THL3504

24-channel Constant Current LED Driver with LVDS Interface

DESCRIPTIONS

The THL3504 is an LED driver with 24 channel constant current sink outputs. The constant current values for three output groups are determined by external resistors.
The embedded oscillator and PWM controller individually generates 256-step brightness set by the dedicated registers for each channel.
The serial interface of 2-pair LVDS lines (clock and data) features high-level noise tolerance, high-speed, and long-distance transmission.
The LVDS allowing cascaded and multidrop connection offers the maximum flexibility for designers to place and connect LED drivers.
The simple and one-way communication protocol is easily-controlled and requires less CPU resources.

APPLICATIONS

Amusement
LED Backlight
LED Display
Digital Signage
Illumination

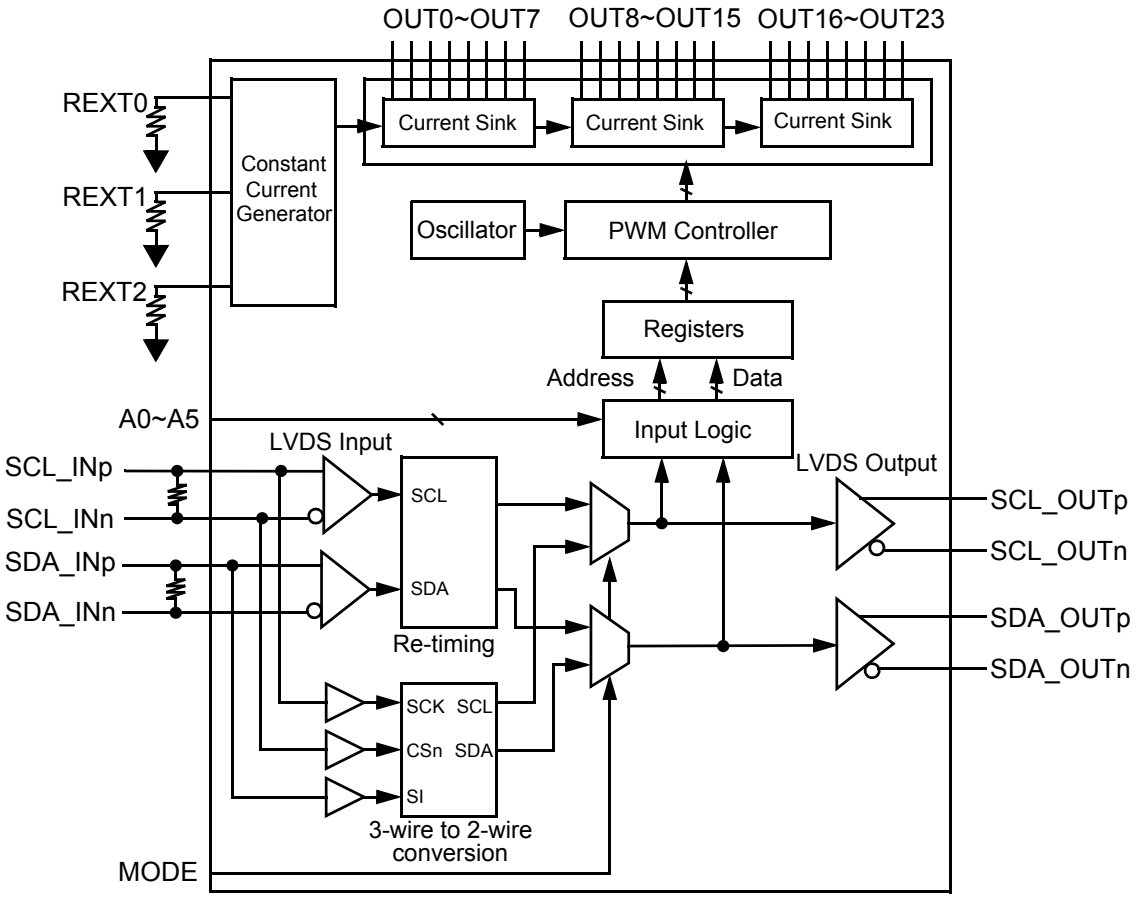
FEATURES

< Driver part >
- Constant Current Output: 24 channels
- Output Sink Current: up to 40mA/ch
- Output voltage: up to 40V
- Individual Brightness Control: 256 steps
- Group Brightness Control: 64 steps
- Output disable/enable

< Serial interface part >
- 2-pair Serial LVDS Input or 3-wire Serial CMOS Input up to 10Mbps
- Bridge Function Converting 3-wire Serial CMOS Input to 2-pair Serial LVDS Output
- Repeater function of 2-pair Serial LVDS Input / Output with Waveform and Timing Correction
- Device Address Selection up to 62 addresses
- General call to all devices

Protection Circuits
UVLO, Short Circuit Protection, Thermal Shutdown
Supply Voltage: 3.0~5.5V
Package: QFN 48-pin Exposed Pad

Block Diagram



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