

Datasheet

LuxaLight Pixel LED-strip TM1814 Amber + White Protected (24 Volt, 96 LEDs, 2835, IP64)

LS24AMW96TM1814PLX

Version: 2025-02-28.2

Product description

This professional **LuxaLight** 24V digital amber-white LED strip is designed for applications where flexible, customized lighting is required, offering high control over each individual LED pixel. The strip consists of **125 mm segments**, with each segment containing **12 LEDs (6 amber LEDs of 1600K and 6 white LEDs of 5100K)**. The strip uses the **TM1814 IC** for advanced control and color management, enabling smooth and precise adjustments of the amber and white LEDs' brightness and color temperature. The LED strip is equipped with an **IP64-rated Silicon Layer**, providing dust protection and additional protection against moisture ingress, making it suitable for both indoor and outdoor environments.

LED Strip Configuration

- **Voltage:** 24V
- **PCB Color:** White
- **Number of Segments:** 125 mm each segment with 12 LEDs (6 amber LEDs of 1600K and 6 white LEDs of 5100K)
- **Total LEDs on the Strip:** 96 LEDs per meter
- **IP Rating: IP64 Silicon Layer:** The strip is covered with a protective **IP64-rated silicon layer**, which enhances its durability and provides additional protection against dust and humid environments.
- **PCB Thickness:** The PCB has a thickness of **3 oz/ft²**, providing robust support and efficient heat dissipation.
- **Mounting Tape:** 4905 VHB adhesive for secure attachment.

Key Features of the TM1814 IC:

- **Individual Addressing:** Each segment can be controlled independently for precise color and brightness settings.
- **Color Management:** Supports both **amber** and **white LEDs**, ensuring optimized color rendering and the ability to create specific light temperatures (1600K amber and 5100K white).
- **Smooth Pixel Filming:** The **PWM rate of 1000Hz** allows smooth filming with cameras up to **34fps**, providing clear video recording of the LED strip.
- **Communication:** The **TM1814 IC** uses a serial data interface with a **data rate of 800Kbps**, enabling easy integration of long chains of LED strips.
- **Stability and Performance:** Designed to operate with a wide voltage range, the **TM1814 IC** ensures stability in various environmental conditions.

Technical specifications

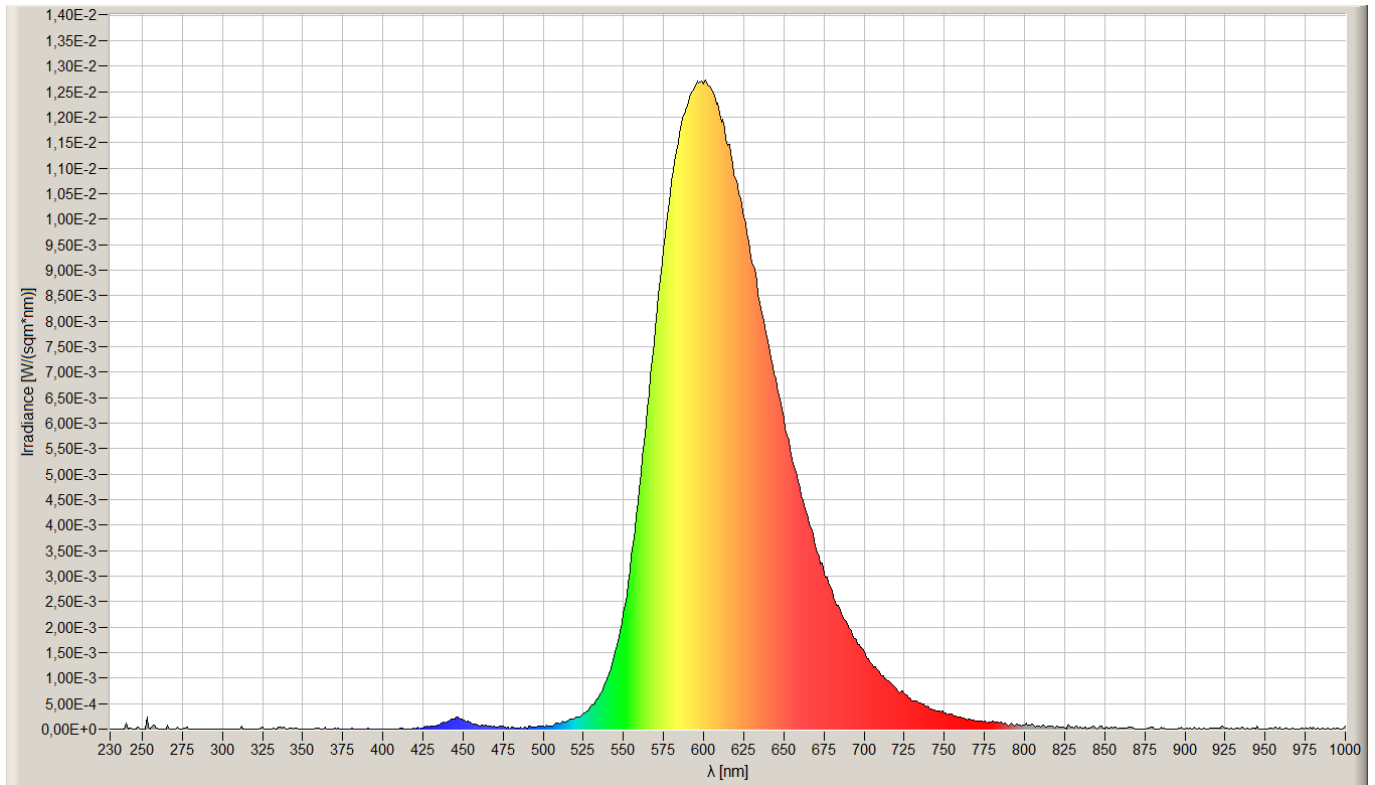
General									
Brand	LuxaLight								
LEDs / meter	96								
LEDs per pixel	12								
LED type	2835								
Length per reel	10 m								
Length per segment	125 mm								
LED strip width	12.00 mm								
LED strip thickness	2.50 mm								
PCB color	White								
Mantle material	Silicon								
Dimensions	10.000 × 12 × 2,5 mm								
Mounting	3M tape VHB4905								
Lifetime	50000 hours								
Lighting									
Color temperature white	5000 ~ 5200 K								
Color temperature amber	1600 ~ 1700 K								
CRI	≥ 80								
Luminous flux white	1239 lm								
Luminous flux amber	552 lm								
BIN	3 SDCM								
Beam angle	120 °								
LB waarde	L90B50								
Electronics									
Working voltage	24V								
Current / meter	0.80 A / meter								
Power consumption per meter	19.20 W / meter								
PCB material	Copper								
Driving method	Constant voltage								
Pinout	<table border="1"> <thead> <tr> <th>Symbol</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>V+</td> <td>V+</td> </tr> <tr> <td>GND</td> <td>Ground</td> </tr> <tr> <td>D1</td> <td>Data in</td> </tr> </tbody> </table>	Symbol	Function	V+	V+	GND	Ground	D1	Data in
Symbol	Function								
V+	V+								
GND	Ground								
D1	Data in								
Control									
Number of channels	2								
IC type	TM1814								

