

Tiny version

Driver

- self made LED fixtures
- easy to use
- low cost
- dimming options
- battery supply
- CV supply



**Futuro
Lighting**
design

LED Driver I50T

94% efficiency typical

Build your own LED fixture

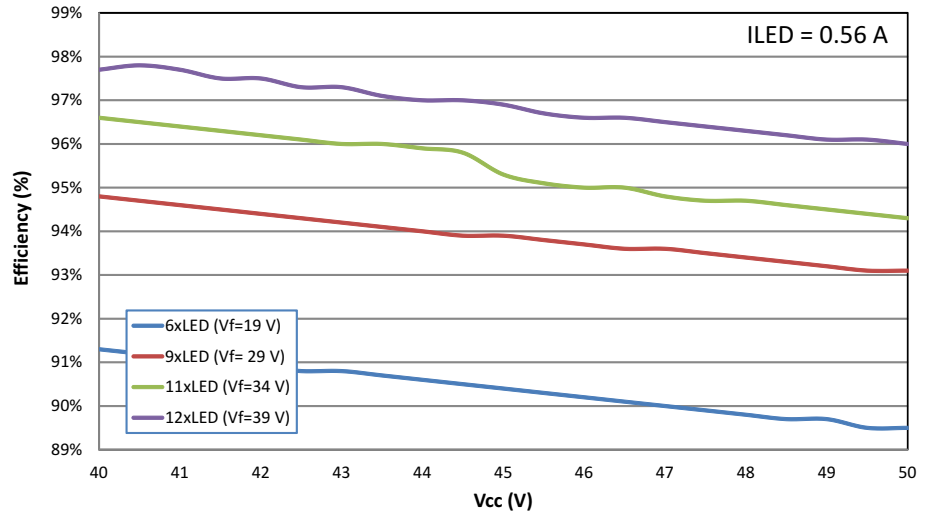
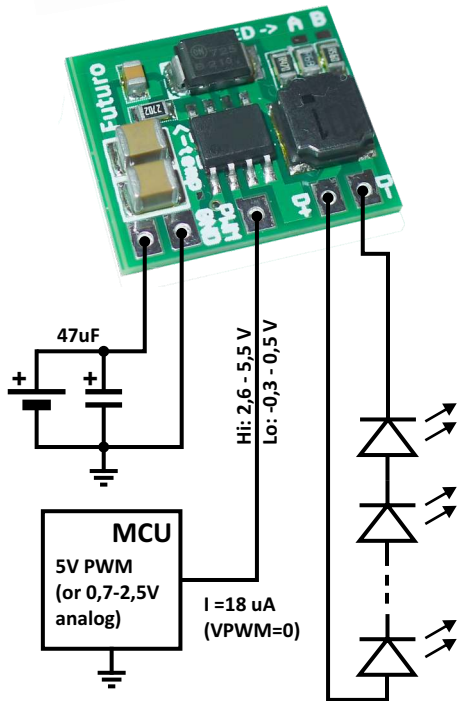


Specification:
Topology: Buck
Vcc = 4,5-60 V DC
I LED = Adjustable
see next page for
setting options

Regulation / dimming:
- typical 3% output accuracy
- soft start capability
(just adding cap to PWM in)
- high speed PWM 20kHz max
- analog 0,7 - 2,5 V
- thermal foldback

