

# AS3691

## 4 Precision 400mA Current Sources for RGB and Single Color Leds

### 1 General Description

The AS3691 features four high precision current sources for driving up to four LED strings (RGB or single color leds). Each of the four currents sources can be controlled independently by PWM inputs. The full scale current value is set by external resistors.

### 2 Key Features

- 4 x 400mA constant current outputs
- Programmable with external resistors
- 4 independent PWM inputs
- Absolute current accuracy  $\pm 0.5\%$
- 'Automatic Supply Regulation' to reduce power dissipation<sup>1)</sup>

<sup>1)</sup>Patent Pending

- Very wide output voltage current source voltage compliance
  - Down to 0.41V
  - Up to 15V<sup>2)</sup>
- Integrated overtemperature protection
- Separate sense pads (Rfb1-Rfb4) for easy and precise PCB Layout
- Package
  - DIE
  - QFN24 4x4mm

<sup>2)</sup> 15V is sufficient for most applications as the AS3691 does not switch off the LED current completely

### 3 Applications

- General Lighting
- Backlighting
- RGB Backlighting for LCD TV/Monitors with White Color Balancing

### 4 Application Diagrams

Figure 1 – Application Diagram of AS3691 for Single Color Lighting (Single Module shown)

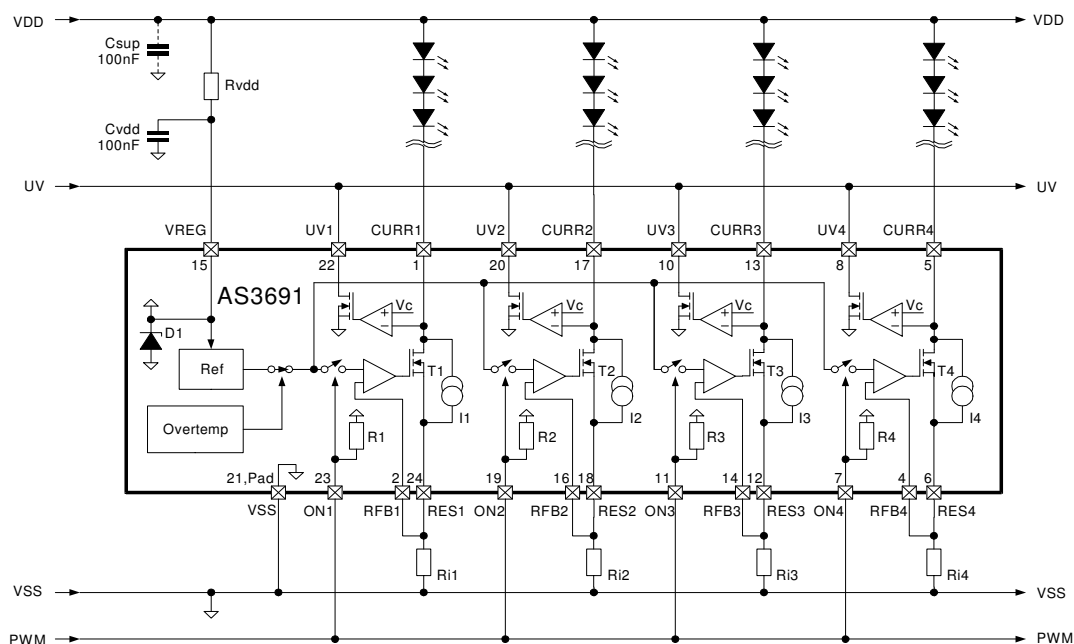


Figure 2 – Application Diagram of AS3691 for RGB Lighting (single Module shown)

