



DQG 26650 driver hacking

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79 replies [Last post]

Thu, 07/10/2014 - 02:15		#61
<p>zeremefico</p>  <p>Online</p> <p>Last seen: 4 min 40 sec ago</p> <p>Title: ★★★★★</p> <p>Joined: 03/27/2012</p> <p>Posts: 806</p> <p>Location: Greece</p>	<p>I have replaced the mosfet</p> <p>I have replaced the mosfet but I noticed that the sprint of the driver gets really hot after some seconds of running. I worry that might some other components have damaged, except the replaced mosfet. Using a fet driver with star firmware is my next step, what do you think?</p> <hr/> <p>ἄνθρωπος ΟΥΔΕΝ ΚΡΥΠΤΟΝ ΥΠΟ ΤΟΝ ΗΛΙΟ ἄνθρωπος</p>	
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Thu, 07/10/2014 - 02:19		#62
<p>nofearek9</p>  <p>Offline</p> <p>Last seen: 15 min 27 sec ago</p> <p>Title: ★★★★★</p> <p>Joined: 07/08/2012</p> <p>Posts: 779</p> <p>Location: Cyprus</p>	<p>11Amps is lot ,maybe add</p> <p>11Amps is lot ,maybe add copper braid to the spring</p>	
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Thu, 07/10/2014 - 07:48		#63
<p>wight</p> <p>Offline</p> <p>Last seen: 1 hour 33 min ago</p> <p>Title: ★★★★★</p> <p>Joined: 11/27/2013</p> <p>Posts: 4180</p> <p>Location: Virginia, USA</p>	<p>nofearek9 wrote:its nice that</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>nofearek9 wrote:</p> <p>its nice that you can tune each mode separate ,if you glue a small piece of copper on top of the chips zeremefico exploted might solve the problem?</p> </div> <p>Do not bypass these resistors. Bypassing a boost driver which does not have an additional limit is bad. For example, people do a bypass on Fenix boost driver sense resistors, but those drivers have a 4.5v voltage limit. That keeps the current from getting so high that it destroys those drivers.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>zeremefico wrote:</p> </div>	

I have replaced the mosfet but I noticed that the sprint of the driver gets really hot after some seconds of running. I worry that might some other components have damaged, except the replaced mosfet. Using a fet driver with star firmware is my next step, what do you think?

The spring getting hot may be normal. If so, a copper braid mod is in order. Maybe comfychair or someone else can tell us. Did you remove the bypass?

An FET driver will require you to put the emitters in parallel.

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits ~~et/feaser thread~~](#)

Released Drivers: 17mm/20mm/26/27mm *single-sided* DD/FET driver [AxxDD-SO8] || 17mm 8x7135 with Zener & dual-PWM [A17PZL] || 22mm 16x 7135 driver [A22-7135]

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Thu, 07/10/2014 - 09:07

#64

zeremefico



Online

Last seen: 4 min 40 sec ago

Title: ★★★★★

Joined: 03/27/2012

Posts: 806

Location: Greece

I removed the bridge that

I removed the bridge that caused the mosfet meltdown. I am planning to use a noctigon triple in parallel. xpl would be great but they are damn expensive for now.

ΟΥΔΕΝ ΚΡΥΠΤΟΝ ΥΠΟ ΤΟΝ ΗΛΙΟ

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Thu, 07/10/2014 - 10:36

#65

wight

Offline

Last seen: 1 hour 33 min ago

Title: ★★★★★

Joined: 11/27/2013

Posts: 4180

Location: Virginia, USA

zeremefico wrote:I removed

zeremefico wrote:

I removed the bridge that caused the mosfet meltdown. I am planning to use a noctigon triple in parallel. xpl would be great but they are damn expensive for now.

I would measure the current draw. If you get the expected numbers then I think it's safe to say the spring is just crap. [EDIT: Well, maybe not crap. Let's just say "not the best".]

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits ~~et/feaser thread~~](#)

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Thu, 07/10/2014 - 13:10

#66

comfychair



Offline

Last seen: 12 weeks 2 days ago

Title: ★★★★★

Joined: 01/12/2013

Posts: 5873

I've been ignoring this

I've been ignoring this driver while doing other stuff... well, not really ignoring it, just giving it some free time to float around in the ol' brain computer.

