

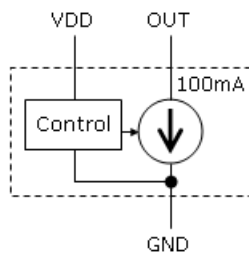
Features

- Wide input voltage range : 8V to 120V
- Constant output current : 96mA
- Constant application current : 100mA±6.0%
- Parallel working for higher currents
- Dropout voltage: 1.5V
- RoHS and green compliant packages

Applications

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

Equivalent Block Diagram



General Description

The LD7663 is a cost-effective linear regulator optimized for high input voltage. It regulates to supply a constant application current of 100mA±6.0% at input voltage of 8V to 120Vdc with the enable control by VDD. The Device can be used as a constant current source or a constant current sink.

The typical application of LD7663 is to drive a string LED with a constant current 100mA. The dropout voltage can be low as 1.5V. The parallel connection of LD7663 can be used to provide higher constant current.

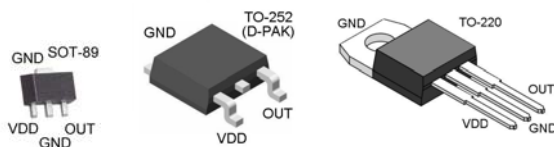
For a wider application, the package is available in SOT-89, TO-252, and TO-220.

Ordering Information

Part No.	Package	Packing Options		
		Tube(TU)	Bag(BG)	Tape & Reel(TR)
LD7663	SOT-89-3	N/A	LD7663L5-BG	LD7663L5-TR
	TO-252-3	LD7663T6-TU	N/A	LD7663T6-TR
	TO-220-3	LD7663T3-TU	N/A	LD7663T3-TR

- Package material default is “Green” package.

Package Pin Out



Product Marking

LD8888 SSSS...	◇ Line 1 – “LD” is a fixed character 8888: product name
●	◇ Line 2 – SSSS...: lot number

Thermal Characteristics

Package	Power Dissipation @T _A =25°C	θ _{JC} °C/W	θ _{JA} °C/W
SOT-89	1.3W	15	80
TO-252	2.0W	1.3	40
TO-220	2.0W	2.5	62

Absolute Maximum Ratings

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

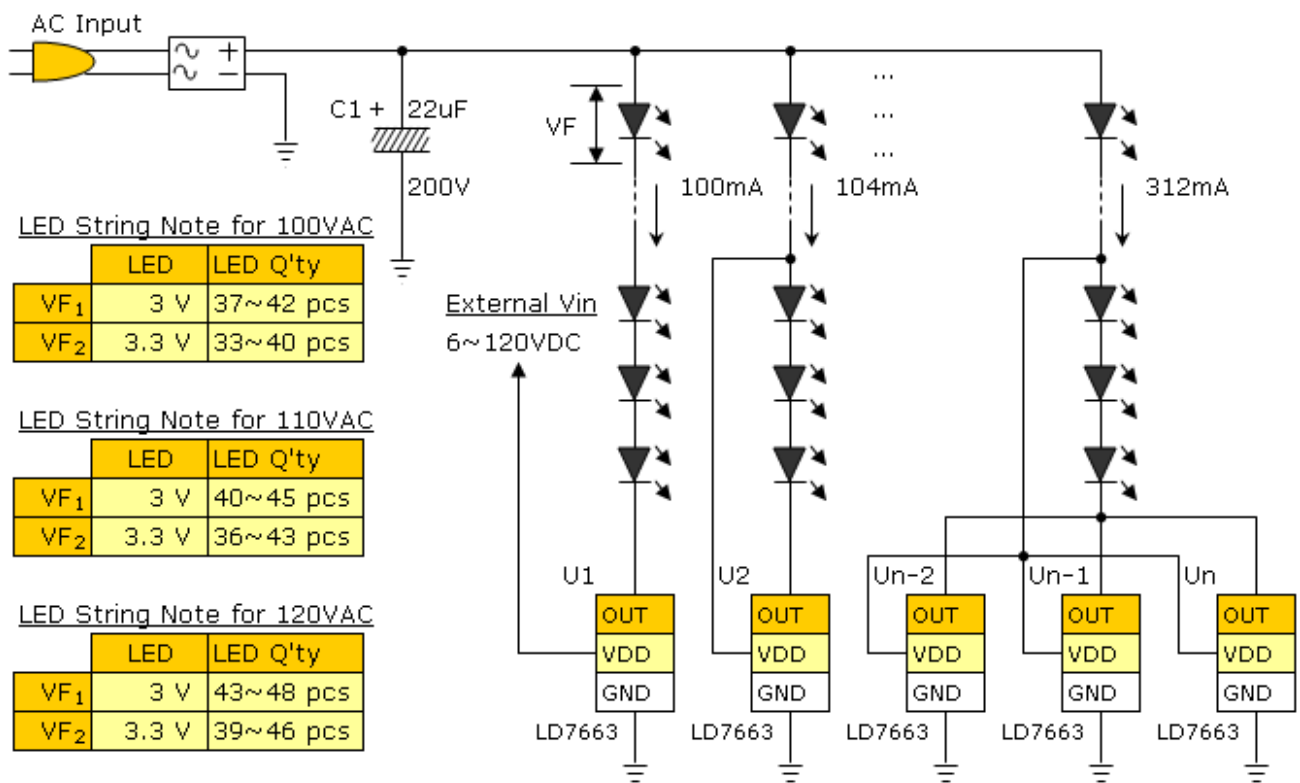
The values beyond the boundaries of absolute maximum rating may cause the damage to the device. Functional operation in this context is not implied. Continuous use of the device at the absolute rating level might influence device reliability. All voltages have their reference to device ground.