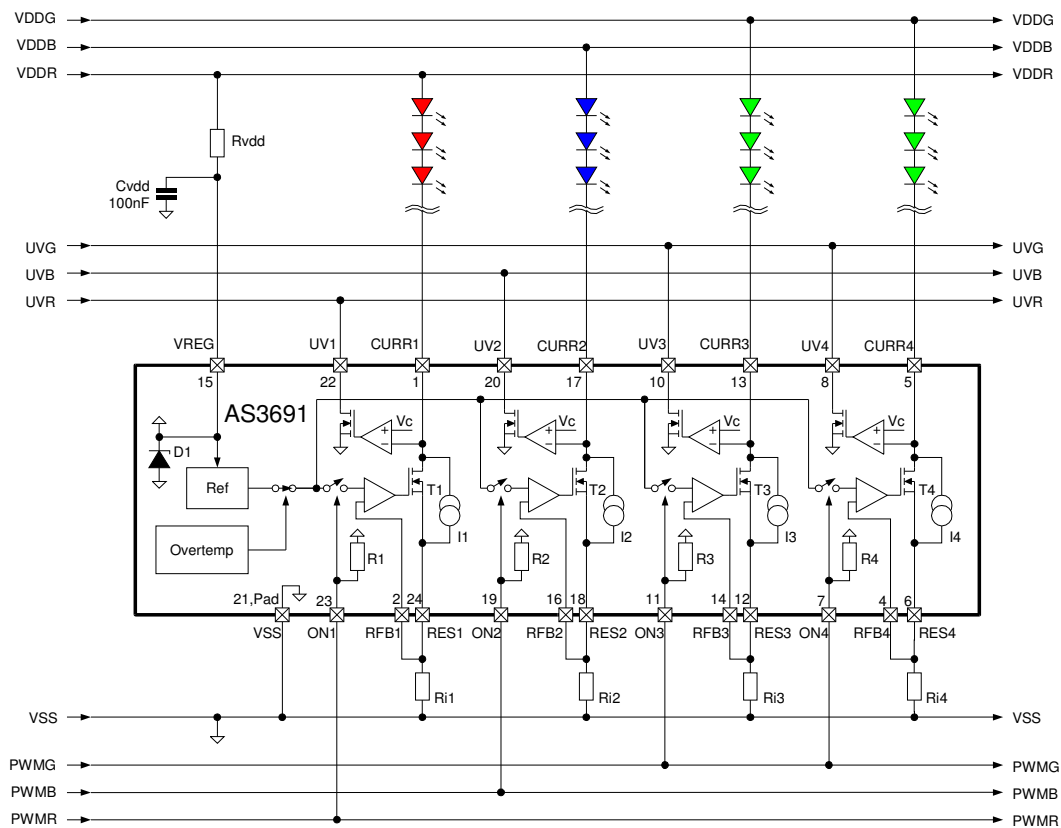
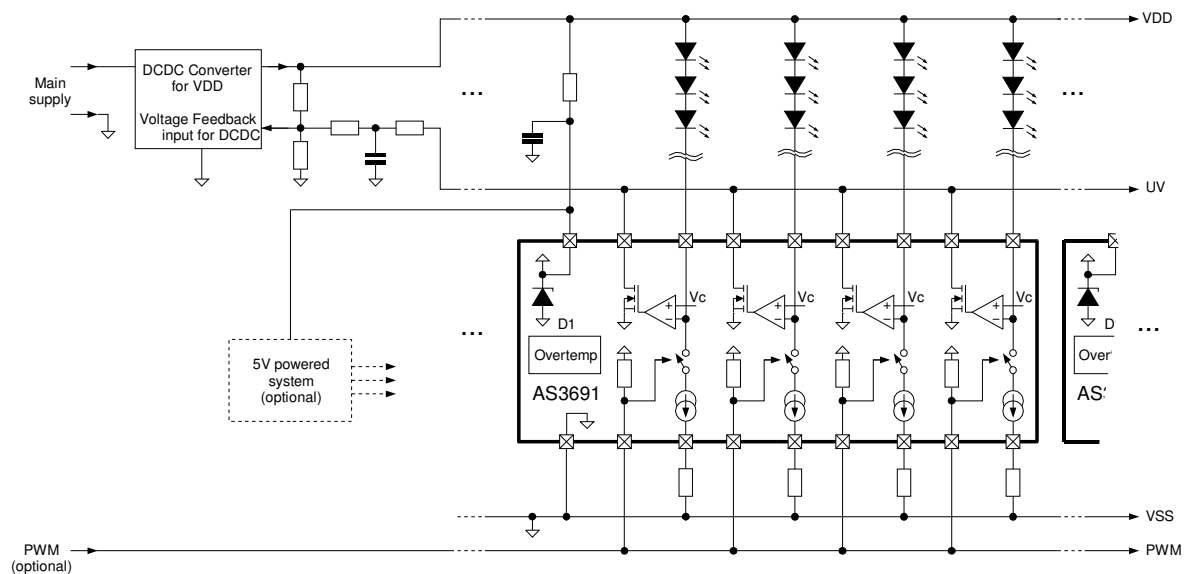


Figure 3 – Complete AS3691 Application using White LEDs



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