Environmental

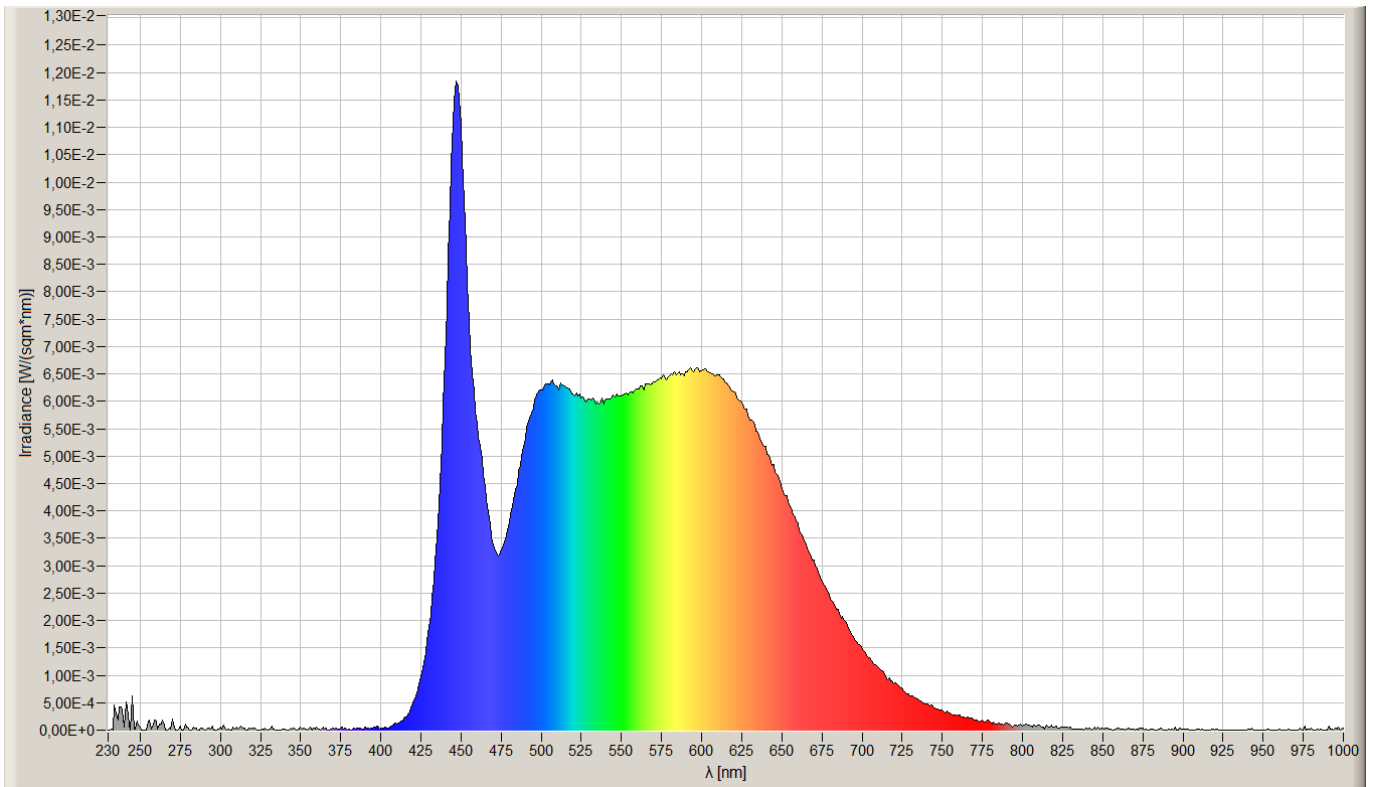
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Measurement results

Amber 1659K



White 5140K



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