

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 NP05 configurable power supply helped the customer move quickly from concept validation to production readiness while minimizing risk and development costs.

- **Accelerated time to production** through rapid delivery of configured power supplies for immediate system validation and troubleshooting.
- **Reduced development costs** by eliminating the need for custom power supply design and non-recurring engineering (NRE) expenses.
- **Supported production ramp-up** with a scalable, configurable platform built on proven technology.
- **Improved confidence and reliability** through a field-proven power solution backed by strong application support.

By leveraging Advanced Energy's NP05 platform, the customer was able to validate its next-generation test equipment, meet project and financial objectives, and establish a streamlined path to production.



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