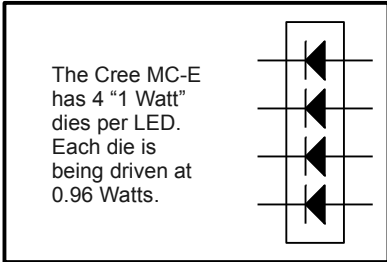
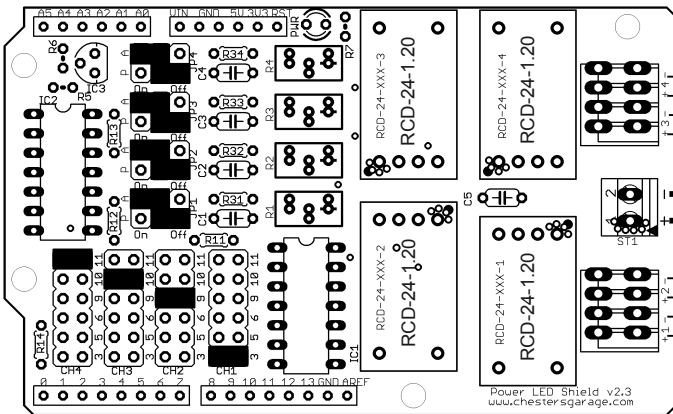


High Efficiency General Illumination:

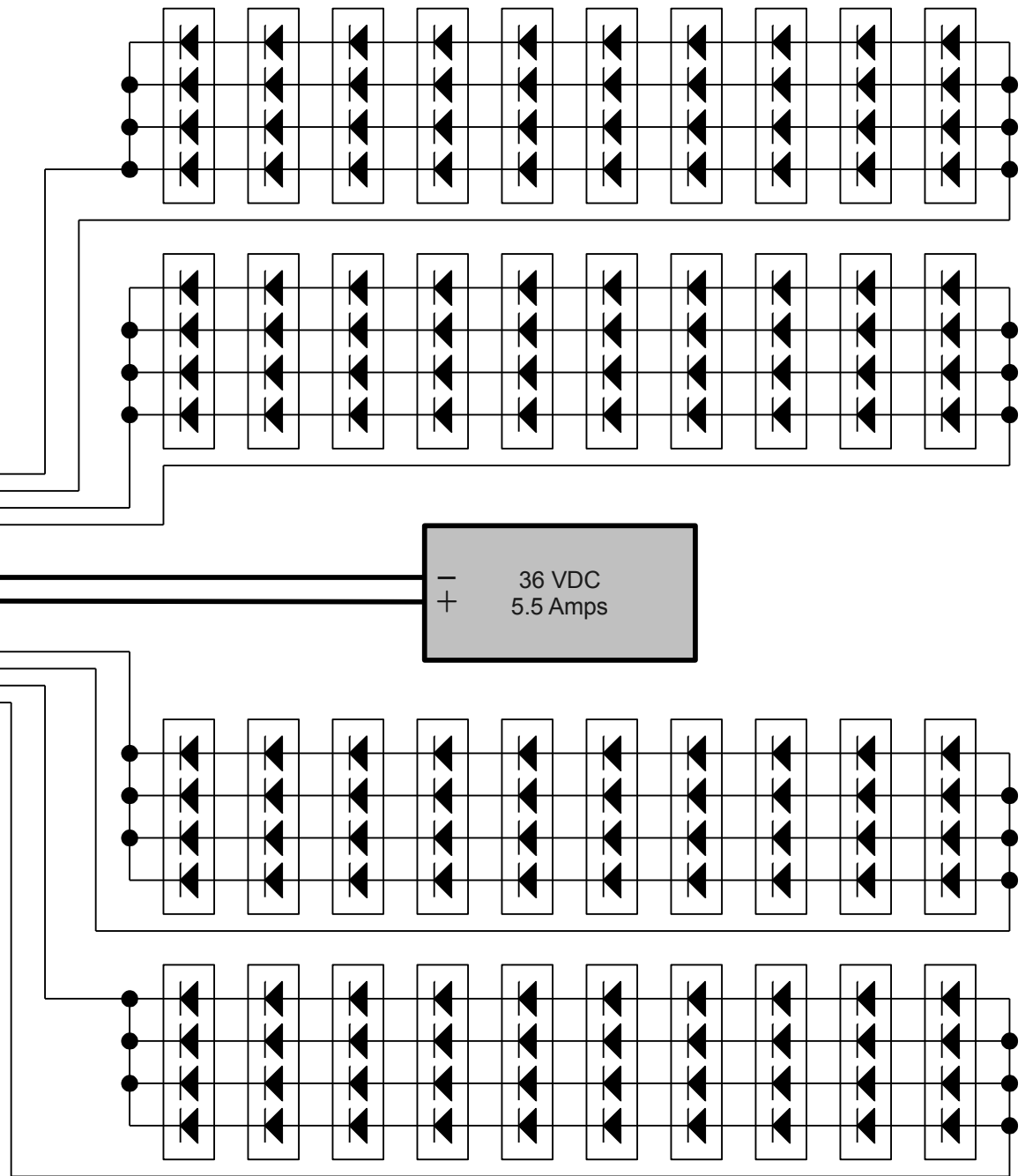
Each channel has 10 Cree MC-E 4-die, 430 lumen LEDs, wired in 4 parallel strings. This configuration draws just under 154 Watts and produces 15,000 lumens!