As we know, the modes come from enabling small FETs that use a limiting resistor to control the output level. No PWM. Each 'mode channel' is used independently, only one in use at any one time. Would there be anything to be gained (moar output!) by switching them on concurrently? Like, low = channel 1, medium = channel 1 + channel 2, high = 1 + 2 + 3? Or would that overload the smoke-prone AO4468? Is it already too close to max output in stock form running thru the original resistors?

...

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Thu, 07/10/2014 - 19:03

#67

wight

Offline

Last seen: 1 hour 33 min ago

Title: ★★★★★

Joined: 11/27/2013

Posts: 4180

Location: Virginia, USA

comfychair wrote:l've been

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zeremefico got 11A at the tailcap when he torched his. It seems that the stock turbo is 5.5A @ tailcap on an MNKE cell, [see post #13 here](#). In post #1 of the same thread vinhnguyen54 mentions that he purchased some to mod before he realized that the stock turbo was just as high as he was planning to take high.

If we are assuming that the smoke comes out with an input >5.5A and <11A then... I'd say leave it alone. Remember on the tail end of the discharge you're pulling like 25% more or something, so you've got to have some headroom. So we may draw up to... what, 7A or something on a mostly dead cell on Turbo w/ the stock setup. That's a lot of guesstimation, but I don't see much space for increasing the current.

Switching them concurrently could be used to give more granular mode spacing, as I've described in other threads for use with a 7135 driver. This would be slightly different of course.

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits ~~at~~ *teaser thread*](#)

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Thu, 07/10/2014 - 19:10

#68

leafye

Offline

Last seen: 11 weeks 1 day ago

Title: ★★★★★

Joined: 07/25/2012

Posts: 3648

Location: San Diego, CA

wight wrote: I think there is

wight wrote:

I think there is no interest in running STAR on this light using the stock levels, but for the record I think the latest firmware I posted has an error. It looks like I forgot to set "RUN_PIN" to output along with the MODE_X pins.

Wouldn't that be rather straight forward though? Rework the pcb with pads for the switch, throw on BLFDD hardware with the old switch, wire emitters in parallel, and it's done. Old driver should still be good in case the BLFDD driver doesn't work out. I want to say that if no one else did this, I eventually would, but this light appears to be out of production and the replacement is currently listed with a very high price, so perhaps I took too long.

The low mode should be lower.

Reviews: Efan IMR18350 700mAh 10.5A, Efest IMR 18650 3100mAh 20A, Sony US26650VT, MNKE 26650 3500mAh, Acebeam MRC18650NP-230A, Efest 26650 3500mAh 32A/64A, Efest 18500 1000mAh 15A, Efest 18350 700mAh 10.5A, Trustfire TR10440, Samsung ICR18650-26F, Basen 18350 700mAh 10A, Basen 18490 1100mAh 15A, Basen 18500 1100mAh 22A, Basen 18650 1500mAh 20A, Basen 18650 2100mAh 30A, Basen 18650 2500mAh 30A, Basen 18650 3000mAh, Basen 18650 3200mAh, Basen 18650 3400 mAh, XinTD X3, Solarstorm K2

MAP list of shame: Niwalker, Jax.

BLF on reddit

When a man's freedom is reduced to zero, he commits no crimes.

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Thu, 07/10/2014 - 19:33

#69

wight

Offline

Last seen: 1 hour 33 min ago

Title: ★★★★★

Joined: 11/27/2013

Posts: 4180

Location: Virginia, USA

leafye wrote: wight wrote:

leafye wrote:

wight wrote:

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Eh? You are talking about taking a regulated, no-PWM-at-all, boost-driver-having light and changing it into an unregulated DD light with PWM. Totally different subject. Please skim the thread in order to get up to speed if you haven't yet.

