Preliminary – **LD7673**

High Voltage 120V Linear LED Driver
100mA Constant Current with Control

Features

- Wide input voltage range : 1.5V to 120V
- Constant output current : 100mA±10%
- Parallel working for higher currents
- Dimming control by an enable pin
- RoHS and green compliant packages

Applications

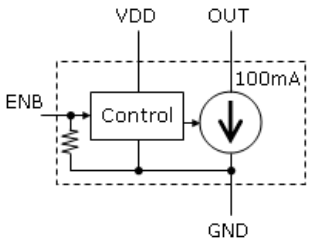
- Turn signal
- LED traffic light
- Signage or decorative LED lamp
- Constant source or constant sink

General Description

The LD7673 is a cost-effective linear regulator optimized for high input voltage. It regulates to supply a constant current of 100mA±10% at input voltage of 1.5V ~ 120Vdc with the enable control by VDD or ENB pin. The Device can be used as a constant current source or a constant current sink.

The typical application of LD7673 is to drive a string LED with a constant current 100mA. The parallel connection of LD7673 can be used to provide higher constant current.

Equivalent Block Diagram

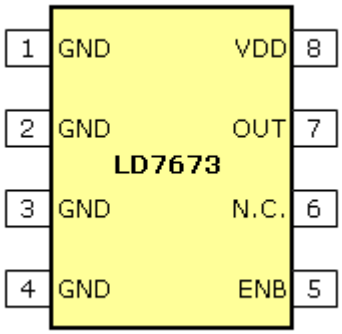


Ordering Information

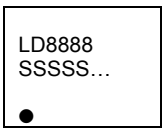
		Packing Options	
Part No.	Package	Tube (TU)	Tape & Reel (TR)
LD7673	SOP-8	LD7673S1-TU	LD7673S1-TR

- Package material default is “Green” package.

Package Pin Out



Product Marking



- Line 1 – “LD” is a fixed character
  8888: product name
- Line 2 – SSSSS…: lot number

Absolute Maximum Ratings

Parameter	Maximum	Units
Maximum Operating Voltage	130	V
Operating Junction Temperature	-40 to +125	°C
Storage Temperature	-55 to +150	°C

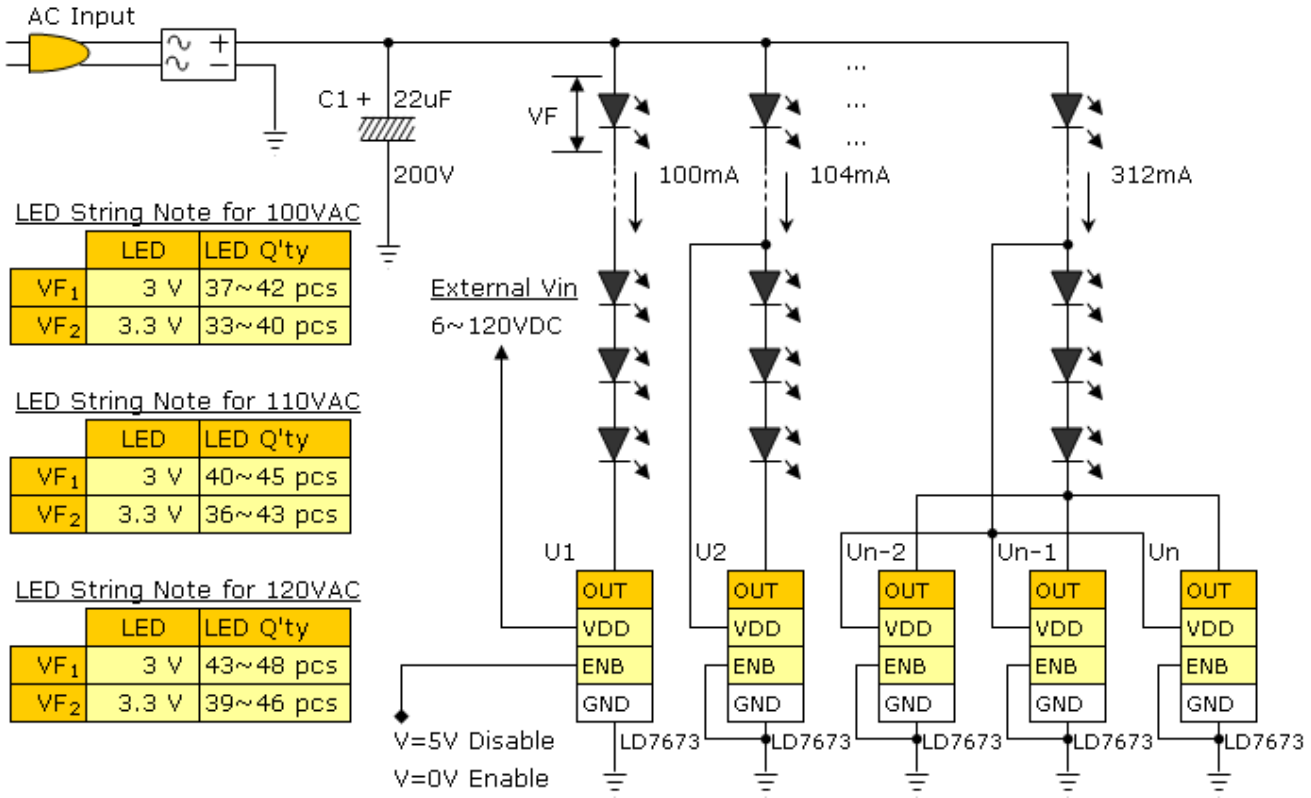
The values beyond the boundaries of absolute maximum rating may cause the damage to the device. Functional operation in this context is not implied. Continuous use of the device at the absolute rating level might influence device reliability. All voltages have their reference to device ground.