The LEDs run relatively cool because each is running at about 86% of its test spec current capacity.

Each channel uses analog dimming for smooth, pleasant light.



Each Channel: (10) White

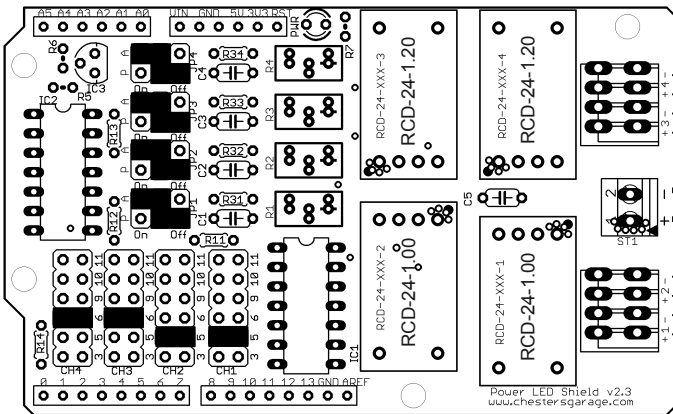


Reef Aquarium Lighting:

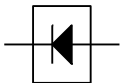
Each channel has 9 Cree XP-G (White) or XP-E (Colored) LEDs wired in series. Each white LED is being driven at 1200 mA. Each Blue and Royal Blue LED is being driven at 1000 mA.

This setup is suitable for tanks with water surface dimensions of 12" x 12" through 24" x 24". Use multiple instances of this circuit for larger tanks. Use optics for deeper tanks.

