

Datasheet

LuxaLight Pixel LED-strip SK6812 Digital RGB+WW High Power Protected (6 - 36 Volt, 60 LEDs, 5050, IP64)

LS36RGBWW60SK6812PLX

Version: 2025-02-28.2

Product description

This **LuxaLight** professional digital RGBW LED strip is designed for applications where flexible, customized lighting is required, offering a high level of control over each individual LED pixel. The strip consists of **10 segments**, each **10 cm long**, with **6 RGBW LEDs per segment**. Each segment is equipped with a voltage regulator, allowing for a wide voltage range of **6 to 36 volts**, making it ideal for large-scale projects. The **SK6812 IC** is **embedded in the 5050 LED housing**, enabling each LED to be individually controlled. This allows for detailed light effects and precise color and brightness settings. The strip has an **IP64 rating**, meaning it is dust-tight and protected against **humid environments**, making it suitable for both indoor and outdoor applications. The **high PWM rate of the IC** enables smooth filming of these pixels with cameras up to **40fps**, ensuring clear and accurate visual performance.

LED Strip Configuration:

- **Voltage:** 24V
- **Number of segments:** 10
- **Length per segment:** 10 cm
- **Number of LEDs per segment:** 6 RGBW LEDs
- **Total LEDs on the strip:** 60 RGBW LEDs per meter
- **Adhesive:** The strip is equipped with **4905 VHB (Very High Bond)** tape, ensuring strong and durable adhesion to various surfaces.
- **PCB thickness:** The PCB has a thickness of **3 oz/ft²**, providing robust support and efficient heat dissipation.
- **IP rating:** **IP64**, suitable for **indoor and outdoor applications**, with protection against dust and humid environments.
- **Voltage regulator per segment:** Each segment is equipped with a voltage regulator, allowing a wide voltage range of **6 to 36 volts**, making the strip ideal for large projects.

SK6812 IC

The LED strip uses the **SK6812 IC**, which is **embedded in the 5050 LED housing**. The **SK6812** is an advanced controller that provides PWM dimming (pulse width modulation) for the RGBW LEDs, allowing for very smooth and precise control over the color range and brightness. Additionally, the LEDs can be **individually controlled**, enabling detailed light effects and color settings.

Key Features of the SK6812 IC:

- **Pixel Addressing:** Each LED can be controlled separately for precise color and brightness settings.
- **Color Management:** Supports **RGBW LEDs**, ensuring optimized color rendering and additional flexibility for adjusting color temperatures.
- **Communication:** The IC uses a serial data interface, where data is passed from the first to the last IC, enabling the integration of long chains of LED strips.
- **Stability and Performance:** Designed to operate with a wide voltage range, ensuring stability under varying environmental conditions.
- **High PWM Rate (1200Hz):** The IC's high PWM rate allows for smooth pixel filming with cameras up to **40fps**, providing clear and precise video recording of the LED strip.
- **Data Transfer Rate (800kbps):** Supports a data transfer rate of **800kbps**, ensuring fast and efficient communication between the ICs on the strip.

Technical specifications

General									
Brand	LuxaLight								
LEDs / meter	60								
LEDs per pixel	1								
LED type	5050								
Length per reel	10 m								
Length per segment	100 mm								
LED strip width	10.00 mm								
LED strip thickness	4.00 mm								
PCB color	White								
Mantle material	Silicon								
Warranty	5 years								
Lifetime	50000 hours								
Lighting									
Color temperature warm white	2650 - 2950 K								
CRI	≥ 80								
Luminous Flux	1163 lm								
Luminous flux red	200 lm								
Luminous flux green	290 lm								
Luminous flux blue	185 lm								
Luminous flux warm white	488 lm								
Wave length Red	620~630 nm								
Wave length Green	510~525 nm								
Wave length Blue	455~470 nm								
BIN	3 SDCM								
Beam angle	120 °								
Electronics									
Working voltage	6-36V								
Power consumption per meter	19.20 W / meter								
PCB material	Copper								
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	4								
IC type	SK6812								

