



## UL66X

Preliminary

CMOS IC

### HIGH ACCURACY LINEAR CONSTANT CURRENT LED DRIVER

#### DESCRIPTION

The UTC **UL66X** 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  $\pm 4\%$ . The application scheme is simple and the cost is low. This device also incorporates temperature compensation and thermal shutdown functions.

#### FEATURES

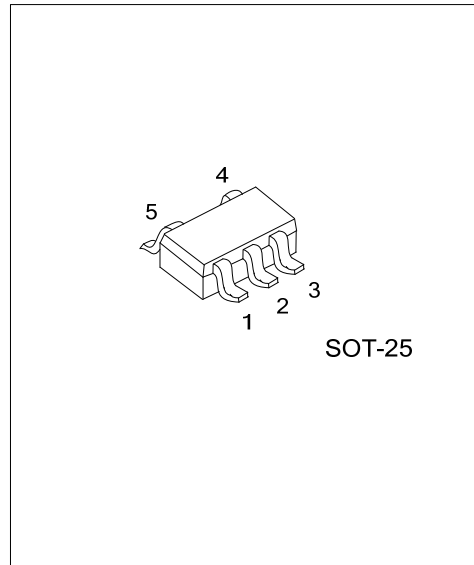
- \* Output Current is determined by the external MOSFET
- \* Up to  $\pm 4\%$  Constant Current Accuracy
- \* No EMC Problem
- \* Temperature Compensate
- \* Thermal Shutdown

#### ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UL66XL-xx-AF5-R	UL66XG-xx-AF5-R	SOT-25	Tape Reel

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

UL66XG-xx-AF5-R	(1)Packing Type	(1) R: Tape Reel
	(2)Package Type	(2) AF5: SOT-25
	(3)Output Voltage Code	(3) xx: Refer to Marking Information
	(4)Green Package	(4) G: Halogen Free and Lead Free, L: Lead Free



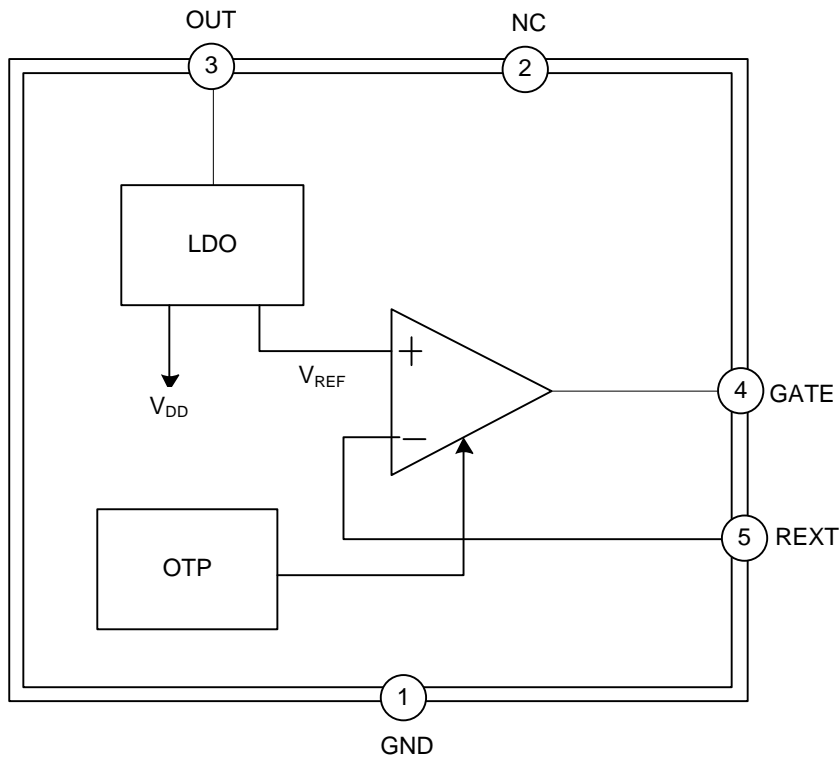
MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-25	03: 0.3V 06: 0.6V	

PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	GND	Current Output Pin.
2	NC	NO connect.
3	OUT	Current Output Pin.
4	GATE	Connect to the gate of external MOSFET Pin.
5	REXT	Output Current Setting Pin.

BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

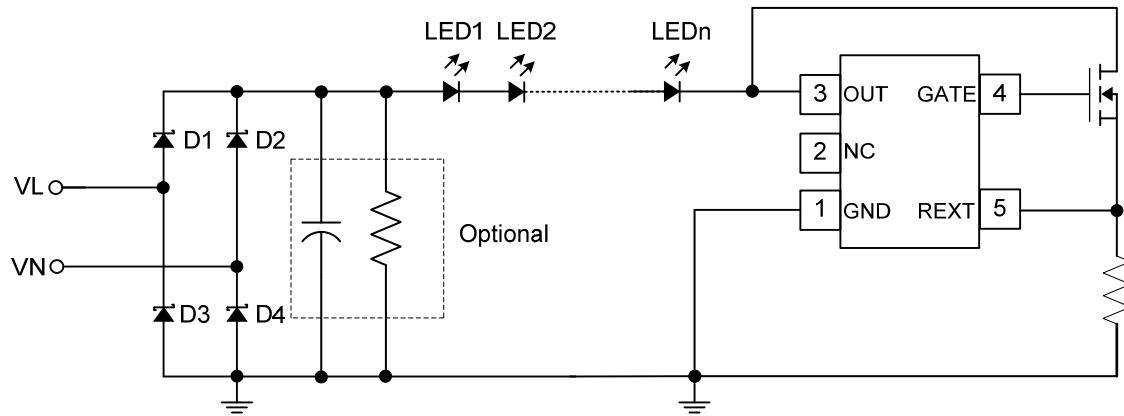
PARAMETER	SYMBOL	RATINGS	UNIT
OUT Pin Voltage	$V_{OUT}$	-0.5 ~ 450	V
Operating Junction Temperature	$T_{OPT}$	-40 ~ +150	°C
Storage Junction Temperature	$T_{STG}$	-50 ~ +150	°C

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	$V_{REXT}$	$V_{OUT}=10V$		0.3		V
				0.6		V
$V_{REXT}$ Voltage Error		$I_{OUT}=5\sim 60mA$		$\pm 4$		%
Temperature Compensate Point	$T_{CP}$			140		°C

■ TYPICAL APPLICATION CIRCUIT



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