Electrical Characteristics

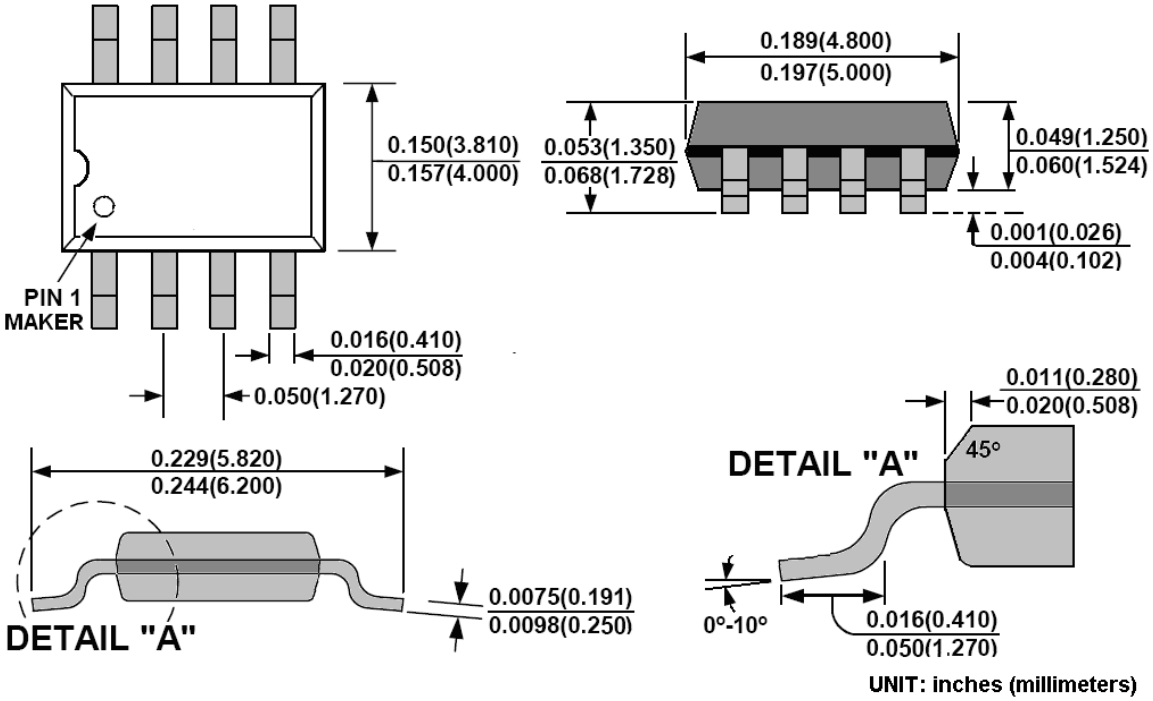
T_A=25°C unless specified, otherwise minimum and maximum values are guaranteed by production testing requirements.

Parameter	Symbol	Condition	Minimum	Typical	Maximum	Units
Supply Voltage	V_{DD}	Normal	6.5	–	28	V
		Extended	6.5	–	120	
Output Voltage at OUT	V_{OUT}	Normal	1.5	–	28	V
		Extended	1.5	–	120	
VDD current	I_{DD}		–	4.0	5.0	mA
Regulated Constant OUT Current	I_{OUT}	Normal	90	100	110	mA
		Temperature limit	88	35	112	
		Extended conditions	85	–	115	
OUT Current while VDD open	$I_{OUT(OFF)}$	V_{DD} open or ENB=5V	–	–	10	μA
OUT shut off VDD voltage	$V_{OUT(OFF)}$	I_{DD} < 10μA	–	–	2.5	V
Delay Time of OUT current on	t_{ON}	ENB=0V	–	–	3.0	μS
Delay Time of OUT current off	t_{OFF}	ENB=5V	–	–	0.1	μS
Time for OUT current applied	t_{RISE}	ENB=0V	–	–	4.0	μS
Time for OUT current off	t_{FALL}	ENB=5V	–	–	0.1	μS
Operating Junction Temperature	T_J		-40		120	°C

Typical Application Circuit



Package Outline



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