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits ~~etd~~ ~~teaser thread~~](#)

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Thu, 07/10/2014 - 19:25

#70

wight

Offline

Last seen: 1 hour
33 min ago

Title: ★★★★★

Joined: 11/27/2013

Posts: 4180

Location: Virginia,
USA

Also, and I don't know if

Also, and I don't know if they are telling the truth, but WB and BG both claim to have the light in stock for \$45 or less:
<http://www.banggood.com/DQG-3xCREE-XP-G2-R5-1A-Or-3B-Tiny-Triple-LED-Fla...>
<http://wallbuys.com/Product/DQG-Tiny-26650-Triple-3-x-CREE-XP-G2-R5-1A-C...>

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits ~~etd~~ ~~teaser thread~~](#)

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Thu, 07/10/2014 - 19:29

#71

leafye

Offline

Last seen: 11
weeks 1 day ago

Title: ★★★★★

Joined: 07/25/2012

Posts: 3648

Location: San
Diego, CA

BG probably isn't. They've

BG probably isn't. They've been telling me via email that [this light](#) is out of stock and they can't find new stock, but their webpage sure doesn't reflect that.

Yeah, I'm thinking of something totally different. I'd hate to muck up the stock driver without a backup to fall back to.

The low mode should be lower.

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20A, Sony US26650VT, MNKE 26650 3500mAh, Acebeam MRC18650NP-230A, Efest 26650 3500mAh 32A/64A, Efest 18500 1000mAh 15A, Efest 18350 700mAh 10.5A, Trustfire TR10440, Samsung ICR18650-26F, Basen 18350 700mAh 10A, Basen 18490 1100mAh 15A, Basen 18500 1100mAh 22A, Basen 18650 1500mAh 20A, Basen 18650 2100mAh 30A, Basen 18650 2500mAh 30A, Basen 18650 3000mAh, Basen 18650 3200mAh, Basen 18650 3400 mAh, XinTD X3, Solarstorm K2

MAP list of shame: Niwalker, Jax.

BLF on reddit

When a man's freedom is reduced to zero, he commits no crimes.

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Thu, 07/10/2014 - 19:39

#72

wight

Offline

Last seen: 1 hour
33 min ago

Title: ★★★★★

Joined: 11/27/2013

Posts: 4180

Location: Virginia,
USA

leafye wrote:BG probably

leafye wrote:

BG probably isn't. They've been telling me via email that [this light](#) is out of stock and they can't find new stock, but their webpage sure doesn't reflect that.

Yeah, I'm thinking of something totally different. I'd hate to muck up the stock driver without a backup to fall back to.

I don't trust a one of 'em.

You may not want that thing you linked to. It seems to be a clone of the [SF lantern head](#), AFAIK the universal opinion is that the lantern head sucks. I bought the SF one even after reading people's opinions because "how bad could it be". It was *bad*. Totally useless and completely unable to distribute light the way you might think it could. I kept it on the parts shelf for about 6 months and finally threw it away. I couldn't think of any use for the parts and it would never be useful as a lantern so there was no logic in gifting it.

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits](#) ~~etd~~
~~teaser thread~~

