



## UL67C

CMOS IC

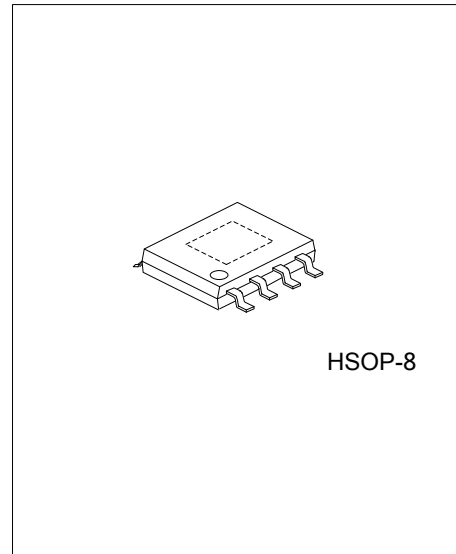
### HIGH ACCURACY LINEAR CONSTANT CURRENT LED DRIVER

#### DESCRIPTION

The UTC **UL67C** is a linear constant current IC with a built-in power MOSFET. The output current can be adjusted from 5mA to 60mA, 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

- \* 5mA ~ 60mA Output Current
- \* Up to  $\pm 4\%$  Constant Current Accuracy
- \* Built-in Power MOSFET
- \* No EMC Problem
- \* Temperature Compensate
- \* Thermal Shutdown

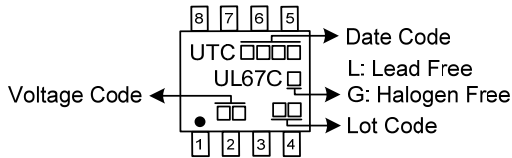


#### ORDERING INFORMATION

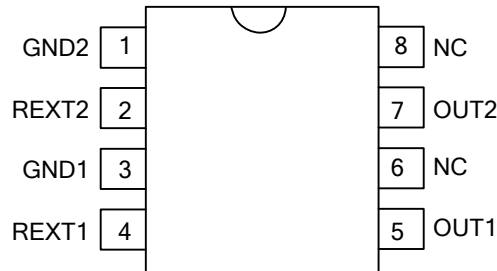
Ordering Number		Package	Packing
Lead Free	Halogen Free		
UL67CL-xx-SH2-R	UL67CG-xx-SH2-R	HSOP-8	Tape Reel

<p>UL67CG-xx-SH2-R</p> <ul style="list-style-type: none"> <li>(1) Packing Type</li> <li>(2) Package Type</li> <li>(3) Output Voltage Code</li> <li>(4) Green Package</li> </ul>	<ul style="list-style-type: none"> <li>(1) R: Tape Reel</li> <li>(2) SH2: HSOP-8</li> <li>(3) xx: Refer to Marking Information</li> <li>(4) G: Halogen Free and Lead Free, L: Lead Free</li> </ul>
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■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
HSOP-8	03: 0.3V 06: 0.6V	 <p>             UTC □ □ □ □ → Date Code              L: Lead Free              G: Halogen Free              Lot Code              Voltage Code ←         </p>

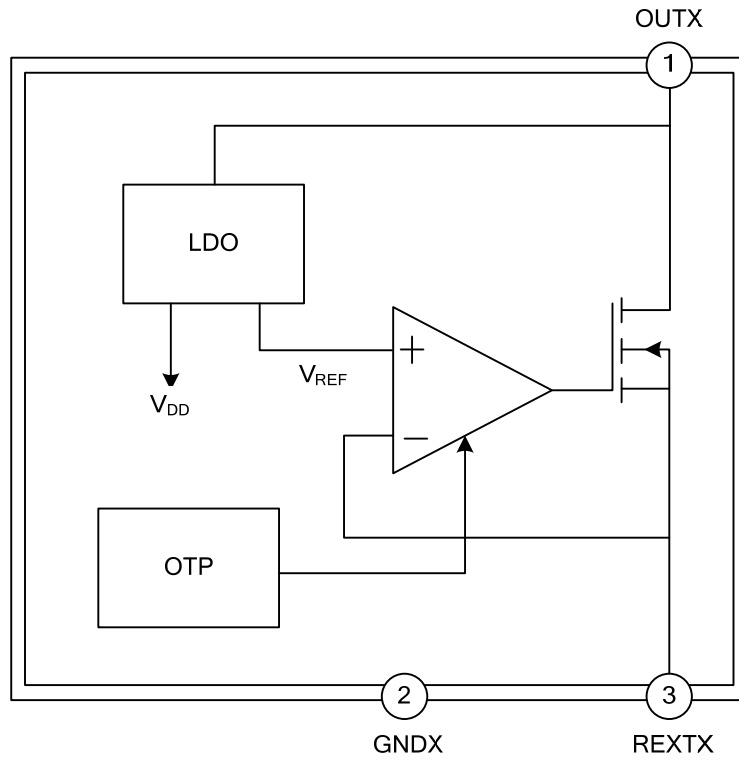
■ PIN CONFIGURATION



■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	GND2	Ground2.
2	REXT2	Output2 Current Setting Pin.
3	GND1	Ground1.
4	REXT1	Output1 Current Setting Pin.
5	OUT1	Current Output1 Pin.
6, 8	NC	
7	OUT2	Current Output2 Pin.

