Spectrum 5 Controller

5-Channel Tunable RGBW-WW LED Controller • Lighting Control Drivers

The Spectrum 5 is a flagship 5-channel constant-voltage PWM driver engineered for Human Centric Lighting (HCL), dynamic tunable white, and multichannel RGBW architectural lighting. Utilising 16-bit dimming resolution with logarithmic curve mapping down to 0.1%, it guarantees zero visible camera flicker or colour shift.

KEY ARCHITECTURAL FEATURES

- **5 independent** 5A output channels for RGBW+WW or 5x Tunable White luminaire control
- **Dual native** protocol stack: DALI-2 Device Type 8 (colour control) and high-speed DMX-512 / RDM
- **Selectable PWM** carrier frequency (1 kHz to 16 kHz) eliminating audible coil whine and high-speed camera banding
- **Integrated active** thermal foldback and short-circuit recovery protection

VERIFIED TECHNICAL SPECIFICATIONS

Part Number / Order Code	Spectrum 5 Controller
Input Electrical Ratings	12V — 48V DC Input, 5 x 5A (25A Max Load)
Supported Field Protocols	DALI-2 DT8 (IEC 62386-209), DMX-512 / RDM
Mounting & Dimensions	Surface / Chassis Mount (140 x 50 x 28 mm)
Enclosure Rating & Material	Anodized Aluminum Chassis (IP20)
Ambient Operating Range	-20°C to +50°C Ambient Operating Range
Certification Standards	IEC 62386-209 (DALI DT8), CISPR 15:2018, CE, BIS R-8400291

TERMINAL BLOCK PINOUT & WIRING ASSIGNMENTS

Terminal / Pin	Designation & Electrical Function
DC+	DC Supply Input Positive (+12V to +48V DC)
DC-	DC Supply Common Negative
DA1 / DA2	DALI-2 Isolated Bus Interface (Polarity Insensitive)
DMX D+ / D-	DMX-512 Differential Data Pairs (with 120Ω termination jumper)
V+ (Common)	Common Anode Output (+)
CH1 - CH5	Switched Low-Side PWM Channels (Red, Green, Blue, Warm White, Cool White)

Regulatory Compliance Notice: Manufactured and tested strictly in accordance with ISO 9001:2015 quality standards at AISPL Engineering Facility, Mumbai, India. All technical specifications are subject to verification against local BIS / IEC installation guidelines.

✓ VERIFIED BY AISPL MUMBAI LAB
TEST REPORT CERT: AISPL-DS-SPEC5-2026-REV2-OK

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