

Re: Newbie question: circuit for harddrive indicator

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fob wrote:

> *Folks:*

>

> *I want to light up an ultra violet reactive 120mm computer case fan
> with UV LED's whenever my harddrive is accessed.*

>

> *I figure that I will use 3 UV LEDs to light up the fan, and the 3
> LED's will be activated by a transistor that is triggered off of the
> computer motherboard's harddrive LED connector.*

>

> *Problem is that I don't have any idea how to do this. I figure I will
> need to power it off of a molex connector from the power supply (5v or
> 12v) and use a combination of resistors, a transistor and maybe other
> stuff (like caps and/or a voltage regulator). I do know that LED's
> are*

> *2.4v devices and are polarized.*

>

One pin of the HDD Activity header connects to +5V through a resistor, commonly 220R-330R. Other pin goes to pin39 of the IDE cable/drive which is an open-collector NPN transistor, switched on activity so that header pin goes low and the LED comes on. There are a couple of steering diodes so either drive will light the one LED.

You *can* use a PNP transistor switch and the molex supply to boost the current, but it's a lot safer to just plug an opto-isolator's diode in place of the LED; check its rating, you may need a small NPN transistor switch as well. If you put your 3 UV leds in series (with the appropriate resistor) the 12V supply will run them all with minimum wastage.