



EZ-Color™ High-Brightness LED Control Solutions

Cypress' EZ-Color™ family of devices offers the ideal control solution for high-brightness LED applications requiring intelligent dimming control. EZ-Color devices combine the power and flexibility of Cypress' Programmable System-on-Chip™ (PSoC) with Cypress' precise illumination signal modulation™ (PrISM) technology providing lighting designers a fully-customizable and integrated-lighting solution platform.

EZ-Color devices support up to 16 independent LED channels with up to 32-bit resolution per channel, enabling lighting designers the flexibility to choose the LED array size and color quality. Cypress' PSoC Express™ software, with lighting specific drivers, can significantly cut development time and simplify implementation of fixed color points through temperature and LED binning compensation. EZ-Color products have virtually limitless analog and digital customization, allowing for simple integration of features in addition to intelligent lighting, such as battery charging, image stabilization, and motor control. These features, along with Cypress' quality and design support, make EZ-Color devices the ideal choice for intelligent HB-LED control applications.

Features ▶

- Up to 16 HW LED channels
- Programmable 8-bit to 32-bit dimmer resolution
- PrISM modulation technology (patent pending)
- Dynamic reconfiguration
- I²C, SPI, UART, DMX512, and DALI

Benefits ▶

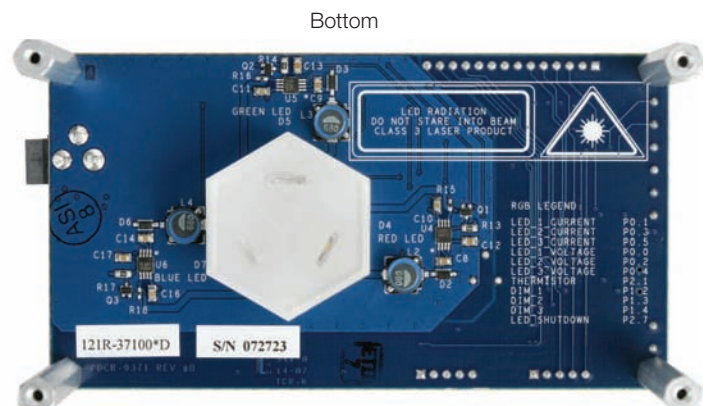
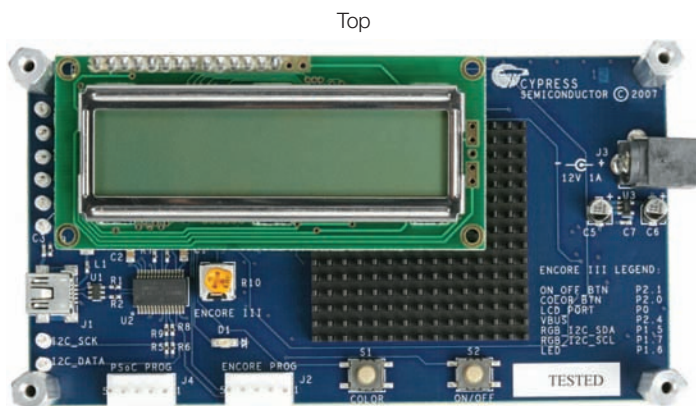
- Manufacturer binning and temperature compensation within embedded visual design tool
- High-resolution dimmers enable greater color precision
- PrISM modulation reduces radiated EMI and flickering at low frequencies compared to PWM
- Design with no C or assembly code using Cypress' PSoC Express design tool
- Can control HB-LEDs, battery charging, motor control, and more

Applications ▶

- White light
- Architectural lighting
- Entertainment lighting
- LCD backlight
- Portable lighting

Product Specifications ▶												
Part Number	Type	PWM Ch. (#)/ Res. (bits)	Flash (KB)	RAM (KB)	ZigBee® Enabled (Y/N)	Core Supply (V)	IO Supply (V)	I ² C/Ch. (#)	UART/Ch. (#)	SPI/Ch. (#)	Operating Temperature (°C)	Markets
CY8CLED02	QFN/SOIC	2*/16	4	0.256	N	3.0-5.25	NA	1	1	1	-40 to +85	CL FL BL SI
CY8CLED04	QFN	4*/32	16	1	N	3.0-5.25	NA	1	1	1	-40 to +85	CL FL BL SI
CY8CLED08	QFN/SSOP	8*/32	16	0.256	N	3.0-5.25	NA	1	Up to 2	Up to 2	-40 to +85	CL FL BL SI
CY8CLED16		16*/32	32	2	N	3.0-5.25	NA	1	Up to 4	Up to 4	-40 to +85	CL FL BL SI
MARKETS LEGEND							CL COMMERCIAL LIGHTING	FL FLASHLIGHTS	TR TRANSPORTATION	BL BACKLIGHTING	SI SIGNAGE	

Development software required
 *For 8-bit resolution



CY3261A-RGB EZ-Color Evaluation Kit