

LED Drivers—Lighting and Display Solutions

Allegro MicroSystems offers a broad portfolio of LED drivers for lighting and display applications.



Features ▶

- Small packages
- Excellent matching
- Low quiescent current
- Charge pump and boost designs
- Multiple control methods
- Output currents up to 350 mA per channel
- 10-bit PWM per channel
- 7-bit current-control DACs for color calibration (dot correction)
- Open and shorted LED detection
- Thermal shutdown and under voltage lockout

Benefits ▶

- Reduced solution size
- Uniform brightness
- Longer battery life
- More solution choices
- Flexible dimming control
- Drive high-brightness LEDs
- Precise brightness control
- Accurate color balance and white point
- Remote diagnostics
- Full protection of driver IC

Applications ▶

- Mobile phones
- Notebooks/desktop LCD panels
- Portable media players
- GPS/navigation systems
- Digital cameras
- Full-color LED video displays
- Monochrome to full-color message and graphic displays
- Channel letter signs
- Architectural/decorative lighting
- Stage/entertainment lighting
- Automotive interior lighting
- Automotive exterior signal lighting



Product Specifications ▶												
Part Number	Type	Dimming Type	Number of LEDs/String	Number of Strings	Configuration	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	Peak Efficiency (%)	Diagnostic Capabilities*	Interface	Markets
A8430	Boost	PWM/analog	2-6	1	Series	2.5-10	36	25	87	TSD	PWM/analog	BL
A8431		PWM/analog	2-6	1	Series	2.5-10	32	25	87	TSD/OVM	PWM/analog	BL
A8500		PWM/analog	8-12	8	Series	5-25/ 4.3-5.5	47	25 x 8	92	TSD/OVM/LOD	Serial/PWM/analog	BL
A8501		PWM	8-12	4	Series	8-21	38	100 x 4	92	TSD/OVM/LOD	Serial/PWM	BL
A8503		PWM/analog	8-11	6	Series	5-25/ 4.3-5.5	50	20 x 6	92	TSD/OVM/LOD	Serial	BL
A8504		PWM/analog	8-11	8	Series	5-25/ 4.3-5.5	47	40 x 8	92	TSD/OVM/LOD	Serial/PWM/analog	BL
A8435		Charge pump	PWM/analog	1	4	Parallel	2.7-5.5	6	30 x 4	92	TSD/OVM/LOD	Serial
A8434	PWM/analog		1	6	Parallel	2.7-5.5	6	30 x 6	92	TSD/OVM/LOD	Serial	BL
A8530	PWM/analog		1	6	Parallel	2.7-5.5	6	30 x 4 and 100 x 2	92	TSD/OVM/LOD	Serial	BL
A6285	Linear	Internal DAC/external PWM/ external resistor	3	16	Series/parallel	3-5	13	80	–	LOD/TSD/UVLO	Serial/PWM/analog	TR BL SI
A6279		External PWM/ external resistor	4	16	Series/parallel	3-5	17	90	–	LOD/TSD/UVLO	Serial/PWM/analog	TR BL SI
A6282		External PWM/ external resistor	3	16	Series/parallel	3-5	13	50	–	TSD/UVLO	Serial/PWM/analog	TR BL SI
A6278		External PWM/ external resistor	4	8	Series/parallel	3-5	17	90	–	LOD/TSD/UVLO	Serial/PWM/analog	TR BL SI
A6277		Logic input dims to 50%/ external PWM or resistor	6	8	Series/parallel	5	24	150	–	UVLO	Serial/PWM/analog	TR BL SI
A6280		Internal PWM/internal DAC/ external resistor	4	3	Series/parallel	5-17	17	150	–	TSD/UVLO	Serial/PWM/analog	CL TR BL SI
A6281		Internal PWM/internal DAC/ external resistor	4	3	Series/parallel	5-17	17	150	–	TSD/UVLO	Serial/PWM/analog	CL TR BL SI
A6260	Linear regulator	External PWM/analog	12	1	Series	6-40	Input=2.25V at 350 mA	350	–	TSD/OVM (current foldback)	PWM or analog	CL TR
A6210	Constant-current buck switching regulator	PWM	–	–	QFN	9-46	3.5-31	3A	–	–	–	CL FL TR BL SI

MARKETS LEGEND

CL COMMERCIAL LIGHTING FL FLASHLIGHTS TR TRANSPORTATION BL BACKLIGHTING SI SIGNAGE

*Diagnostic capabilities: TSD: Thermal shutdown, UVLO: Under voltage lock out, OVM: Output voltage monitoring, LOD: LED open detection