PL-PDT-24QN

Overview

The PL-PDT-24QN is a professional-grade LED PAR fixture designed for live entertainment, theaters, television studios, houses of worship, conference venues, exhibitions, rental companies, and architectural lighting applications. Featuring 24 × 12W high-output RGBW 4-in-1 LEDs, it delivers powerful illumination, vibrant color mixing, and outstanding color accuracy, making it ideal for both stage lighting and architectural wash effects.

Equipped with a constant current LED driver, 16-bit linear dimming, and adjustable flicker-free PWM (2kHz–40kHz), the fixture provides smooth dimming performance, stable light output, and flicker-free operation for professional broadcasting, film production, and high-speed camera applications. With CRI ≥98, ±50K CCT consistency, and excellent color uniformity, it ensures natural color reproduction and consistent lighting quality across multiple fixtures.

Designed for long-term professional use, the PL-PDT-24QN incorporates an intelligent temperature-controlled cooling system, automatic over-temperature protection, and a high power factor (≥0.95) to maximize efficiency, reliability, and operational stability. Multiple DMX channel modes, PowerCon IN/OUT, 3-pin XLR DMX connectivity, and end-to-end fixture linking enable seamless integration into modern lighting control systems for both fixed installations and touring productions.

Built with durability and performance in mind, the fixture offers an LED lifetime of up to 100,000 hours and MTBF exceeding 50,000 hours, reducing maintenance while ensuring dependable operation. Combinin advanced optical performance, intelligent thermal management, and flexible control capabilities, the PL-PDT-24QN is an ideal lighting solution for demanding professional stage and architectural applications.

Key Feature

- 24 × 12W High-Power RGBW 4-in-1 LEDs
- High Output with Smooth RGBW Color Mixing
- CRI ≥98 for Exceptional Color Accuracy
- ±50K CCT Consistency
- 16-bit Linear Dimming (0–100%)
- Flicker-Free PWM (2kHz–40kHz Adjustable)
- Refresh Rate ≥6000Hz for Broadcast Applications
- Constant Current LED Driver
- Intelligent Temperature-Controlled Cooling
- Automatic Over-Temperature Protection
- Excellent Color Uniformity
- Power Factor ≥0.95
- Multiple DMX Channel Modes (3 / 4 / 6 / 7 / 8 CH)
- DMX512 Control Protocol
- PowerCon IN/OUT & 3-pin XLR DMX IN/OUT
- End-to-End Fixture Linking Supported
- Instant On, No Warm-Up Required
- LED Lifetime ≥100,000 Hours
- MTBF ≥50,000 Hours
- Compact, Lightweight and Professional-Grade Design



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PL-PDT-24QN

Specification

Specification	Details
Model	PL-PDT-24QN
Product Type	Professional RGBW LED PAR Light
Light Source	24 × 12W High-Power RGBW 4-in-1 LEDs
LED Driver	Constant Current LED Driver
Color Mixing	RGBW 4-in-1
CRI (Color Rendering Index)	≥98
CCT Consistency	±50K
Color Uniformity	Excellent Color Uniformity
Beam Angle	25° (Optional 30° / 45°)
Dimming Resolution	16-bit Linear Dimming
Dimming Range	0–100% Linear Adjustable
Strobe	0–20 F.P.S
Refresh Rate	≥6000Hz
Flicker-Free PWM	Adjustable 2kHz–40kHz
Display	Digital Display

Specification	Details
Control Protocol	DMX512
DMX Channels	3 / 4 / 6 / 7 / 8 CH
End-to-End Capability	Supported
Power Connection	PowerCon IN / OUT
DMX Connection	3-pin XLR IN / OUT
Input Voltage	AC 90–260V, 50/60Hz Auto Sensing
Power Consumption	280W
Power Factor	≥0.95
Cooling System	Intelligent Temperature-Controlled Cooling
Thermal Protection	Automatic Over-Temperature Protection
Startup Time	Instant On
Warm-Up Time	No Warm-Up Required
IP Rating	IP20
LED Lifetime	≥100,000 Hours
MTBF	≥50,000 Hours
Dimensions (L × W × H)	300 × 220 × 320 mm
Weight	2.8 kg

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