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Thu, 07/10/2014 - 19:40

#73

comfychair



Offline

Last seen: 12
weeks 2 days ago

Title: ★★★★★

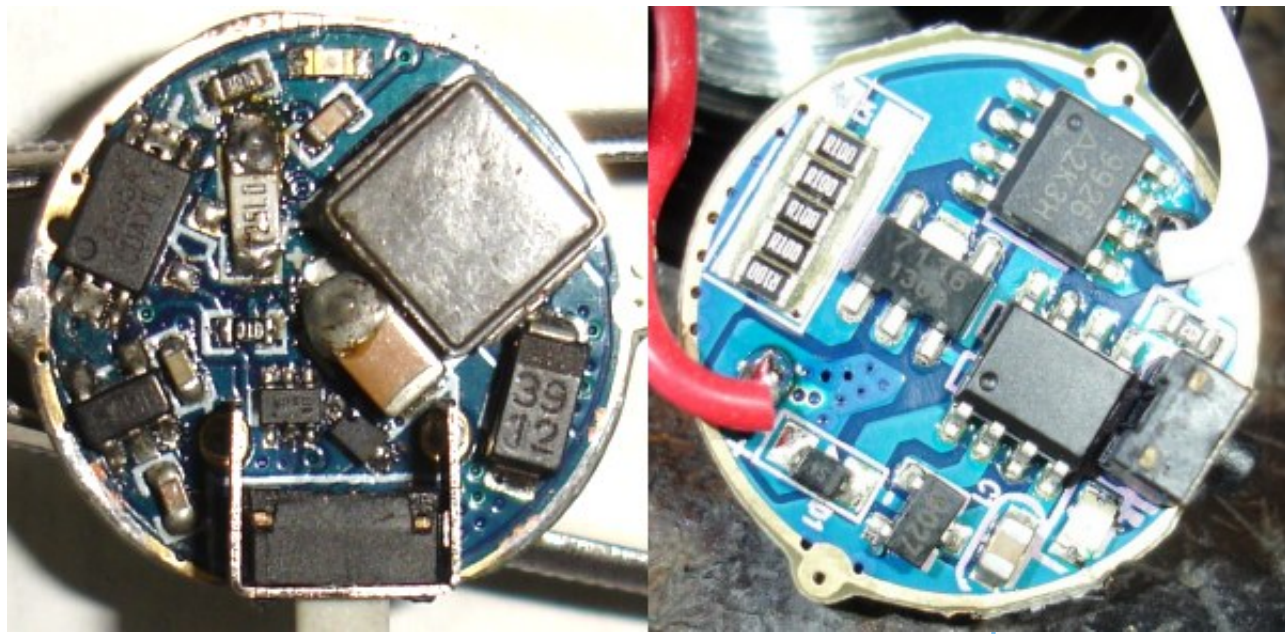
Joined: 01/12/2013

Posts: 5873

I wouldn't be surprised if

I wouldn't be surprised if the internals are completely different. They've done that kind of thing before.

Roche F6 driver from Fasttech left, Roche F6 driver from Banggood right:



xD

...

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Thu, 07/10/2014 - 19:44

#74

wight

Offline

Last seen: 1 hour
33 min ago

Title: ★★★★★

Joined: 11/27/2013

Posts: 4180

Location: Virginia,
USA

Ugh, good point. I'd

Ugh, good point. I'd forgotten about that already.

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits](#) ~~etd~~
~~teaser thread~~

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Thu, 07/10/2014 - 21:55

#75

comfychair



Offline

Last seen: 12
weeks 2 days ago

Title: ★★★★★

Joined: 01/12/2013

Posts: 5873

Is your v06 adapter correct

Is your v06 adapter correct for this board, as far as you know?

...

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Thu, 07/10/2014 - 22:02

#76

wight

Offline

Last seen: 1 hour
33 min ago

Title: ★★★★★

Joined: 11/27/2013

comfychair wrote:Is your v06

comfychair wrote:

Is your v06 adapter correct for this board, as far as you know?

Posts: 4180
Location: Virginia, USA

Yes, as far as I know. Assuming you just plan to use the stock operation mode of the driver (no PWM).

[WTS Lux-Pro 2D MT-G2 8xAA HIGH-current e-switch Conversion Kits ~~at~~ ~~teaser thread~~](#)

Released Drivers: 17mm/20mm/26/27mm *single-sided* DD/FET driver [AxxDD-SO8] || 17mm 8x7135 with Zener & dual-PWM [A17PZL] || 22mm 16x 7135 driver [A22-7135]

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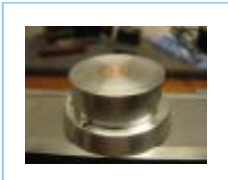
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Mon, 09/22/2014 - 13:11

#77

rjorge



Offline

Last seen: 11 hours 23 min ago

Title: ★★

Joined: 11/05/2012

Posts: 75

Location: TN, USA

MT-G2 mod

I have modded my mini with a MT-G2 on copper + 30mm TIR. What is the safest way (without damaging the driver) to increase the output on turbo?

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Mon, 09/22/2014 - 13:19

#78

comfychair



Offline

Last seen: 12 weeks 2 days ago

Title: ★★★★★

Joined: 01/12/2013

Posts: 5873

'Safe' and 'increasing output

'Safe' and 'increasing output from a boost driver' are two things that don't really go together. The current draw as the battery drains can get out of control and burn the driver up.

...

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Mon, 09/22/2014 - 13:23

#79

rjorge



Offline

Last seen: 11 hours

Well then, I really don't

Well then, I really don't want to fry this one! So, I will probably leave it alone. Wasn't easy to fit that big boy in there!

23 min ago

Title: ★★

Joined: 11/05/2012

Posts: 75

Location: TN, USA

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