Environmental

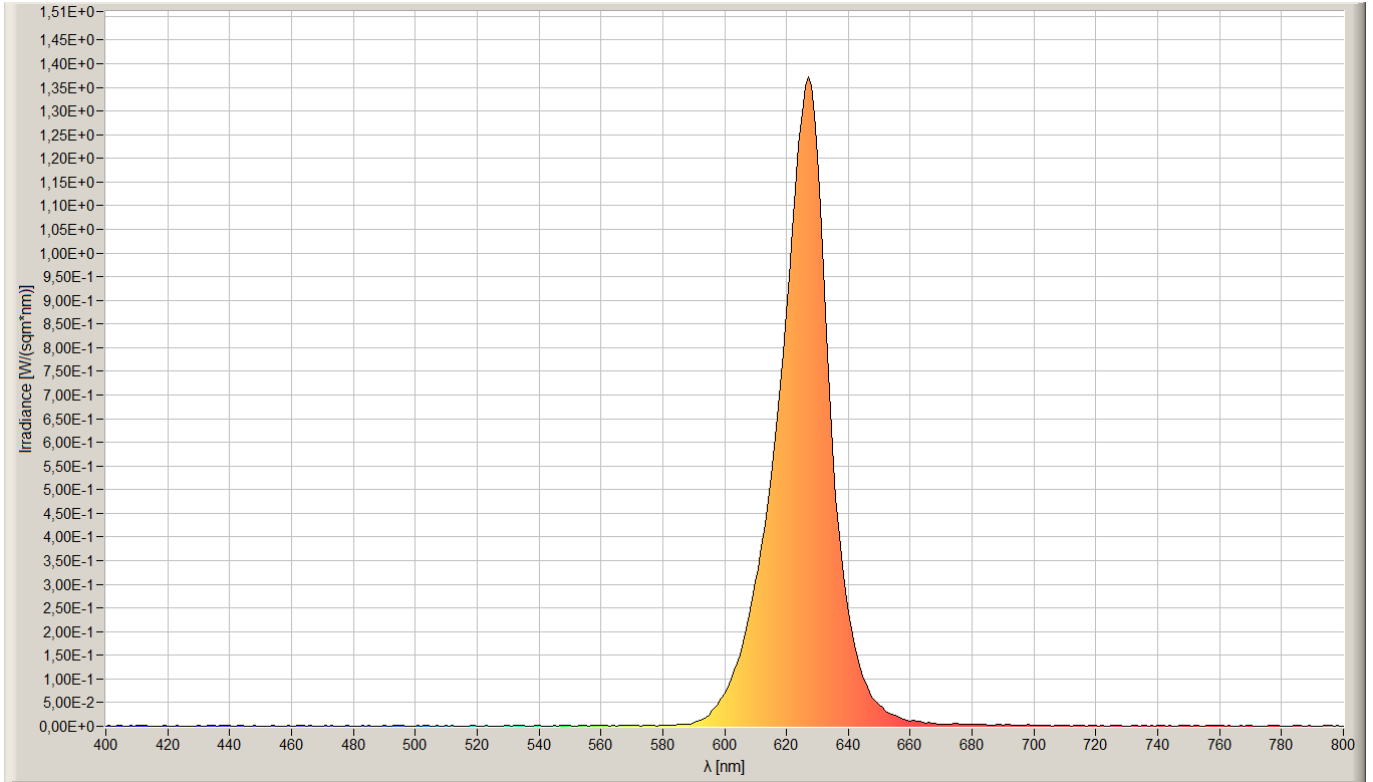
Operating temperature	-20 ~ +60 °C
Storage temperature	-40 ~ +80 °C
IP class	IP 64

