



ZHEJIANG UNIÜ-NE Technology CO., LTD

浙江宇力微新能源科技有限公司



U4115 Data Sheet

V1.1

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30V 1.2A Step-Down Dimmable LED Driver

General Description

The U4115 is step-down regulator for dimmable LED driver, which is designed in continuous current mode for driving the high-brightness LEDs from a wide input voltage of 6V to 30V. The U4115 employs a hysteretic control scheme to regulate LED current. Moreover, the control scheme provides optimal loop stabilization and a very quick response time. The U4115 implements PWM and analog dimming together on the EN/DIM pin. The U4115 includes under-voltage lockout and thermal overload protection to prevent damage in the event of an output overload. The U4115 requires a minimal number of readily available, external components and is available in a space saving SOT89-5 package.

Key Features

- Wide 6V to 30V Operating Input Range
- 1.2A MAX Output Current
- Maximum 1MHz Switching Frequency
- Over Temperature Protection
- Inherent Open-Circuit LED Protection
- High-side Current Sense
- Hysteretic Control: No Compensation
- 400mΩ Low RDS(ON) Internal Power MOSFETs
- High efficiency (up to 97%)
- Adjustable Constant LED current
- PWM and Analog Dimming
- Typical 6% Output Current Accuracy
- Available in SOT89-5 Package
- -40°C to +85°C Temperature Range

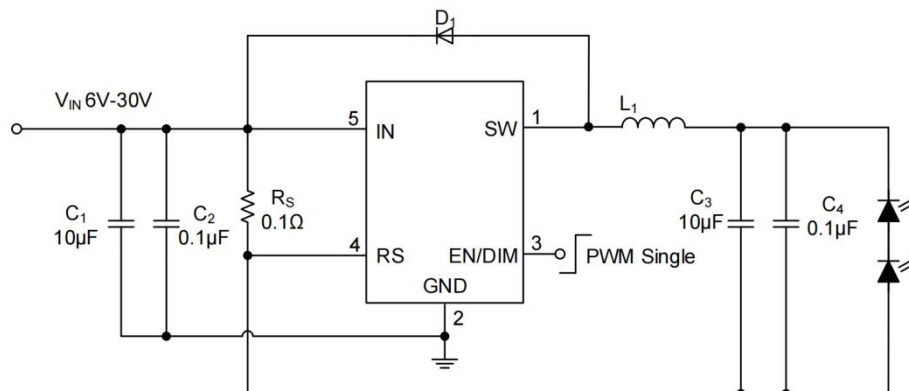
Packages



Applications

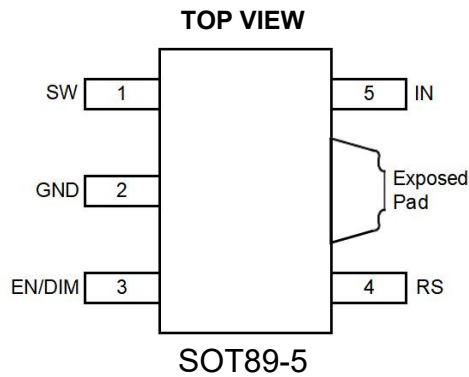
- Low voltage halogen replacement LEDs
- Automotive/Decorative LED Lighting
- Low-Voltage Halogen Replacement
- Signs/Emergency Lighting
- LED Backlighting
- SELV Lighting

Typical Application Circuit



Package and Pin Description

Pin Configuration



Top Marking: JBYLL (device code: JB, Y=year code, LL= lot number code)

Pin Description

Pin	Name	Function
1	SW	Drain of Internal MOSFET. Connect the inductor common terminal and Schottky anode to this pin.
2	GND	Ground.
3	EN/DIM	Enable/Dimming Command Input. For PWM dimming, apply a square wave signal to this pin. Apply a typical value of 5V to fully turn on the chip. Turn off the output current when pulling this pin below 0.3V.
4	RS	LED Current Sense Input. Connect a current-sense resistor to program the LED average current to IN pin.
5	IN	Input Supply Pin. Connect an appropriate decoupling capacitor from the IN pin to GND.

Order Information ⁽¹⁾

Marking	Part No.	Model	Description	Package	T/R Qty
<u>JBYLL</u>	70380010	U4115	U4115 dimmable LED driver IC, 30V, 1.2A, SOT89-5	SOT89-5	3000PCS

Note (1): All RYCHIP parts are Pb-Free and adhere to the RoHS directive.

1.版本记录

DATE	REV.	DESCRIPTION
2018/04/19	1.0	First Release
2021/11/10	1.1	Layout adjustment

2.免责声明

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3.联系我们

浙江宇力微新能源科技有限公司

总部地址：绍兴市越城区斗门街道袍渎路25号中节能科创园45幢4/5楼 电话：
0575-85087896（研发部）

传真：0575-88125157

E-mail: htw@uni-semic.com

无锡地址：无锡市锡山区先锋中路6号中国电子（无锡）数字芯城1#综合楼503室

电 话：0510-85297939

E-mail: zh@uni-semic.com

深圳地址：深圳市宝安区西乡街道南昌社区宝源路泳辉国际商务大厦410

电 话：0755-84510976

E-mail: htw@uni-semic.com