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(54) **SOLID-STATE LIGHT EMITTER POWER SUPPLIES, DIMMABLE SOLID-STATE LIGHT SOURCES, AND METHOD OF POWERING SOLID-STATE LIGHT EMITTERS**

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(57) **ABSTRACT**

A solid-state light emitter power supply includes a first rectifier circuit, a second rectifier circuit, a power factor correction (PFC) stage, a first flyback converter, a second flyback converter, and a microcontroller. The rectifier circuits are configured to receive phase-cut signals from respective dimmer circuits as inputs and output respective phase-cut rectified power signals. The PFC stage is configured to receive a sum of the phase-cut rectified power signals as input and output a power-factor corrected electrical power to the flyback converters. The flyback converters are connected in parallel and are configured to power respective loads including a respective solid-state light emitter. The microcontroller is configured to receive signals derived from the phase-cut signals as inputs and to output respective pulse-width modulation (PWM) control signals to each of the flyback converters. Each flyback converter receives a respective power output portion of the power-factor corrected electrical power in accordance with the respective PWM control signals.