Directives - standards - certificates

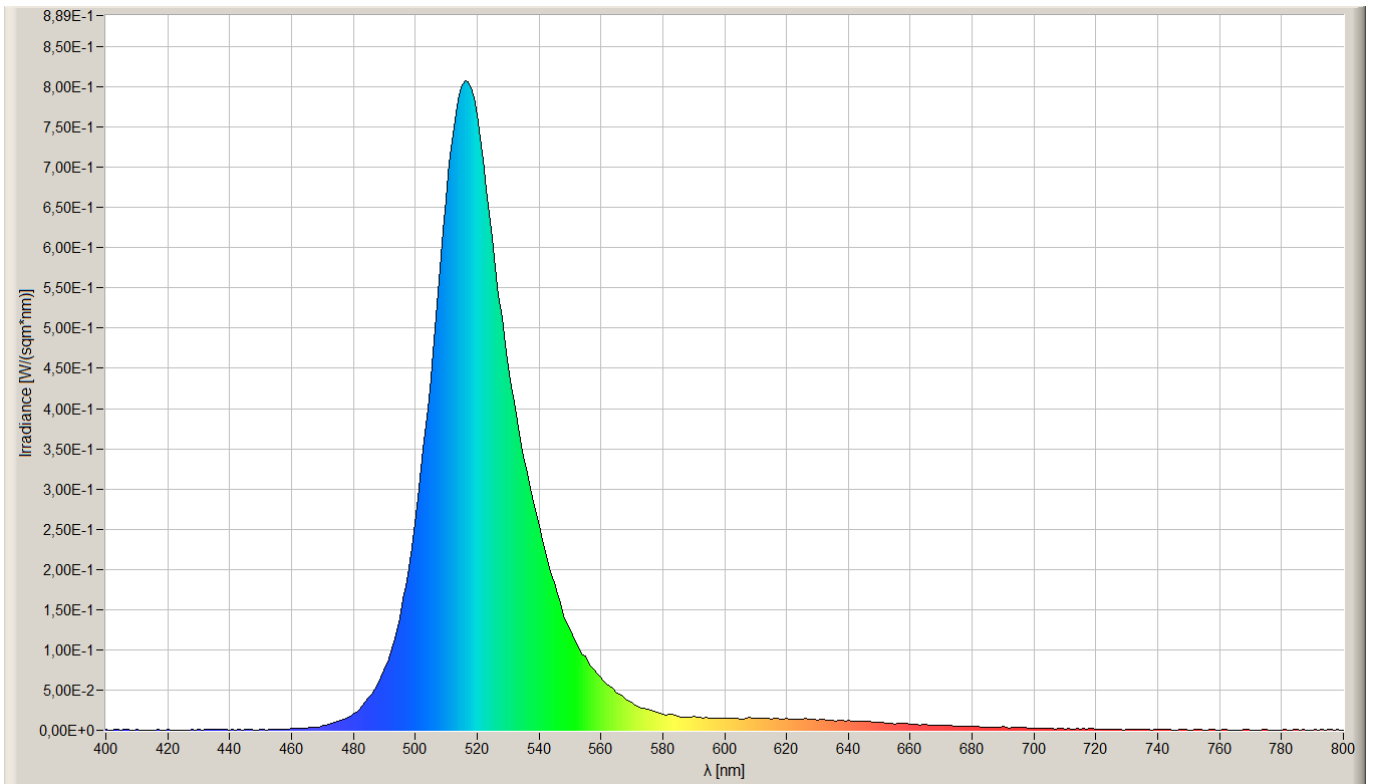
Directives	RoHS CE
Safety standards	EN60598-1 EN62031 IEC62471

