



**LinearDimensions**  
SEMICONDUCTOR

**LND8924**

**DRIVER: 160 Output, 8 Input, “No Power” Display Driver/3D Print Head Driver**

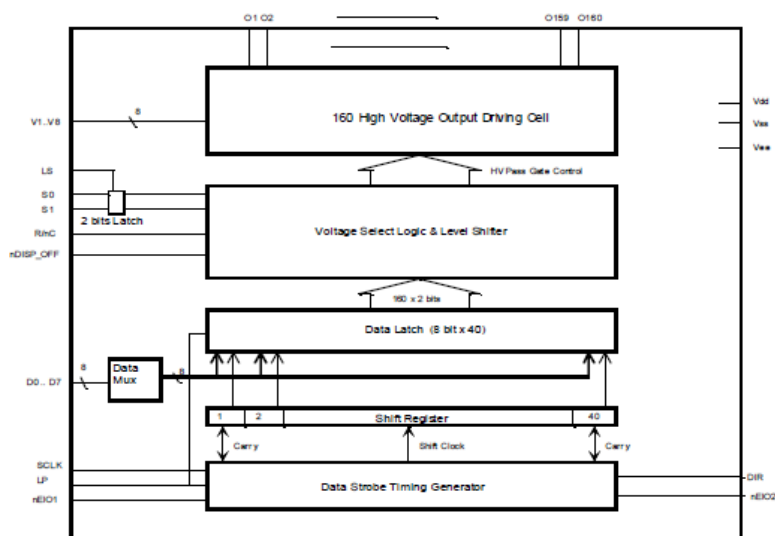
## GENERAL DESCRIPTION

The LND8924 features 160, 0-60V, outputs fed by eight (8) individually addressable voltage levels (V1-V8). The LND8924 is implemented in a sub-micron, high voltage process. The LND8924's versatile truth table enables both row and column driver functionality for both conventional and Dynamic Drive updating schemes. Dynamic Drive and the low 1 ohm channel resistance allow fast refresh of displays that require minimal power such as arm and wrist bands, and portable medical equipment and other wearable devices, overcoming the slow, user observable, refresh rates that have restricted use of Ch-LCD no power displays.

Utilizing a slim aspect ratio, the LND8924 is suitable for slim Tape Carrier Packaging (TCP) and Chip On Glass (COG) applications. A token structure, 8-bit data bus combined with two global state bits enables a cascade design capable of high speed data loading with a minimized footprint.

The LND8924 operates over a temperature range of  $T_j = -40^\circ\text{C}$  to  $150^\circ\text{C}$ .

## Block Diagram



Driver Functional Block Diagram

## FEATURES

- 160 output driver
- Combination row / column driver
- 60V output capability
- Allows fast refresh:
  - 1 ohm channel resistance
  - Dynamic drive
- Conventional or Dynamic Drive
- Slim die format (16.5mm X 2mm)
- Flip chip on flex (COF) or; Chip on glass (COG) compatible
- High speed two wire digital interface:
  - 8 MHz clock rate
  - 8 x 40 bit data bus
  - Daisy chain multiple LND8924s
- Up to  $T_j = 150^\circ\text{C}$  Operation

## APPLICATIONS

- Wrist Bands & Watch Displays
- No Power Wearable Displays
- Cholesteric Display Drivers
  - Ebooks (Dynamic Color)
  - Billboards / Signs
  - Navigation Displays
  - Automotive Instrumentation
- Test & Instrumentation:
  - 160 to 8 or;
  - 8 to 160 Addressable Mux
  - DAQ Interface
- 3D Print Head Driver
- MEMs Devices

## DIE IMAGE

