

Constant Current Driver ICN2038S

Description

The ICN2038S is a 16-channel constant current sink output LED driver. All 16-channels constant current can be set by a single external resistor, which provides users flexibility in controlling the light intensity of LEDs.

The ICN2038S exploits current precision controlling technology, which makes error between ICs less than $\pm 2.0\%$, and error between channels less than $\pm 2.0\%$. At ICN2038S output stage, 16-regulated output ports are designed to provide uniform and constant current sinks for driving LEDs within a large range of forward voltage(VF) variations.

ICN2038S contains two 16-bit shift registers and latches which convert serial input data into parallel output format. For integrated dual latches, ICN2038S could get higher refresh rate.

Features

- 16-channel constant current output
- Output current setting range:
0.5~45mA×16@V_{DD}=5V constant current output
0.5~25mA×16@V_{DD}=3.3V constant current output
- Current accuracy
 - Between channel :< $\pm 2.0\%$
 - Between ICs :< $\pm 2.0\%$
- Fast response of output current,
 \overline{OE} (min):40ns@V_{DD}=5V
- I/O: Schmitt trigger input
- Data transfer frequency:f_{MAX}=30MHz(Max)
- Power supply voltage: V_{DD}=3.3~5V
- Operating Temperature: -40°C to +85°C
- 4 bit current gain: 25%~100%
- Adjustable Pre-Charge for Ghosting Reduction
- LED Protection Circuit
- Enhanced Circuit for Caterpillar Cancelling
- Low-Gray Scale Enhancement
- Integrated Dual Latches for higher refresh rate
- Dim line at the first scan line