Switching freq: 1 MHz max
Rsense ratio: 0,15 Ohm / 1 A

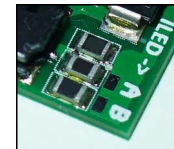
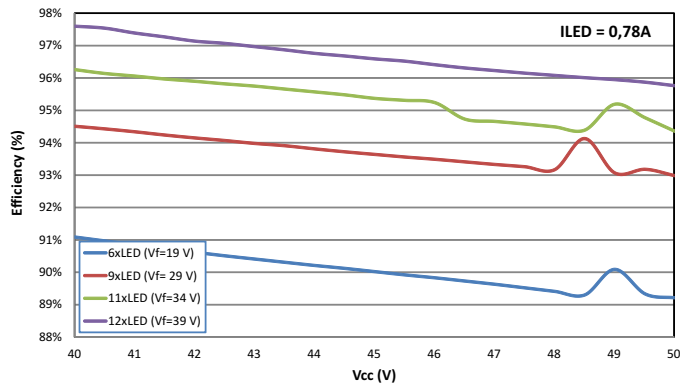
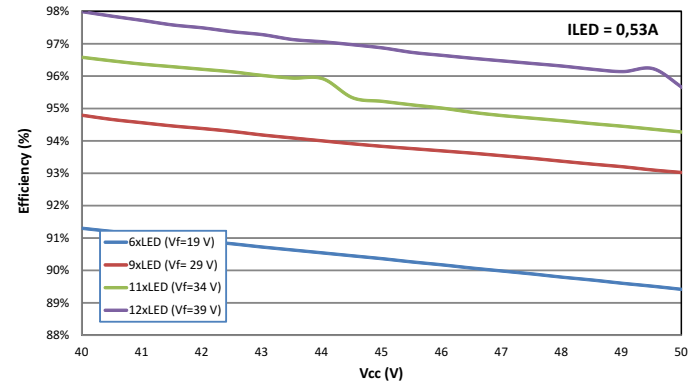
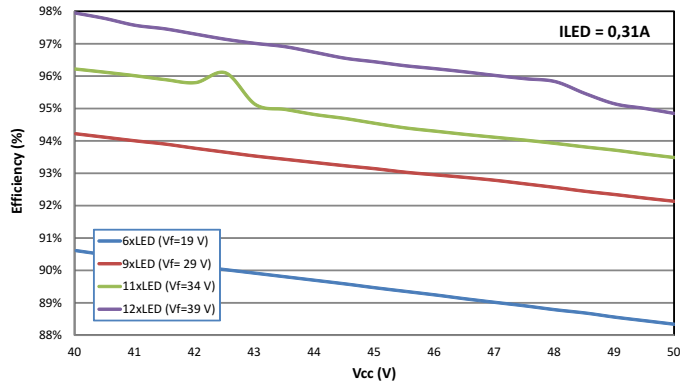
Dimensions: 20 x 17 x 5,2 mm
Weight: 1,8 g
Over temperature protection
Over current protection



Note: if PWM is not connected max ILED generated
Options: encapsulation, reverse protection, thermal foldback

LED Driver I50T

LED current setting



ILED	A	B
0,32 A	-	-
0,53 A	X	-
0,59 A	-	X
0,82 A	X	X

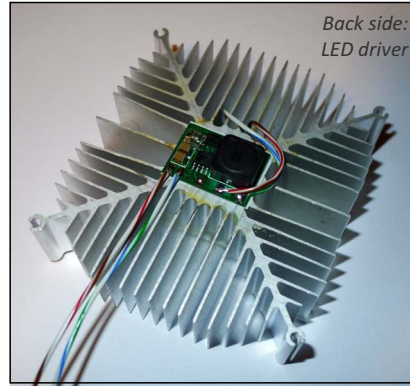
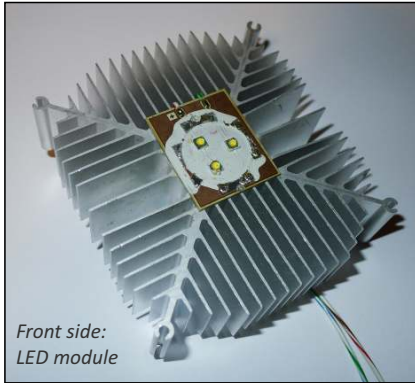
X - linked by soldering iron

Note: Vin is limited to 55 V max for 0,32 A mode, for 0,59 and 0,82A Driver needs to be thermally connected to heatsink with LED module.

