



Wireless Power Technical Specifications

Imagine a power consuming device that doesn't require a cable for power.

LUXX Light Technology



Solution Components

The solution consists of two simple components:

1. Sending Antenna

A dipole antenna that transmits the power in a 10 ft radius in all directions. Max. 50W per sender, cascable (daisy-chainable). The size of the antenna + electronics + housing is about a picture postcard footprint, 2" high. The sender will need a 50W power supply with an output voltage of 48V DC.

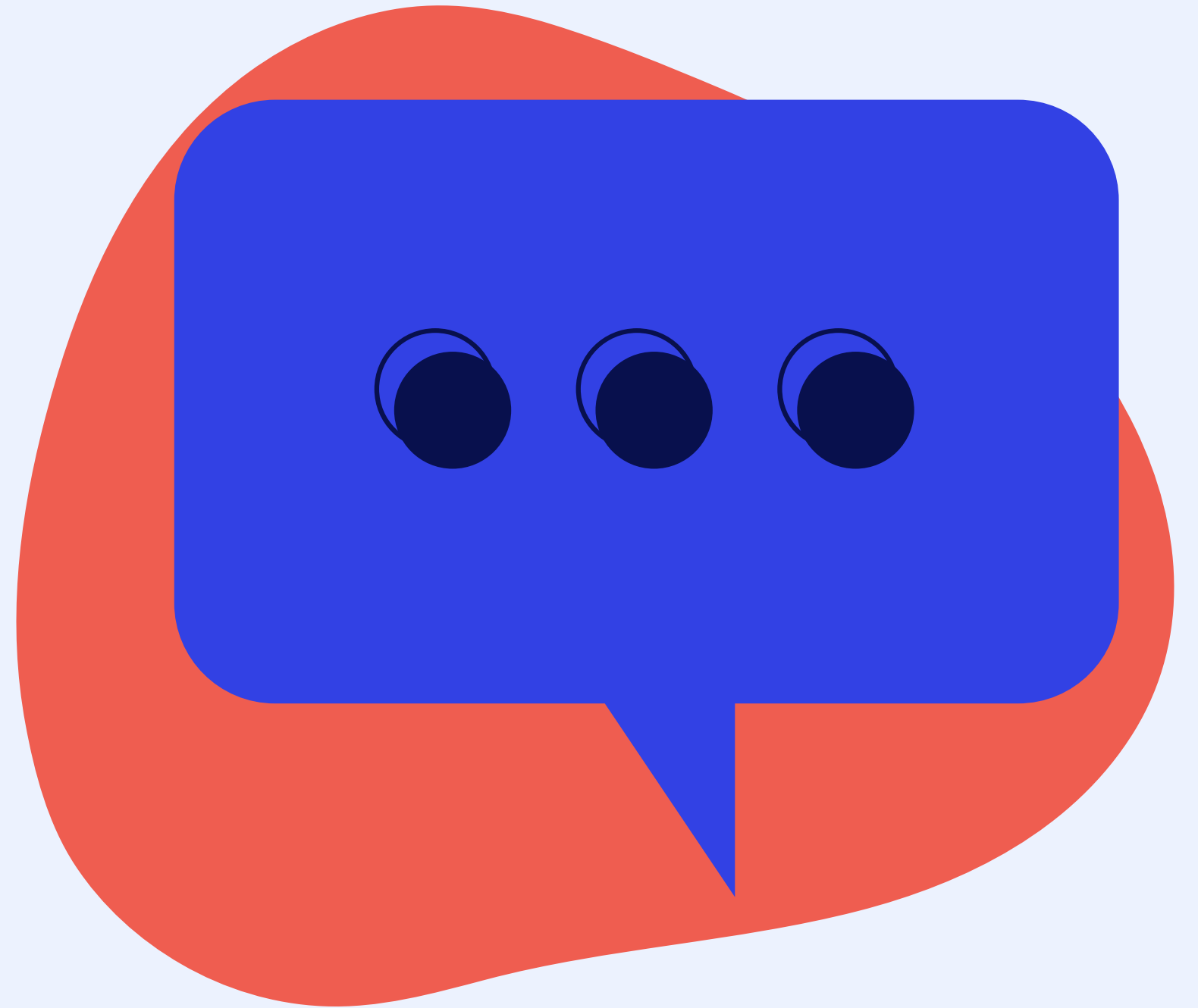
2. Receiving Antenna

A linear antenna with max 50W power consumption per receiver, not cascable (daisy-chainable). The size of the antenna + electronics is about a pencil. The receiving electronics can provide up to 50W in 5V DC or 12V DC or 24V DC (or any other DC voltage, but one voltage per electronic, not combinable, or universal type).



Performance Parameters

1. High wireless powering efficiency up to 80%
2. 50W wireless power transmission up to 3 meters/ 10 feet
3. Resonant Coupling Power Amplifier
4. 48V DC SELV (Safety Extra Low Voltage) input
5. Wide range programmable output voltage
6. Multiple output voltage options



Long Range Scalability

The wireless powering technology is easily scalable. With only one transmitter you can power:

- 1 electronic device of 70 watts at the distance of 25 centimeters. Up to 4 electronic devices of 17,6 watts at the distance of 50 centimeters
- Up to 16 electronic devices of 4,4 watts at the distance of 1 meters
- Up to 64 electronic devices of 1,1 watts at the distance of 2 meters
- Up to 256 electronic devices of 0,275 watts at the distance of 4 meters



Power Transmitting Unit Technical Specifications

Parameter	Condition	Min	Typ	Max	Unit
Input Voltage Rating		48		200	V _{DC}
Input Standby Current		50			mA
Output Current		0		2	A
Auto-Restart Period From Failure			200		ms
Activate Period			600		ms
Switching Frequency		80		900	KHz

TA = 25°C, input voltage 48VDC unless otherwise noted.



