times out after 5 minutes.
Hold for 10 sec	: LED goes Red: Factory Default. All Settings are reset to Factory Settings.
Hold for 12 sec	: LED goes Off: Do Nothing.

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IZI-LC6 mkIII LED driver

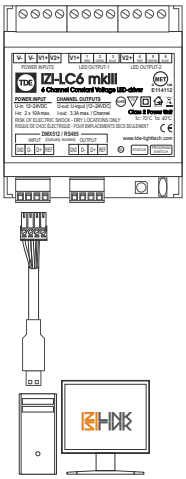
Commissioning

Power the IZI-LC6 mkIII LED driver(s) and connect the IZI-Link USB programmer cable on to the DMX512/RS485 input.

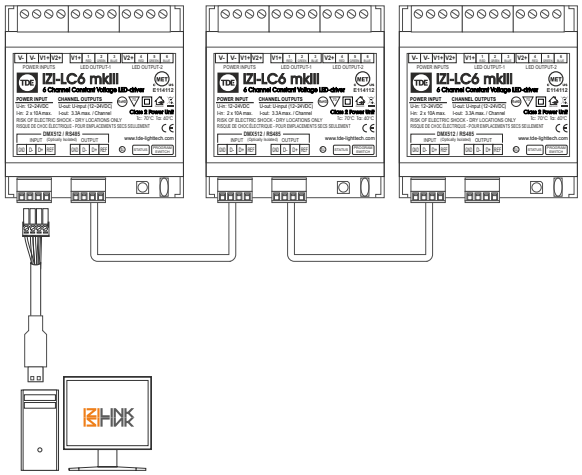
The IZI-Link USB programmer cable needs to be connected on to a windows PC with the IZI-Manager installed.

Below is an overview of a single driver system or multiple IZI-LC6 mkIII LED drivers, all drivers can individually be configured.

Single IZI-LC6 mkIII LED driver



Multiple IZI-LC6 mkIII LED drivers



Data Fail modes

The AD-LC6 MKIII LED driver has 5 different Data Fail modes for DMX Fail start or DMX Fail operation.

	DMX Fail start	DMX Fail operation
Off	All channels 0%	All channels 0%
Hold	All channels 0%	Hold last known DMX value
Max	All channels 100%	All channels 100%
Wave	All channels built-in wave	All channels built-in wave
Scene	Default 0%, when scene programmed scene gets recalled	-

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IZI-LC6 mkIII LED driver

Record Mode

When the switch is pushed for 2 seconds, the LED goes green. When the switch is released while the LED is green, RecordMode is entered. In RecordMode a total of maximum 32 scenes can be stored, which can be played back when the DataFail Mode is set at 'Scene', and no data is present at the IZI-LC6 mkIII's input. Scenes will fade into eachother at the speed set in the IZI-Manager Configuration for the IZI-LC6 mkIII.

In RecordMode the LED will be green. At each short push of the switch, a scene is recorded. The LED will momenary go to Red. After the last scene is recorded, the switch should be pused for >2 seconds. The LED will go RED and the total of all scenes is stored in the IZI-LC6 mkIII's non-volatile memory. After this the IZI-LC6 mkIII resumes normal operation.
When in RecordMode the switch is not pushed for longer than 5 minutes, the operation is suspended and no scenes will be stored. Previously recorded scenes are kept.

User modes

[M1] - Single Channel Mode
DMX1 -> Ch1-Ch6

[M2] - 6 Channel + Master Mode
DMX1 -> Master
DMX2 -> Ch1
DMX3 -> Ch2
DMX4 -> Ch3
DMX5 -> Ch4
DMX6 -> Ch5
DMX7 -> Ch6

[M3] - 6 Channel Mode
DMX1 -> Ch1
DMX2 -> Ch2
DMX3 -> Ch3
DMX4 -> Ch4
DMX5 -> Ch5
DMX6 -> Ch6

[M4] - 3x 2 Channel Mode
DMX1 -> Ch1-Ch3
DMX2 -> Ch4-Ch6

[M5] - 2x 3 Channel Mode
DMX1 -> Ch1-Ch2
DMX2 -> Ch3-Ch4
DMX3 -> Ch5-Ch6

[M6] - 3x Tuneable White Single Control Mode
DMX1 -> Intensity
DMX2 -> Colour

Ch1,Ch3,Ch5= WarmWhite
Ch2,Ch4,Ch6= CoolWhite

[M7] - 3x Warm Dimming Single Control Mode
DMX1 -> Intensity/Colour, Halogen like

Ch1,Ch3,Ch5= WarmWhite
Ch2,Ch4,Ch6= CoolWhite

[M8] - 3 x Tuneable White Separate Control Mode
DMX1 -> Intensity 1
DMX2 -> Colour 1
DMX3 -> Intensity 2
DMX4 -> Colour 2
DMX5 -> Intensity 3
DMX6 -> Colour 3

Ch1= Warm White 1
Ch2= Cool White 1
Ch3= Warm White 2
Ch4= Cool White 2
Ch5= Warm White 3
Ch6= Cool White 3

[M9] - 3 x WarmDimming Separate Control Mode
DMX1 -> Intensity/Colour1, Halogen like
DMX2 -> Intensity/Colour2, Halogen like
DMX3 -> Intensity/Colour3, Halogen like

Ch1= Warm White 1
Ch2= Cool White 1
Ch3= Warm White 2
Ch4= Cool White 2
Ch5= Warm White 3
Ch6= Cool White 3

IZI-LC6 mkIII LED driver

User modes (continued)

[M10] - 2x RGB Mode
DMX1 -> Ch1, Red1
DMX2 -> Ch2, Green1
DMX3 -> Ch3, Blue1
DMX1 -> Ch4, Red2
DMX2 -> Ch5, Green2
DMX3 -> Ch6, Blue3

[M11] - RGB+3W Mode
DMX1 -> Ch1, Red
DMX2 -> Ch2, Green
DMX3 -> Ch3, Blue
DMX4 -> Ch4, White1
DMX4 -> Ch5, White2
DMX4 -> Ch6, White3

[M12] - RGBW Tunable White Mode
DMX1 -> Intensity
DMX2 -> Colour

Ch1= Red
Ch2= Green
Ch3= Blue
Ch4= White
Ch5= White
Ch6= White

[M13] - RGBW WarmDimming Mode
DMX1 -> Intensity/Color, Halogen like

Ch1= Red
Ch2= Green
Ch3= Blue
Ch4= White
Ch5= White
Ch6= White

M14 RGBW & TunableWhite Mode:
DMX1 -> Red/TunableWhite Intensity
DMX2 -> Green/TunableWhite Color
DMX3 -> Blue
DMX4 -> White/Select WarmDimming <-> TunableWhite
DMX5 -> Select RGBW<->TunableWhite

Ch1= Red
Ch2= Green
Ch3= Blue
Ch4= White
Ch5= White
Ch6= White

M6 - M9 Are switchable between normal and Crossover Mode

To ensure proper functioning of the LED driver with a third party product please contact us for more information.

In the view of a constant development of our products, we reserve the right for changing technical data and features without prior notice.