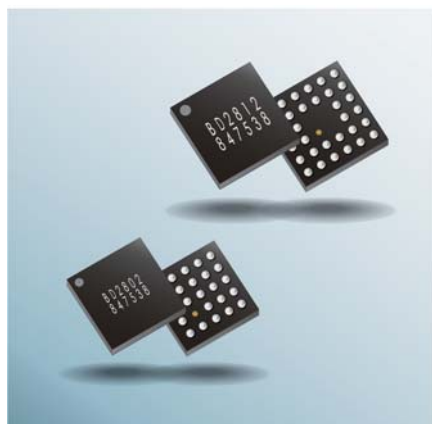


# RGB LED Driver ICs for Illumination

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



### Integrated illumination pattern reduces MCU load

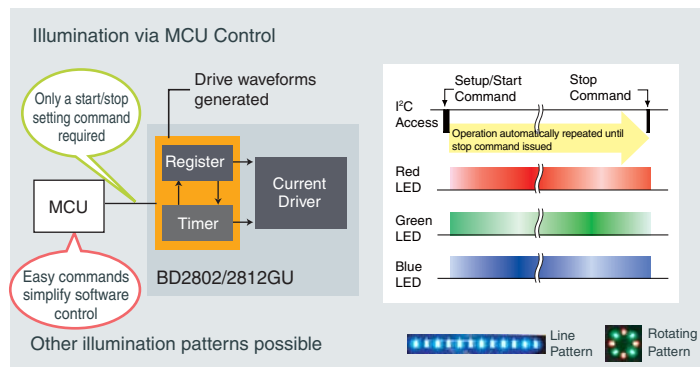


#### Product Outline

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.

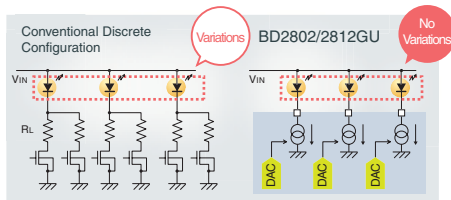
### ■ Reduced MCU load

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



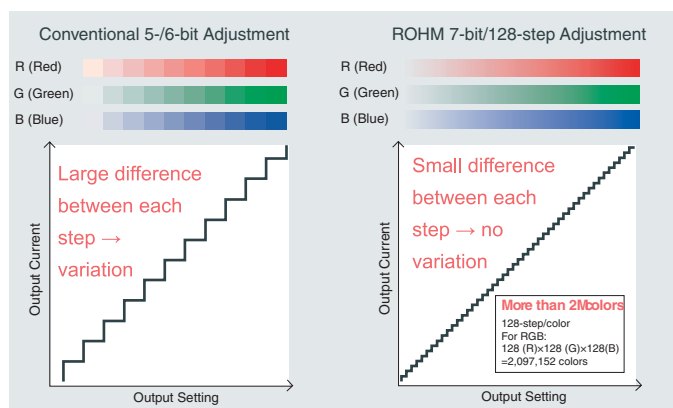
### ■ Constant current circuit eliminates fluctuations

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.

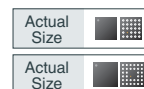


### ■ High definition lighting with more than 2 million colors

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.



- Max 6-LED/30.48mA illumination function built in
- I<sup>2</sup>C address change/reference clock input/output functions enable multiple synchronous operation
- Master/Slave function
- Control interface: I<sup>2</sup>C Bus Fast Mode (400kHz Max.)
- Packages
  - BD2802GU : VCSP85H2 (2.8x2.8mm, 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	I <sup>2</sup> C bus	VCSP85H2
BD2812GU			Charge Pump				VCSP85H3

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