■ BLOCK DIAGRAM



## ■ ABSOLUTE MAXIMUM RATING

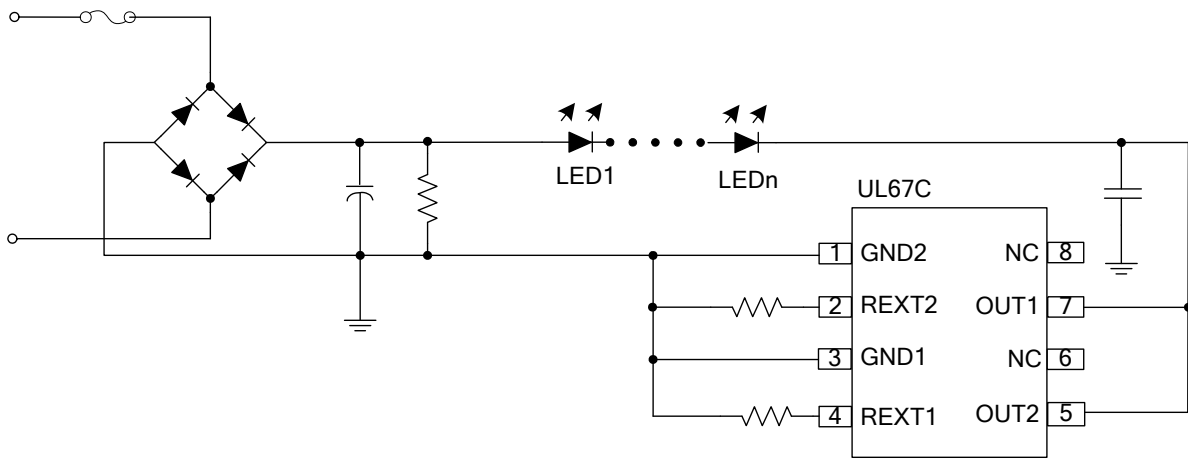
PARAMETER	SYMBOL	RATINGS	UNIT
OUT Pin Voltage	$V_{OUT}$	-0.5 ~ 450	V
OUT Pin Current	$I_{OUT}$	5 ~ 60	mA
Junction Temperature	$T_J$	-40 ~ +150	°C
Storage Temperature	$T_{STG}$	-50 ~ +150	°C

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.

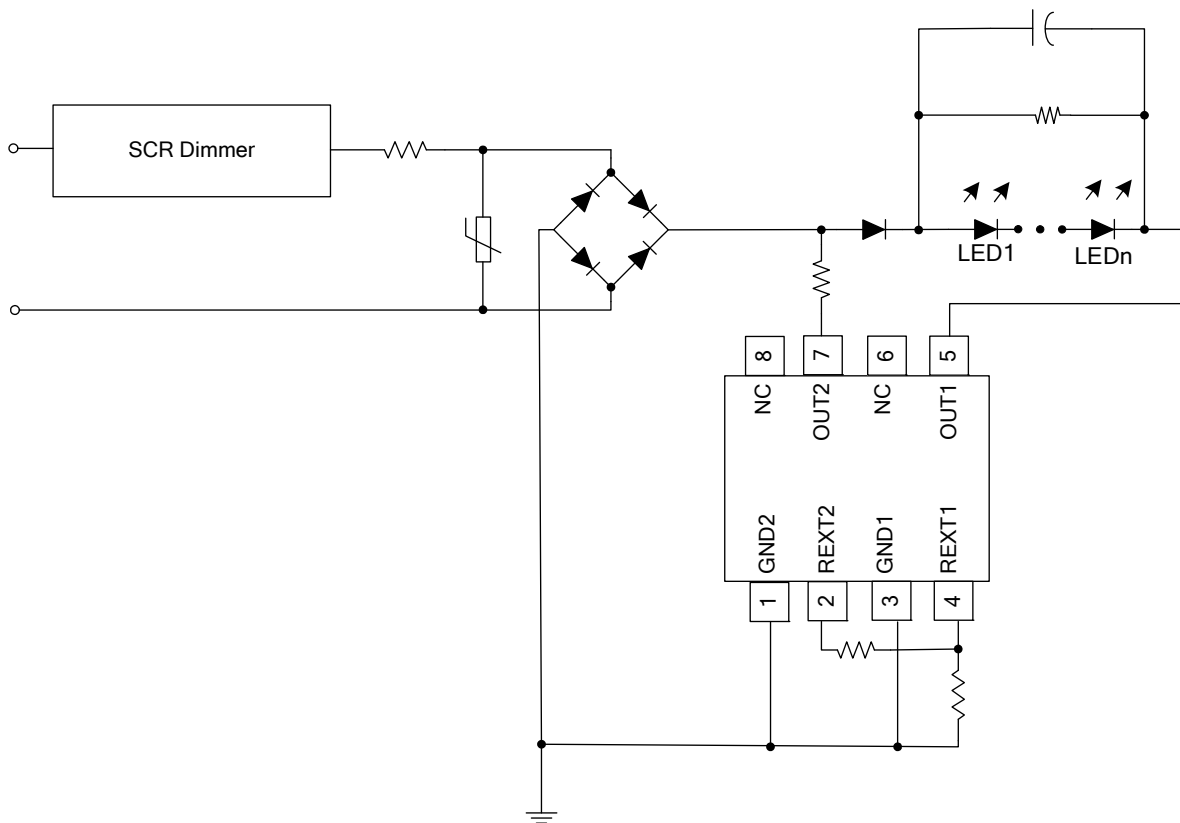
## ■ RECOMMENDED OPERATING CONDITIONS

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
Output Current	$I_{OUT}$		5		60	mA
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
Output Current Error		$I_{OUT}=5\sim 60mA$		$\pm 4$		%
Temperature Compensate Point	$T_{CP}$			140		°C

## ■ TYPICAL APPLICATION CIRCUIT



## ■ TRIC APPLICATION CIRCUIT



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