LED Driver 150T

Thermal foldback

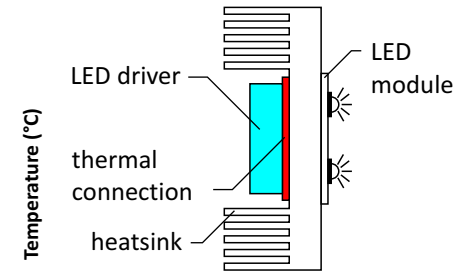
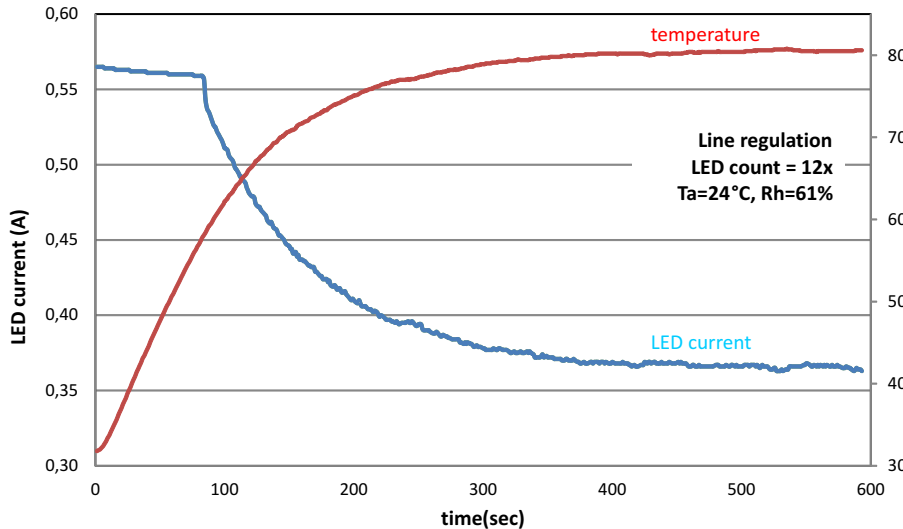
Application Example



Connecting back side of LED driver to fixture heatsink will protect LED fixture against overheating thus extending LED life time and provide safe fixture operation even for inappropriate installations.

Thermal foldback is temperature of the module is set to ~80°C

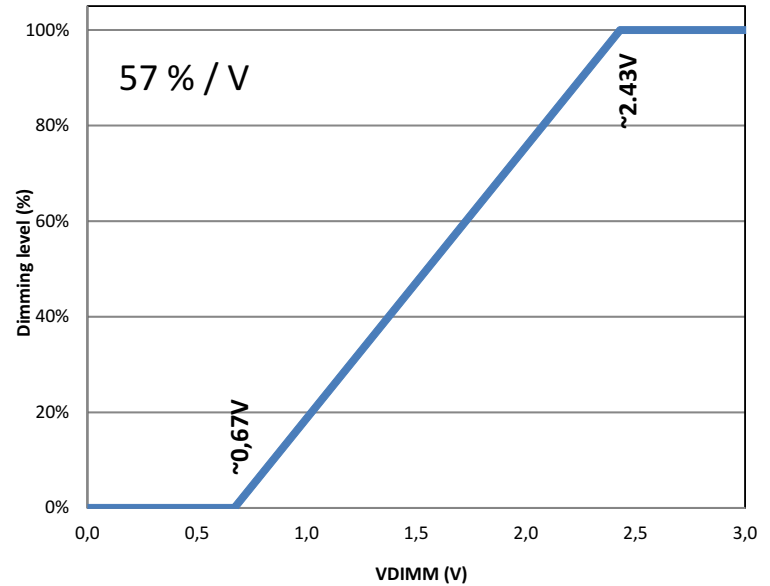
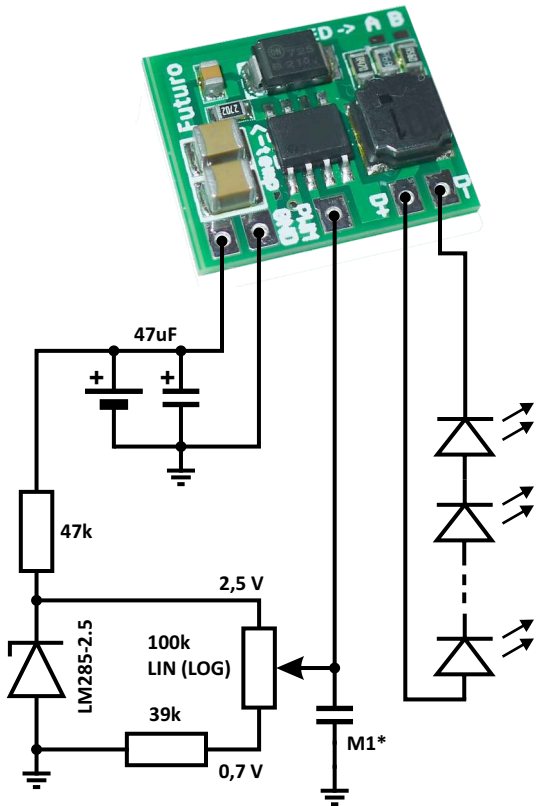
thermal connection can be done by appropriate thermo conductive both side tape or glue.



