DD25 – Current Driver Module: Exclusively for the 9520 Series

Quantum Composers' latest addition of capabilities to the 9520 family of pulse generators is an adjustable current module providing up to 1.5A of output that includes adjustments for analog amplitude, current driver switching frequency, PWM control, PWM frequency, and PWM duty cycle. These adjustments make this module a valuable tool when driving LEDs, low current laser diodes, or other high speed, low current applications.

LEDs are current driven devices whose brightness is proportional to their forward current. A preferred method of regulating LED current is to drive the LED with a constant current source such as the DD25. The constant current source eliminates changes in current due to variations in forward voltage, which translates into a constant LED brightness.

Many LED applications also require dimming, as dimming provides brightness and contrast adjustment. Two types of dimming are available in the DD25: analog and Pulse Width Modulation (PWM). With analog dimming, 50% brightness is achieved by applying 50% of the maximum current to the LED; the DD25 provides this type of amplitude adjustment. However, there are drawbacks to this method such as LED color shift which can be overcome by utilizing the PWM capabilities of the DD25.

PWM dimming is achieved by applying full current to the LED at a reduced duty cycle. In this instance 50% brightness would be achieved by providing full current to the LED at a 50% duty cycle. The DD25 provides 0.01 - 100% duty cycles with a frequency range of 1Hz - 10MHz giving the user a wide range of PWM capabilities.

The fact that the DD25 can be run at a 100% duty cycle means that this module can also be used to drive low current laser diodes. The DD25 can provide drive current for laser diode packages that require between 250mA and 1.5A with competitive stability, overshoot, noise and ripple.

The DD25 expands the already strong capabilities of the Quantum Composers 9520 product line, giving customers the flexibility of having both a voltage controlled and current controlled output all in the same unit. For more information concerning the capabilities and specifications of the DD25 Current Driver Module, contact Quantum Composers applications engineers.

Schulz-Electronic GmbH | Postfach 11 01 18 . D-76487 Baden-Baden . Hausanschrift | Dr.-Rudolf-Eberle-Str. 2 . 76534 Baden-Baden
Fon +49.7223.9636.0 . Fax + 49.7223.9636.90 . vertrieb@schulz-electronic.de . www.schulz-electronic.de