

NeoPower Configurable Power Supplies for OLED Super-Slim TV Testing

INDUSTRY

OLED TV Test and Measurement

SOLUTION

NeoPower™ NP05 AC-DC Power Supplies

APPLICATION

OLED Panel Testing Equipment

CHALLENGE

A manufacturer developing OLED panel testing equipment for super-slim TV displays needed a power architecture that could support multiple functions within a highly constrained design envelope. The system had to deliver stable power for panel startup, sensitive test circuitry, and system controls, while also meeting aggressive development timelines and the reliability demands of continuous production.

The application required several distinct power rails in a single test platform: constant-current power for the OLED panel, low-noise power for precision test circuitry, and additional power for the display and control logic. At the same time, the customer faced a compressed development schedule. Space limitations within the equipment created further pressure to minimize footprint, while 24/7 production requirements made long-term reliability essential.



SOLUTION

Advanced Energy's **NeoPower NP05** configurable AC-DC power supply offers up to 2400 W of output power in a compact 2.5 in profile and delivers a power density of 17 W/in³. Its configurable architecture made it possible to combine multiple outputs within one platform while maintaining the flexibility needed for a demanding test and measurement environment. The NP05 power supply also supports programmable constant-voltage or constant-current operation and is designed for low ripple noise, making it well suited to both OLED panel drive requirements and sensitive measurement circuitry.

In this configuration, three 48 V constant-current modules were connected in parallel to deliver up to 25 A and 1200 W for the OLED panel. A 5 V low-noise module supplied up to 280 W for in-circuit testing, while a 12 V, 400 W module powered the system display and control logic. By consolidating these needs into a single compact, modular platform, the design team was able to meet both performance and integration requirements without the delay and cost associated with a custom power design.

RESULTS

The outcome was a fast, practical route from concept validation to production readiness. Three configured NP05 power supplies were delivered fast through a value-added reseller (VAR), enabling immediate troubleshooting and validation of the new generation of test equipment. The solution supported a faster time to production, scaled effectively for ramp-up, and helped the customer meet both schedule and financial targets while benefiting from a proven, highly reliable power platform.

Beyond meeting the immediate technical requirements, the NP05 solution reduced time to market by eliminating the need for custom engineering and associated non-recurring engineering costs. The customer also benefited from strong application support, confidence in product quality and reliability, and the flexibility of a modular configurable platform built for advanced industrial and test applications.

Advanced Energy's NP05 configurable power supply provided a compact, high-performance solution that helped accelerate deployment and support a rapid path to production.



For international contact information,
visit advancedenergy.com.

powersales@aei.com
productsupport.ep@aei.com
+1 888 412 7832

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