

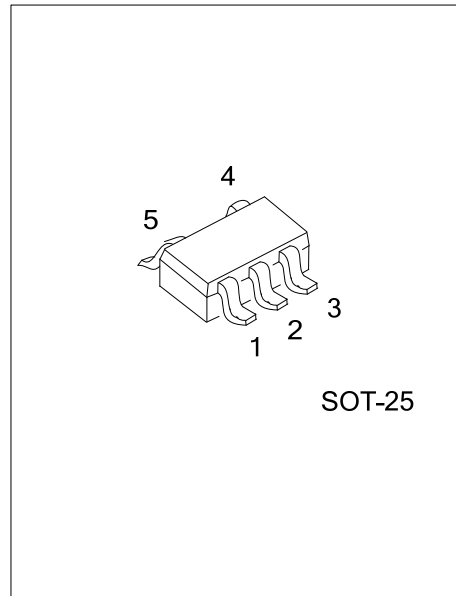


UL68X

Preliminary

CMOS IC

HIGH ACCURACY LINEAR CONSTANT CURRENT LED DRIVER



DESCRIPTION

The UTC **UL68X** is a linear constant current IC that need a external power MOSFET. The output current is determined by the external MOSFET, and constant current accuracy up to $\pm 3\%$. The application scheme is simple and the cost is low. This device also incorporates temperature compensation and thermal shutdown functions.

FEATURES

- * Output Current is determined by the external MOSFET
- * Up to $\pm 3\%$ Constant Current Accuracy
- * No EMC Problem
- * High pressure automatically adjust the current function
- * Temperature Compensate
- * Thermal Shutdown

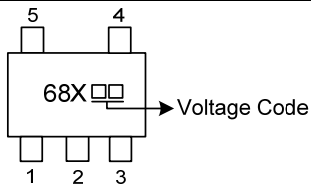
ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UL68XL-xx-AF5-R	UL68XG-xx-AF5-R	SOT-25	Tape Reel

Note: xx: Output Voltage, refer to Marking Information.

<p>UL68XG-xx-AF5-R</p>	<p>(1)Packing Type (2)Package Type (3)Output Voltage Code (4)Green Package</p>	<p>(1) R: Tape Reel (2) AF5: SOT-25 (3) xx: Refer to Marking Information (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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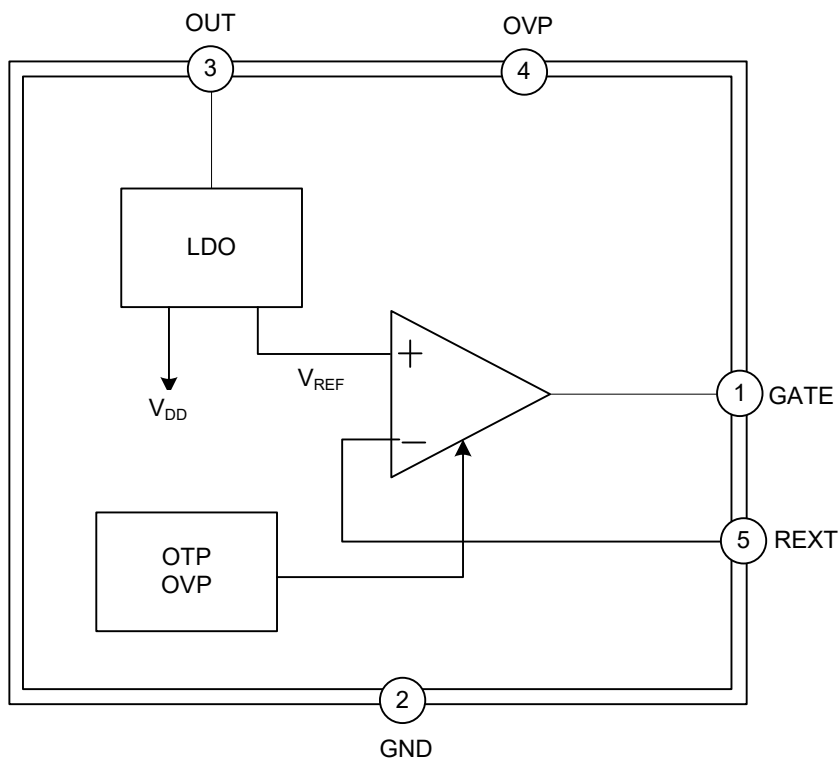
MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-25	25: 250mV 60: 600mV	

PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	GATE	Connect to the gate of external MOSFET Pin.
2	GND	Ground.
3	OUT	Power Supply.
4	OVP	High pressure automatically adjust the current.
5	REXT	Output Current Setting Pin.

BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

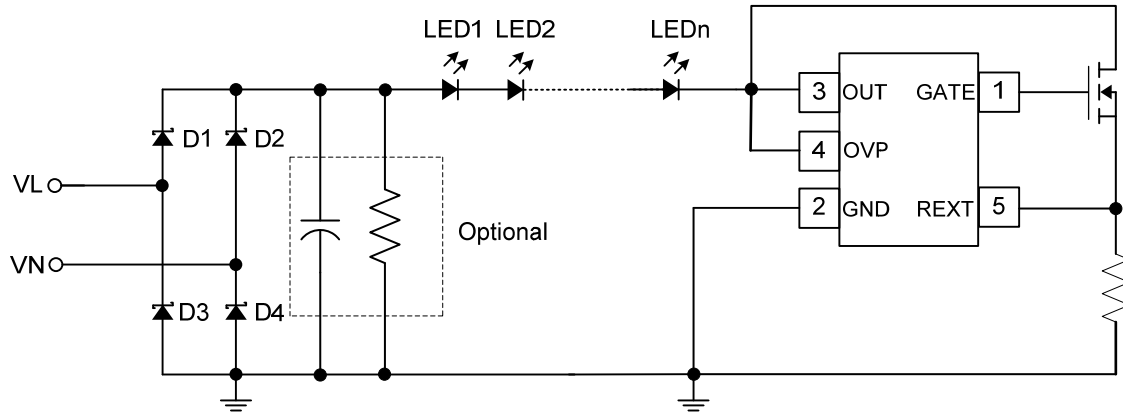
PARAMETER	SYMBOL	RATINGS	UNIT
OUT Pin Voltage	V_{OUT}	-0.5 ~ 450	V
Operating Junction Temperature	T_{OPT}	-40 ~ +150	°C
Storage Junction Temperature	T_{STG}	-50 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	
OUT Pin Voltage	V_{OUT}	$I_{OUT}=30mA$			6.5	V	
OUT Pin Withstanding Voltage		$I_{OUT}=0$	450			V	
Quiescent Current	I_Q	$V_{OUT}=10V$ REXT No Collection		0.16	0.25	mA	
REXT Pin Voltage	V_{REXT}	$V_{OUT}=10V$	UL68X-25	242	250	258	mV
			UL68X-60	582	600	618	mV
Vovc				70		V	
Output Current Error				± 3		%	
Temperature Compensate Point	T_{CP}			140		°C	

■ TYPICAL APPLICATION CIRCUIT



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