LED Driver I50T

Analog Dimming example (local)

Appropriate for local dimming (Potentiometer close to Driver)



* soft start capacitor

Potentiometer selection:

LIN - linear for linear dimming change

LOG - logarithmic change, more appropriate for human eye response

Literature:

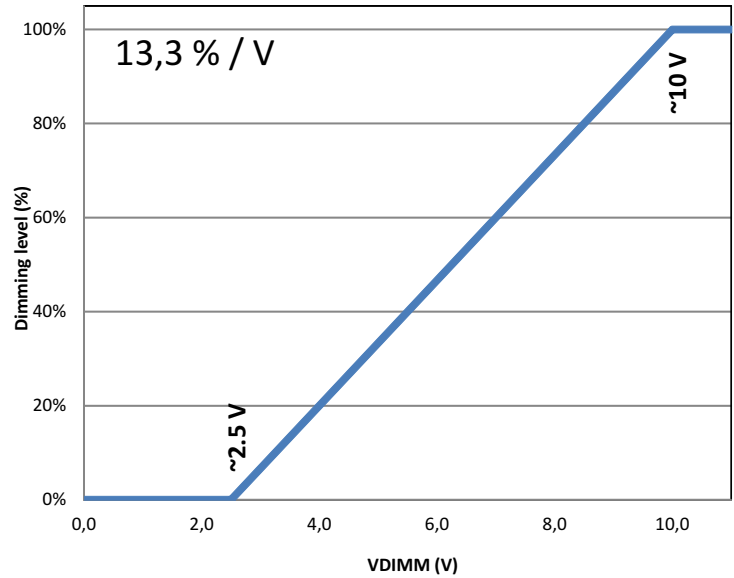
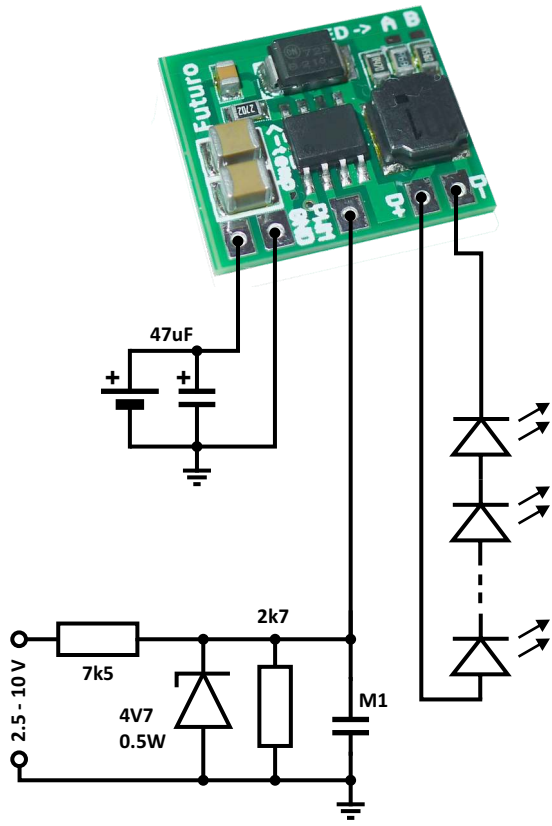
<http://www.ti.com/lit/ds/symlink/lm385b-2.5.pdf>



LED Driver I50T

Analog Dimming example (remote)

Appropriate for remote dimming (1-10V dimmer)



M1 soft start capacitor

Signal selection:

LIN - linear for linear dimming change

LOG - logarithmic change, more appropriate for human eye response



3-CH Digital dimmer for LED Driver 150T

Ready made solution for your lighting needs



Specification:

Supply voltage 30-60 V DC

Power consumption: 1,2 W max

Model: Custom for LED Driver 150

Output voltage 0,55 - 2,55 VDC

Output current: 20 mA / channel max

Number of dimm steps: 250

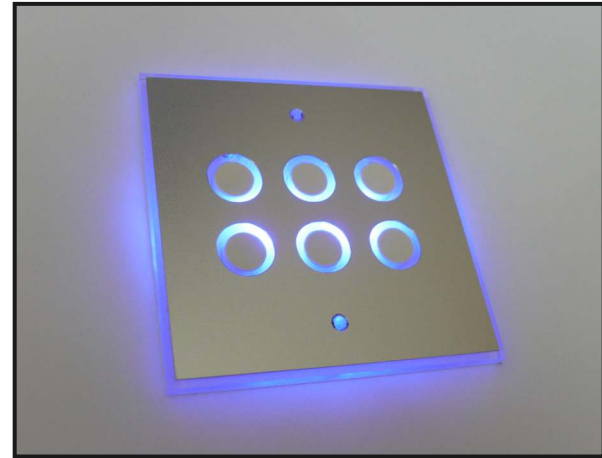
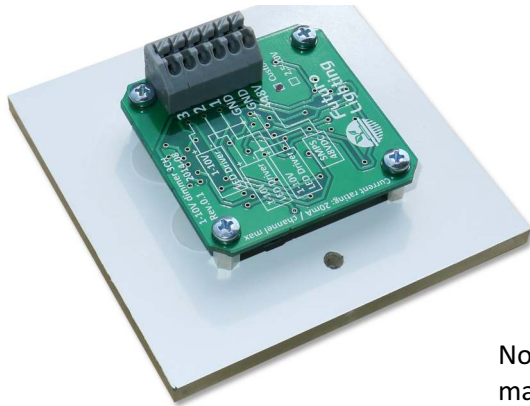
Illumination: Front - Side Blue LED

End of range indication: blink (Blue)

Power-up fade-in duration: 30 sec

Setting memory type: EEPROM

Dimensions: 85 x 85 x 30 mm

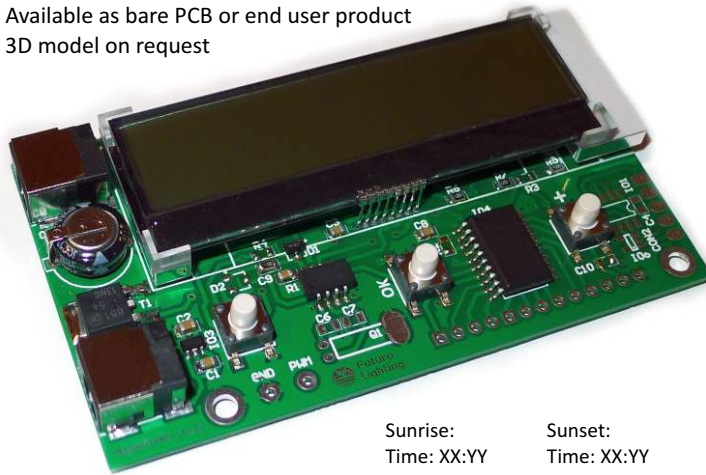


Note: Implemented non isolated buck driver may generate audible noise, this is regular behaving

AquaTimer & LED Driver 150T

Artificial sun for Aquarium life
Application example

Available as bare PCB or end user product
3D model on request



Specification:

Supply Voltage: 6-25 VDC
Supply current: <15 mA
Power consumption: 0,65 W max
Clock source: RTC 24h
Settings for sunset and sunrise:
Start time XX:YY
Intensity 0-100%
Dimm time: 5-99 minutes

PWM frequency: 2000 Hz
Resolution: 1000 steps
Output: 5V / 10mA
Output: CV, 4A max

