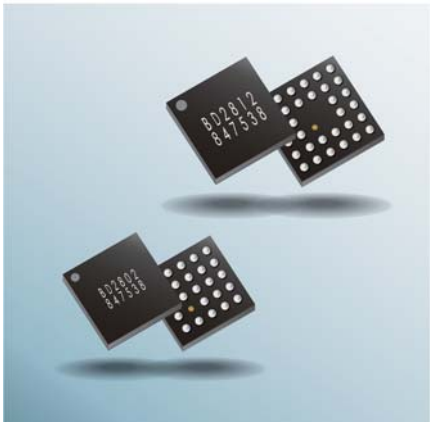
RGB LED Driver ICs for Illumination

BD2802GU/ BD2812GU (Built-in Step-up Voltage Type)



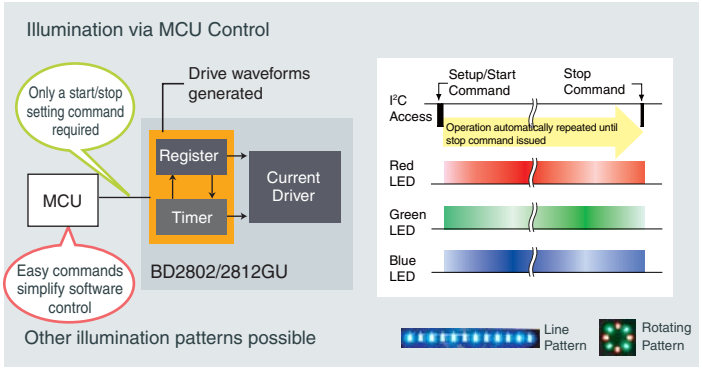
Integrated illumination pattern reduces MCU load

Product Outline

ROHM's new LED driver ICs developed for mobile phones, car audio, and other electronic devices integrate an automatic illumination function, making them ideal for auxiliary and cosmetic lighting applications. Both the BD2802GU, with no boost circuit, and the BD2812GU with boost circuit, are capable of driving up to 6 LEDs via a constant current circuit featuring 7bit dimming capability at each channel, eliminating fluctuations.

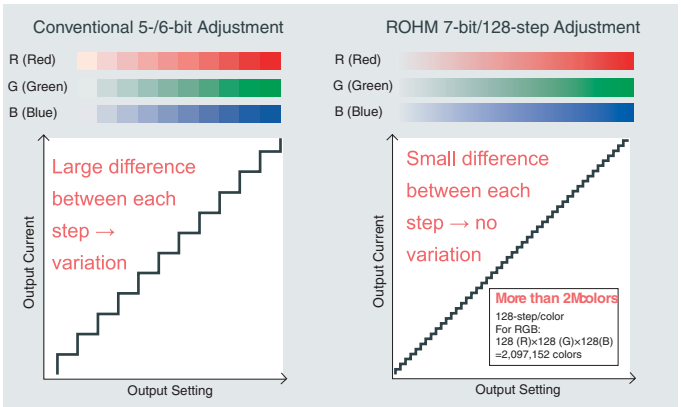
Reduced MCU load

A built-in timer enables various illumination control by simply inputting register settings, eliminating the need for processing via MCU.



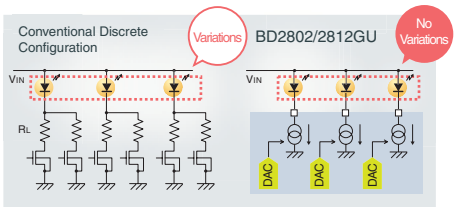
High definition lighting with more than 2 million colors

A high performance 7-bit DAC and constant current driver are built into each of the 6 channels, enabling 128-step brightness adjustment per RGB color, ensuring high resolution illumination of over 2 million colors (2,097,152) while eliminating fluctuations.

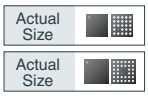


Constant current circuit eliminates fluctuations

The built-in constant current circuit ensures less V_F and limiting resistance variations than discrete configurations, resulting in more uniform brightness and fewer parts.



- Max 6-LED/30.48mA illumination function built in
- I²C address change/reference clock input/output functions enable multiple synchronous operation
- Master/Slave function
- Control interface: I²C Bus Fast Mode (400kHz Max.)
- Packages
  - **BD2802GU** : VCSP85H2 (2.8×2.8mm, t=1.0mm)
  - **BD2812GU** : VCSP85H3 (3.1x3.1mm, t=1.0mm)



Specifications

Part No.	Supply Voltage (V)	LED Connection	Boost Circuit	Auxiliary LED Driver	Other	Control I/F	Package (mm)
BD2802GU	2.7 to 5.5	Parallel	—	Max. 6 LEDs/30.48mA/128-step (for illumination)	Selectable Master/Slave function	I²C bus	VCSP85H2
BD2812GU			Charge Pump				VCSP85H3

The content specified in this document is correct as of 5th February, 2009.

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