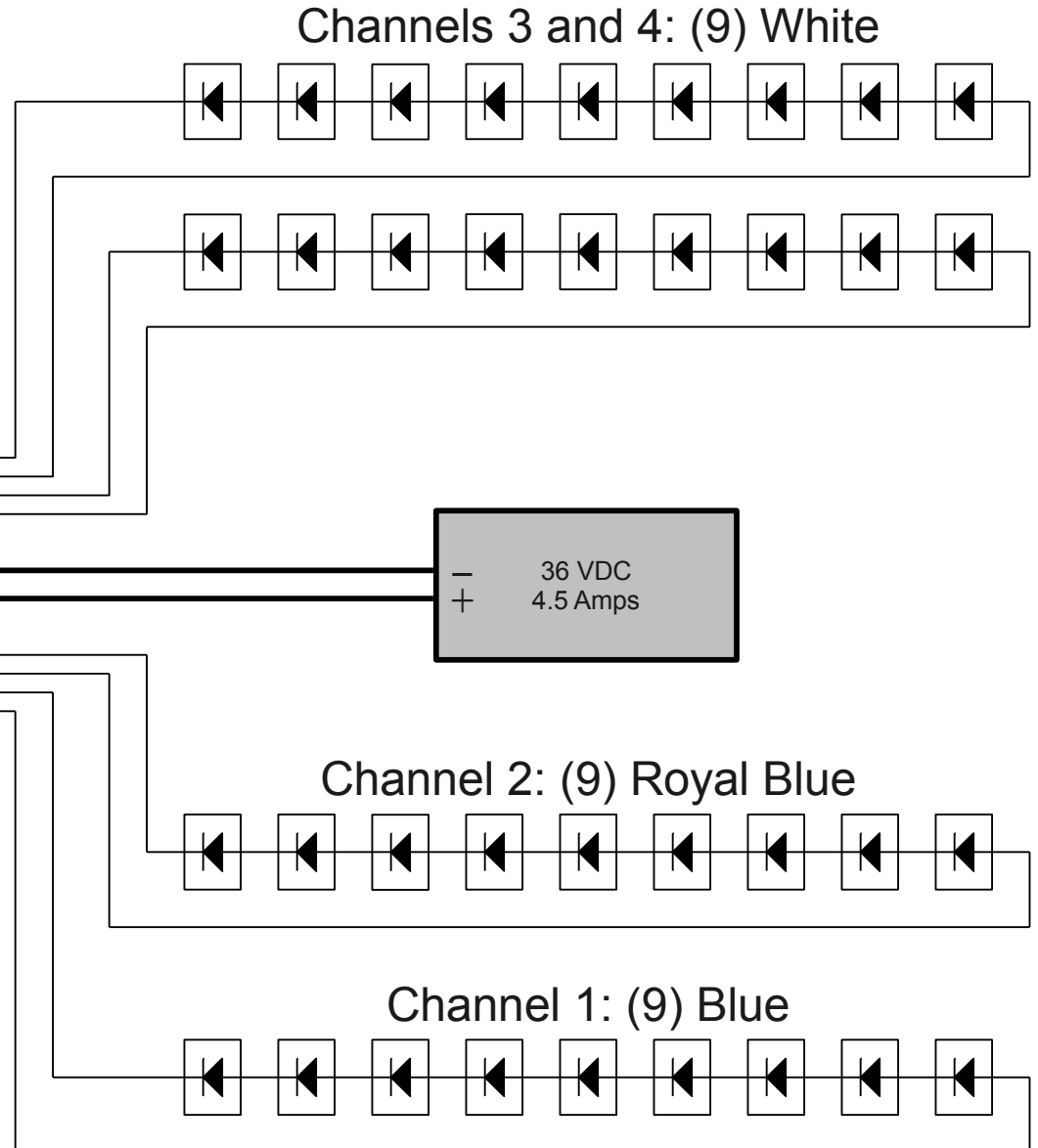
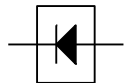
Note different size drivers and channel jumper placement on pins 5 and 6. Analog dimming reduces stress on fish and other animals.



The Cree XP-G is a "5 Watt", single-die LED. It is being driven at 3.9 Watts.



The Cree XP-E is a "3 Watt", single-die LED. It is being driven at 3.5 Watts.