Power Receiving Unit

Technical Specifications

Parameter	Condition	Min	Typ	Max	Unit
Output Voltage Rating		5		24	V
Output Current	Output voltage 12V	0		4.2	A
Efficient Distance		1		5	cm
Efficient Area			314		cm ²
Switching Frequency		80		900	KHz

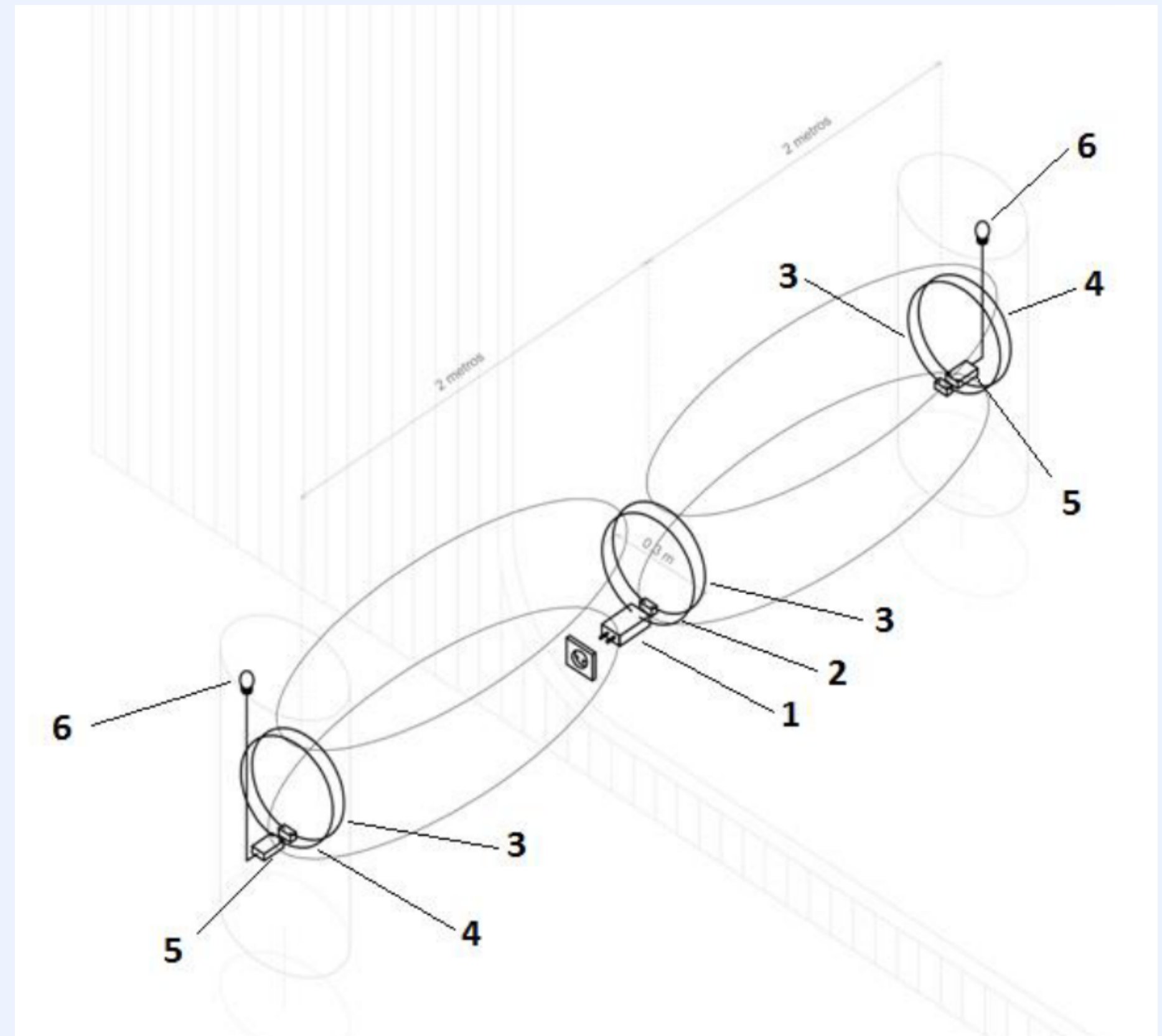
TA = 25°C, output voltage 12VDC unless otherwise noted.



Mechanical Outline

Power Transmitting Unit: 80 x 80 x 30mm, Diameter of the coil: 360mm
Power Receiving Unit: 40 x 40 x 20mm, Diameter of the coil: 360mm

1. PTU
2. Transmitting coil
3. Resonator coil
4. Receiving coil
5. PRU
6. LED



About LUXX Light Technology

Since 1996, LUXX Light Technology has been a global leader in the custom engineering and manufacturing of LED lighting solutions for the Retail Display market, Commercial Refrigeration, Shelf Lighting, and unique Profile extrusions.

In 2019 LUXX introduced the worlds thinnest LED neon rope series, the worlds first IP54 power track, and most recently released a new eShelf video display.



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Let's talk more!



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