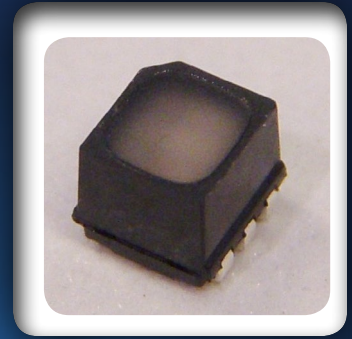


HIGH BRIGHTNESS LEDS FOR SIGNAGE

- Brightest Signage LEDs Available on the Market
- Industry-Leading Optimizations for Video Screen: IPX8 Waterproofing, Matte Surface for Contrast, Smaller Size
- Proven Delivery Track Record for Large & High-Profile Projects

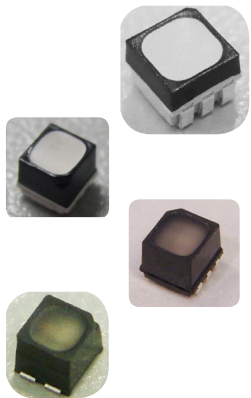


Outdoor Full-Color LED Signs



Optimized to increase intensity, improve contrast & reduce system cost

- Cree first to launch waterproof SMD LEDs in 2009
- IPX8 rated waterproof family
- Bright enough to replace thru-hole LEDs, enabling lighter designs and lower manufacturing costs
- Matte surface for best contrast
- Vertical chip alignment for best picture quality



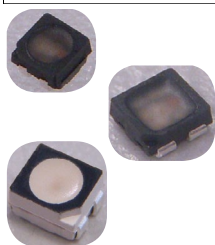
LED	Size	Value	Typ. Green Int.	
CLX6E	3.5 x 3.4 x 2.8 mm	Best price/performance	1,500 mcd @ 20 mA	
CLX6F	3.5 x 3.4 x 2.8 mm	High brightness	2,100 mcd @ 20 mA	
PLCC6 Full-Color	CLY6C	2.8 x 2.8 x 2.5 mm	Low profile/high contrast	1,500 mcd @ 20 mA
	CLY6D	2.8 x 2.8 x 2.5 mm	Low profile/high brightness	2,250 mcd @ 20 mA
	CLYBA	2.8 x 2.8 x 2.5 mm	Best contrast/black package	890 mcd @ 20 mA
	CLMXB	2.1 x 1.8 x 1.55 mm	Smallest outdoor black package	570 mcd @ 10 mA

Indoor Full-Color LED Signs



Optimized for high resolution and maximum contrast

- The proven choice for large indoor signage projects
- Enabling high definition sign resolutions
- Matte surface for best contrast
- Vertical chip alignment for best picture quality



LED	Size	Value	Typ. Green Int.	
PLCC4 Full-Color	CLMUC	1.5 x 1.5 x 1.0 mm	Smallest size, highest resolution	170 mcd @ 5 mA
	CLMVC	2.0 x 2.0 x 1.9 mm	Small size, good contrast	225 mcd @ 5 mA
	CLV1L	3.2 x 2.8 x 1.9 mm	Enables semi-outdoor w/ cover	1,400 mcd @ 20 mA



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Billboard and Event Display Signage



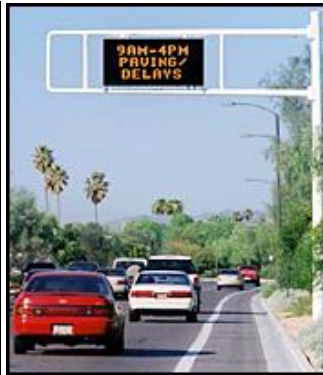
ScreenMaster: matched Red/Green/Blue radiation patterns

- World's brightest oval LEDs
- Application-specific oval LEDs for advertising, transportation and live events
- Advanced optical-grade epoxy offering superior high-temperature and high moisture-resistance performance in outdoor applications
- Encapsulation resin contains anti-UV material to reduce the effects of long-term exposure to direct sunlight



	LED	Angle	Value	Typ. Green Int.
P2 4 mm	S4SMS	105°/50° (-10° tilted)	Best price/performance	3,800 mcd @ 15 mA
	C4SMM	115°/65°	Wide viewing angle	1,800 mcd @ 10 mA
	C4SMB	90°/45°	Highest intensity	7,500 mcd @ 20 mA
	C4SMA	90°/45°	Best price/performance	2,500 mcd @ 10 mA
P2 5 mm	C5SMF	100°/40°	Large pitch displays	4,400 mcd @ 20 mA

LED Roadway Signage



The global choice for LED roadway signage

- Minimum beam angle P2 LEDs available to meet DOT specs
- High intensity and high-quality materials for long life and reduced long-term operating costs
- Advanced optical-grade epoxy offering superior high-temperature and high moisture-resistance performance in outdoor applications
- Encapsulation resin contains anti-UV material to reduce the effects of long-term exposure to direct sunlight



	LED	Angle	Colors Available				
P2 5 mm	C503B	15°	BLU	GRN	AMB	RED	
		23°			AMB	RED	
		30°	BLU	GRN	AMB	RED	
	C566C	70°/30°	BLU	GRN	AMB	RED	
P4	CP41A/ CP41B	40°			AMB	RED	
		70°	BLU	GRN	AMB	RED	
		100°			AMB	RED	
	CP42B	120°			AMB	RED	
	CP43B	90°/35°			AMB	RED	
Single color SMD with lens	CLM2C	30°	BLU 1600*	GRN 5500*	AMB 4000*	RED 3500*	
Single color SMD with lens (high intensity)	CLM2D	30°	BLU 2600*	GRN 15,000*	AMB 6000*	RED 6000*	CYAN 7600*

• Typical intensity (mcd) @ 20 mA