Measurement results

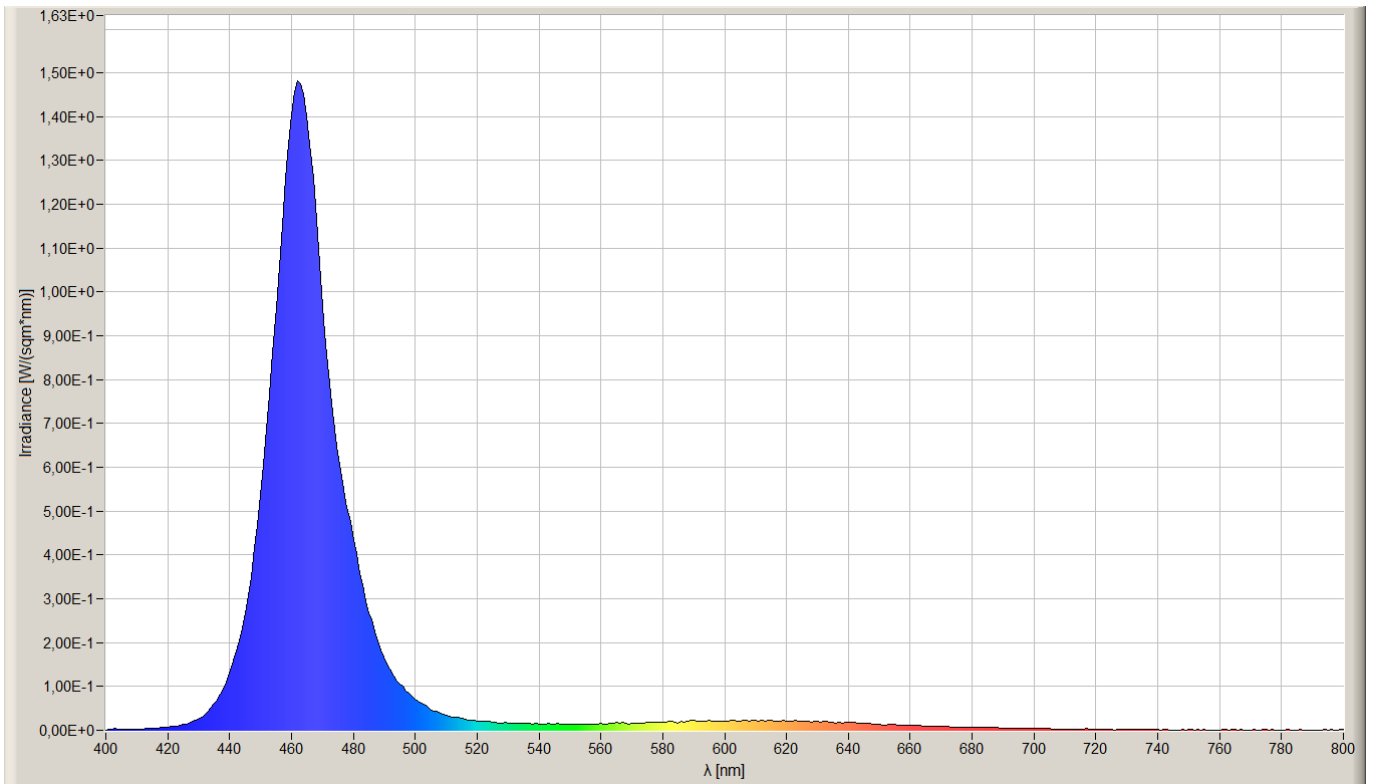
RED



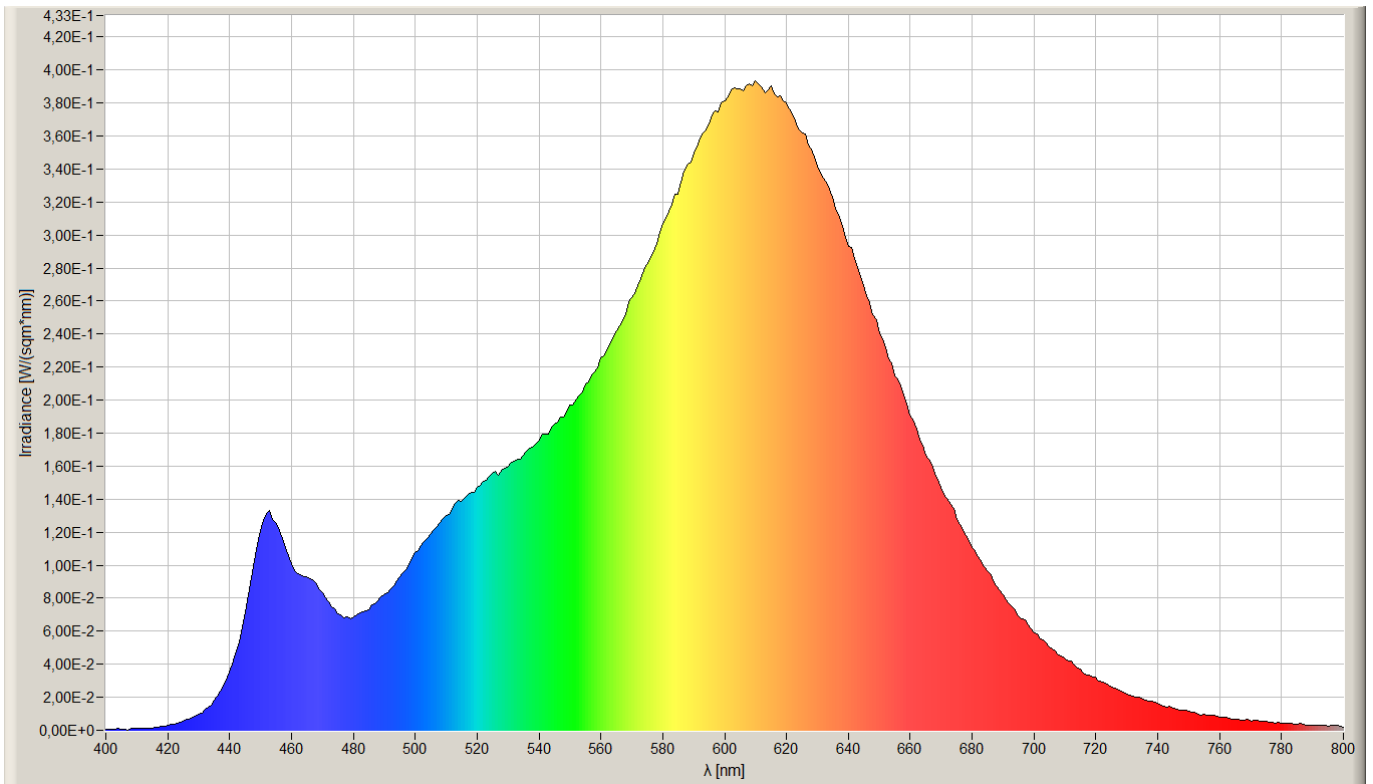
GREEN



BLUE



WARM WHITE



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