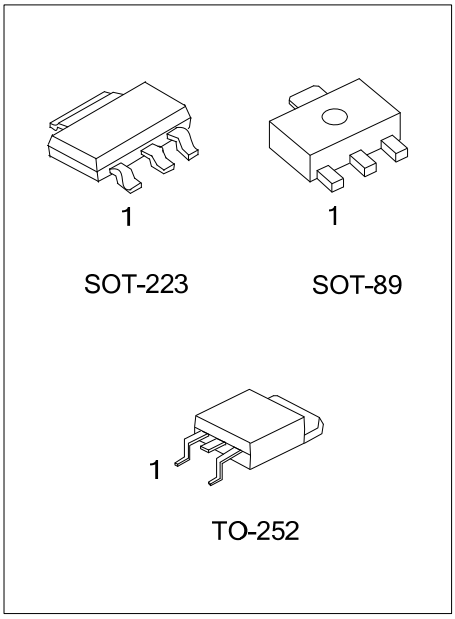
HIGH ACCURACY LINEAR CONSTANT CURRENT LED DRIVER



■ DESCRIPTION

The UTC **UL66A** is a linear constant current IC with a built-in power MOSFET. The output current can be adjusted from 5mA to 30mA, and constant current accuracy up to ± 4%. The application scheme is simple and the cost is low. This device also incorporates temperature compensation and thermal shutdown functions.

■ FEATURES

* 5mA ~ 30mA Output Current
* Up to ± 4% Constant Current Accuracy
* No EMC Problem
* Temperature Compensate
* Thermal Shutdown

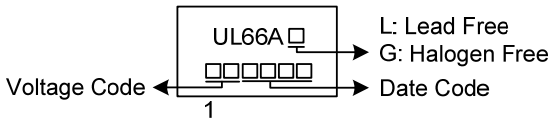
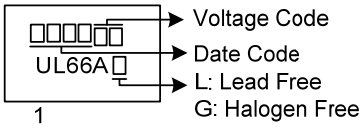
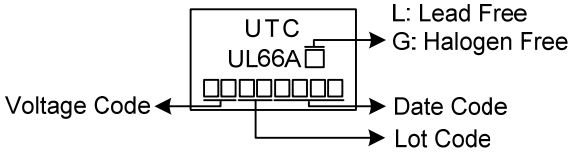
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
UL66AL-xx-AA3-R	UL66AG-xx-AA3-R	SOT-223	Tape Reel
UL66AL-xx-AB3-R	UL66AG-xx-AB3-R	SOT-89	Tape Reel
UL66AL-xx-TN3-R	UL66AG-xx-TN3-R	TO-252	Tape Reel

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

UL66AG-xx-AA3-R (1)Packing Type (2)Package Type (3)Output Voltage Code (4)Green Package	(1) R: Tape Reel (2) AA3: SOT-223, AB3: SOT-89, TN3: TO-252 (3) xx: Refer to Marking Information (4) G: Halogen Free and Lead Free, L: Lead Free

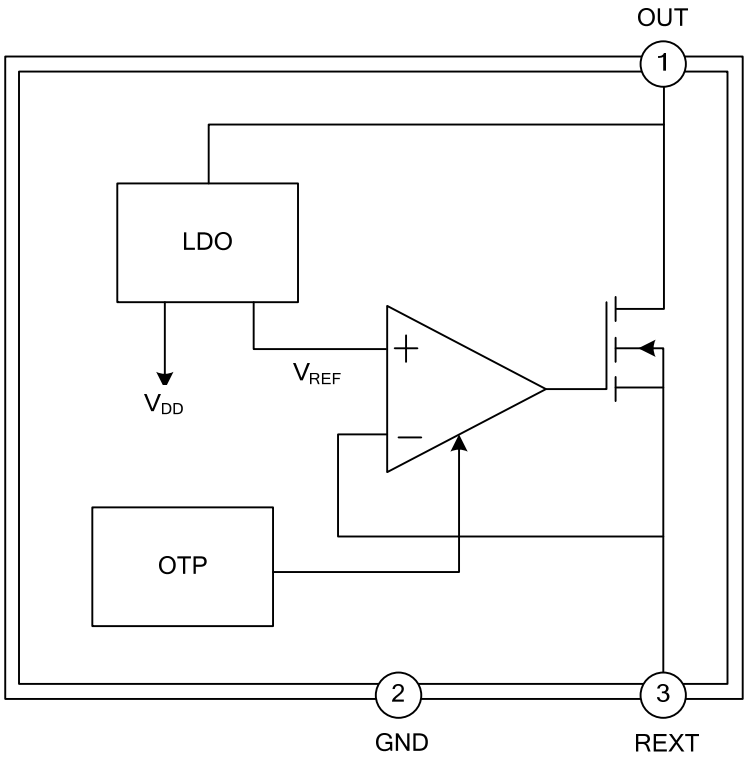
■ MARKING INFORMATION

PACKAGE	VOLTAGE CODE	MARKING
SOT-223	06: 0.6V 03: 0.3V	
SOT-89		
TO-252		

■ PIN DESCRIPTION

PIN NO.	PIN NAME	DESCRIPTION
1	OUT	Current Output Pin.
2	GND	Ground.
3	REXT	Output Current Setting Pin.

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
OUT Pin Voltage	V_{OUT}	-0.5 ~ 500	V
OUT Pin Current	I_{OUT}	5 ~ 30	mA
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	500			V
Output Current	I_{OUT}		5		30	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}=5~30mA		± 4		%
Temperature Compensate Point	T_{CP}			140		°C

■ TYPICAL APPLICATION CIRCUIT