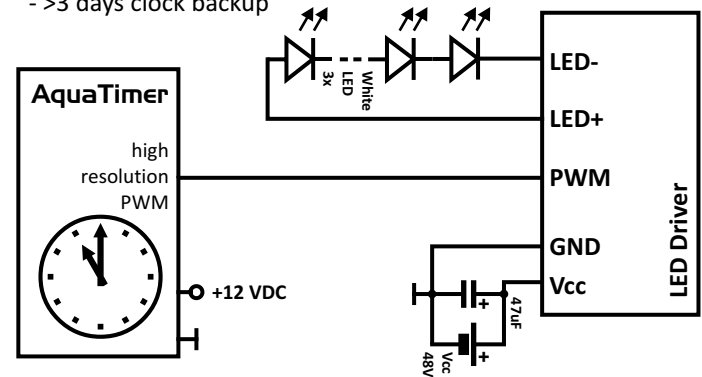
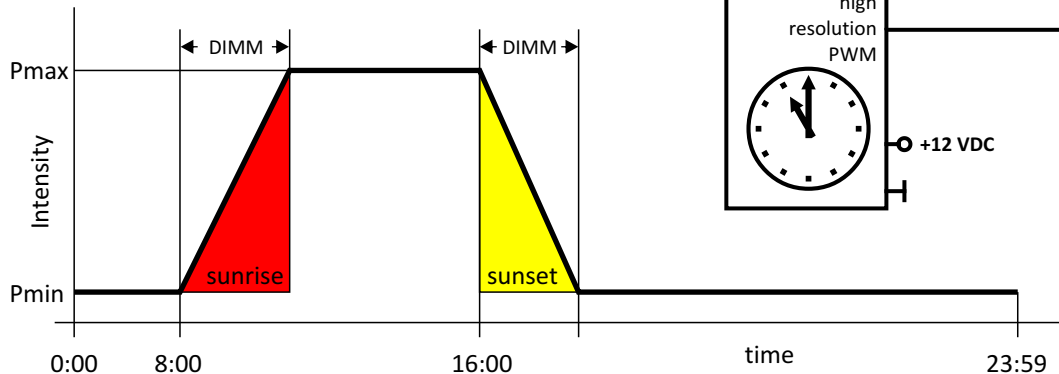
Display: 2x16 lines
Actual time, status,
intensity, Menu
Illuminated (white)

Others:

- Reverse protection
- >3 days clock backup

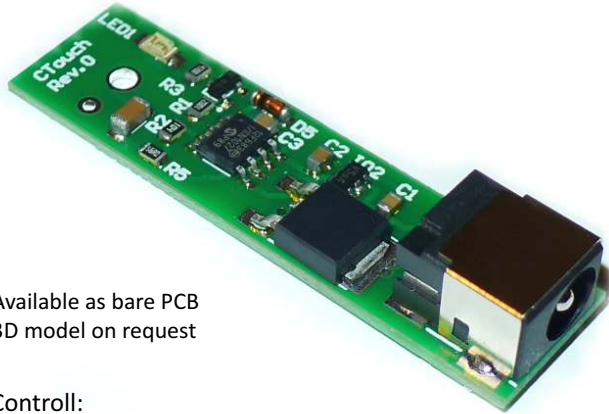
Dimensions: 87x50x10 mm

Sunrise:	Sunset:
Time: XX:YY	Time: XX:YY
P = 10-100%	P = 0-90%
Dimm = 5-99	Dimm = 5-99



TouchDIMM & LED Driver ISOT

Just single push to adjust
Application example



Available as bare PCB
3D model on request

Control:
ON / OFF - short touch (<2sec)



Intensity increase
Touch and hold till reaching required intensity (initial status OFF)



Intensity decrease
Touch and hold till reaching required intensity (initial status ON)



Indicator status
Inactive when off or during fade in and out

Specification:

Supply Voltage: 6-25 VDC

Supply current: <5 mA

Output: PWM / CV 4A max

PWM frequency: 2000 Hz

Resolution: 1000 steps

Output: 5V / 10mA

Dimm steps: 100

Dimming characteristic: Log

Dimensions:

50x13x10 mm

50x13x3.5 mm (wo DC con)

Others:

- Reverse protection
- implemented soft fade in and fade out
- illumination of touch button
- built in N-MOS for CV LED strips