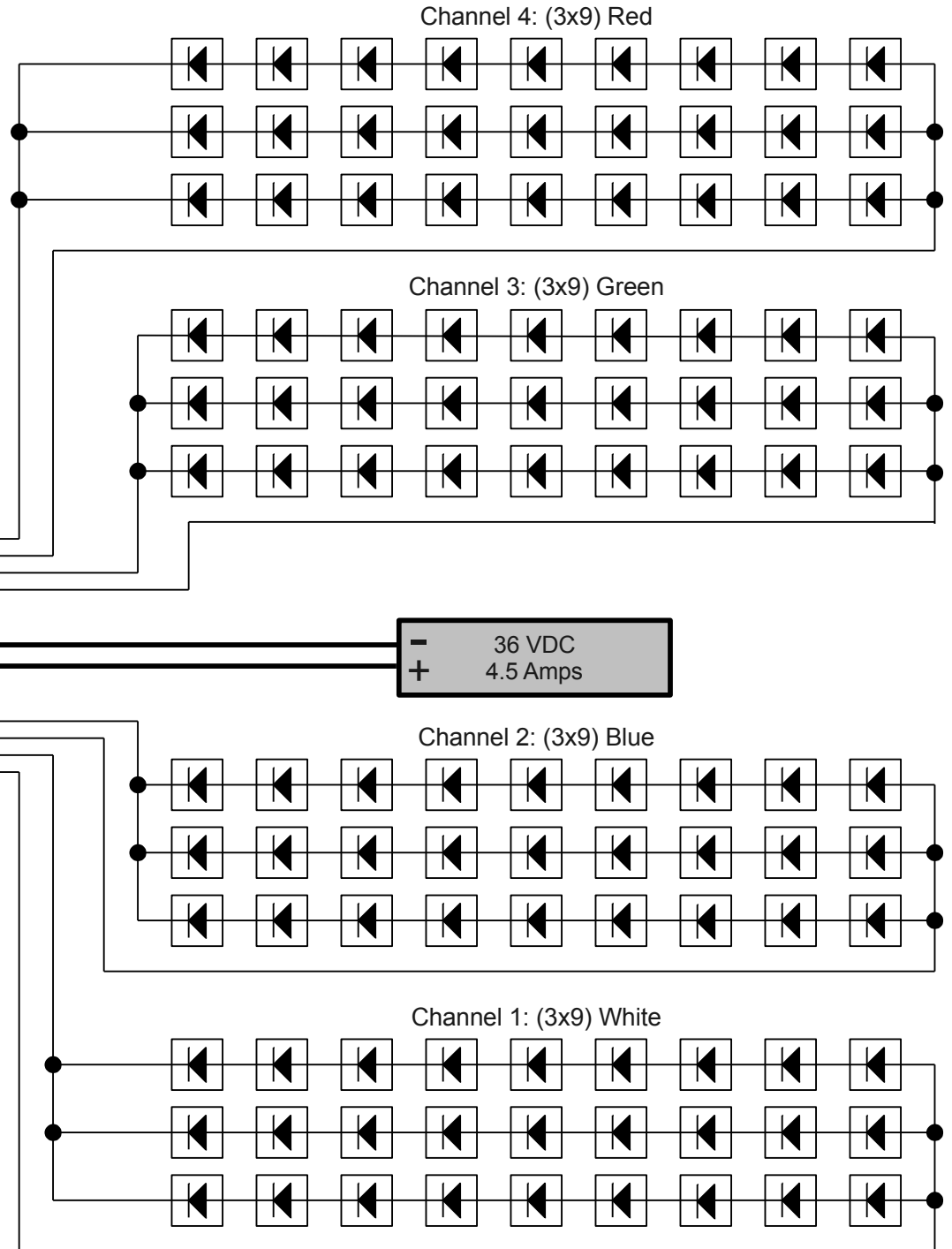
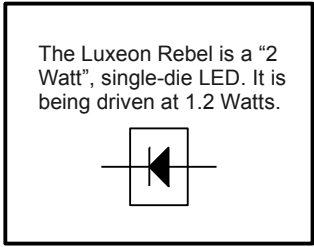
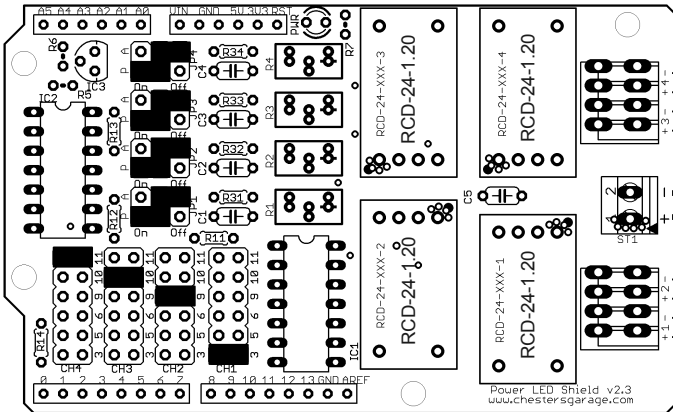
Dance Club Effects:

Each channel has 3 parallel strings of 9 Luxeon Rebel LEDs. Each LED is being driven at 400 mA.

This configuration draws about 140 Watts and delivers bright, vibrant, saturated colors for environment or visual effects.

PWM dimming is used for fast changes, flashing and strobing.

This circuit could be laid out across three fixtures or modules for a broader range of applications.



Bicycle Headlight:

Channel 4 drives the headlight, a set of 3 white Cree MC-E LEDs, delivering over 1100 lumens out front!
Channel 3 drives the tail light, 3 red Luxeon Rebel LEDs for long-range visibility to motorists. Channels 1 and 2 provide turn signals, 2 amber Luxeon Rebel LEDs on each side for an extra measure of safety.

System draws about 16 Watts. Note the combination of different sized drivers.

The headlight uses analog dimming for strobe-free illumination. The tail light and turn signals use PWM dimming for sharp flashing and fast response.