Electrical Characteristics

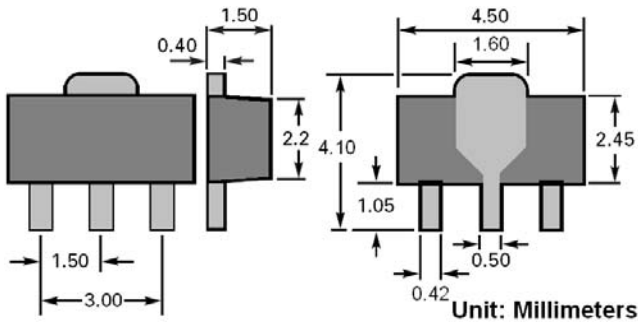
T_A=25°C unless specified, otherwise minimum and maximum values are guaranteed by production testing requirements.

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}		–	5.0	6.0	mA
Regulated Constant OUT Current	I _{OUT}	V _{OUT} = 1.5V ~ 120V	85	95	105	mA
		V _{OUT} < 1.5V	–	–	85	
Application Constant Current	I _{OUT} + I _{DD}	Bin 1 Category	88	–	96	mA
		Bin 2 Category	94	100	106	
		Bin 3 Category	104	–	112	
OUT Current while VDD open	I _{OUT(OFF)}	V _{DD} open	–	–	10	µA
OUT shut off VDD voltage	V _{OUT(OFF)}	I _{DD} < 10µA	–	–	3.0	V
Time for VDD applied	t _{ON}		–	–	20	µS
Time for VDD off	t _{OFF}		–	–	10	µS
Operating Junction Temperature	T _J		-40	–	120	°C

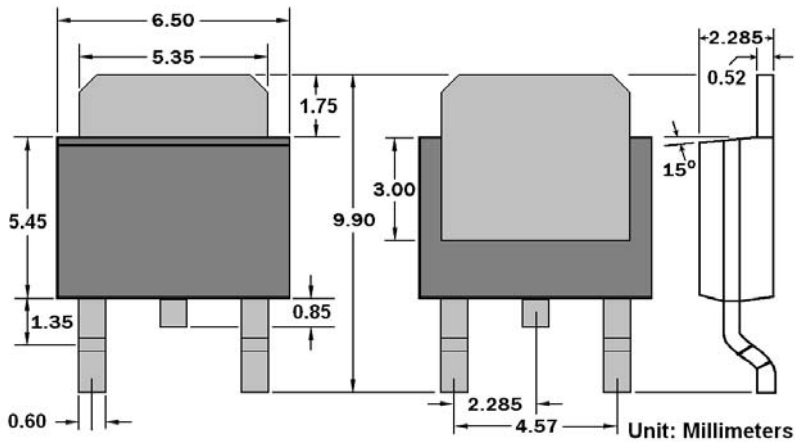
Typical Application Circuit



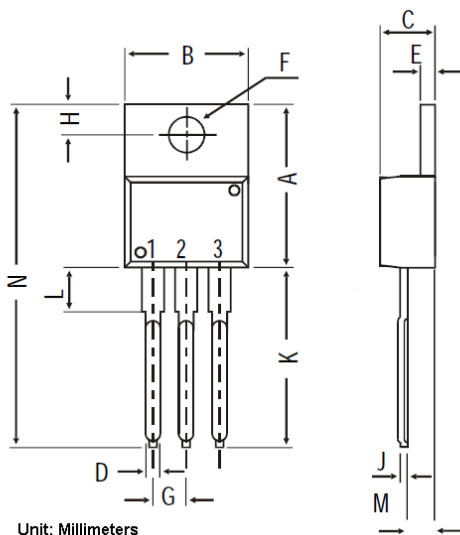
Package Outline
SOT-89:



TO-252:



TO-220:



Symbols	Minimum	Normal	Maximum
A	14.42	15.47	16.51
B	9.63	10.15	10.67
C	3.56	4.20	4.83
D	-	0.90	-
E	1.15	1.28	1.4
F	3.75	3.82	3.88
G	2.29	2.54	2.79
H	2.54	2.99	3.43
J	-	0.56	-
K	12.7	13.72	14.73
L	2.8	3.44	4.07
M	2.03	2.48	2.92
N	-	31.24	-

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