UC2 Series
Installation Guide

Surface mount

Under Cabinet Lighting

iLuxx
LED Lighting

Série UC2

In this project, we'll use the UC2 Series from iLuXx Lighting. This low profile luminaire is surface mount on the bottom panel of the cabinets. Ideal for manufacturers using a dual bottom panel to conceal the wiring.

UC2 Series

Surface mount installation
The UC2 Series provides a flawless finish and a very discrete light source because of its low profile. The choice of designers.
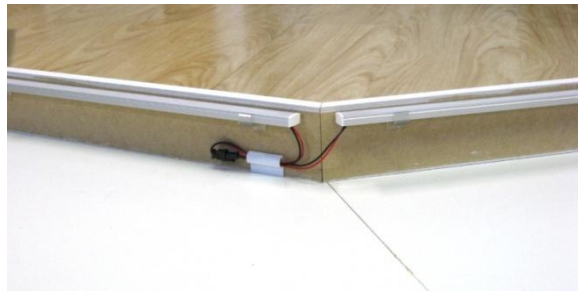
30

8

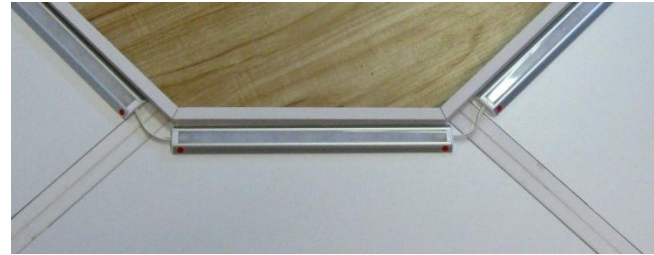Dim: mm

Other mounting options

UC1 Series

Installation on the bottom trim – Trim width ≥ 1''
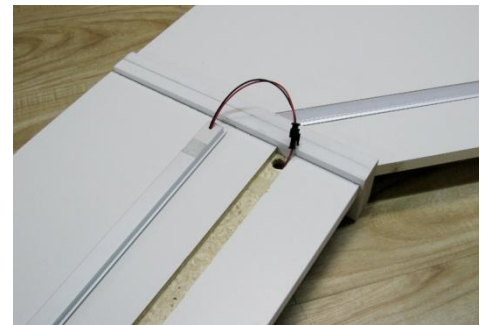

UC2A Series

Surface mount – Ideal for installation behind a narrow bottom trim

UC3 Series

Recessed mount - Ideal for cabinet manufacturer using a dual bottom panel
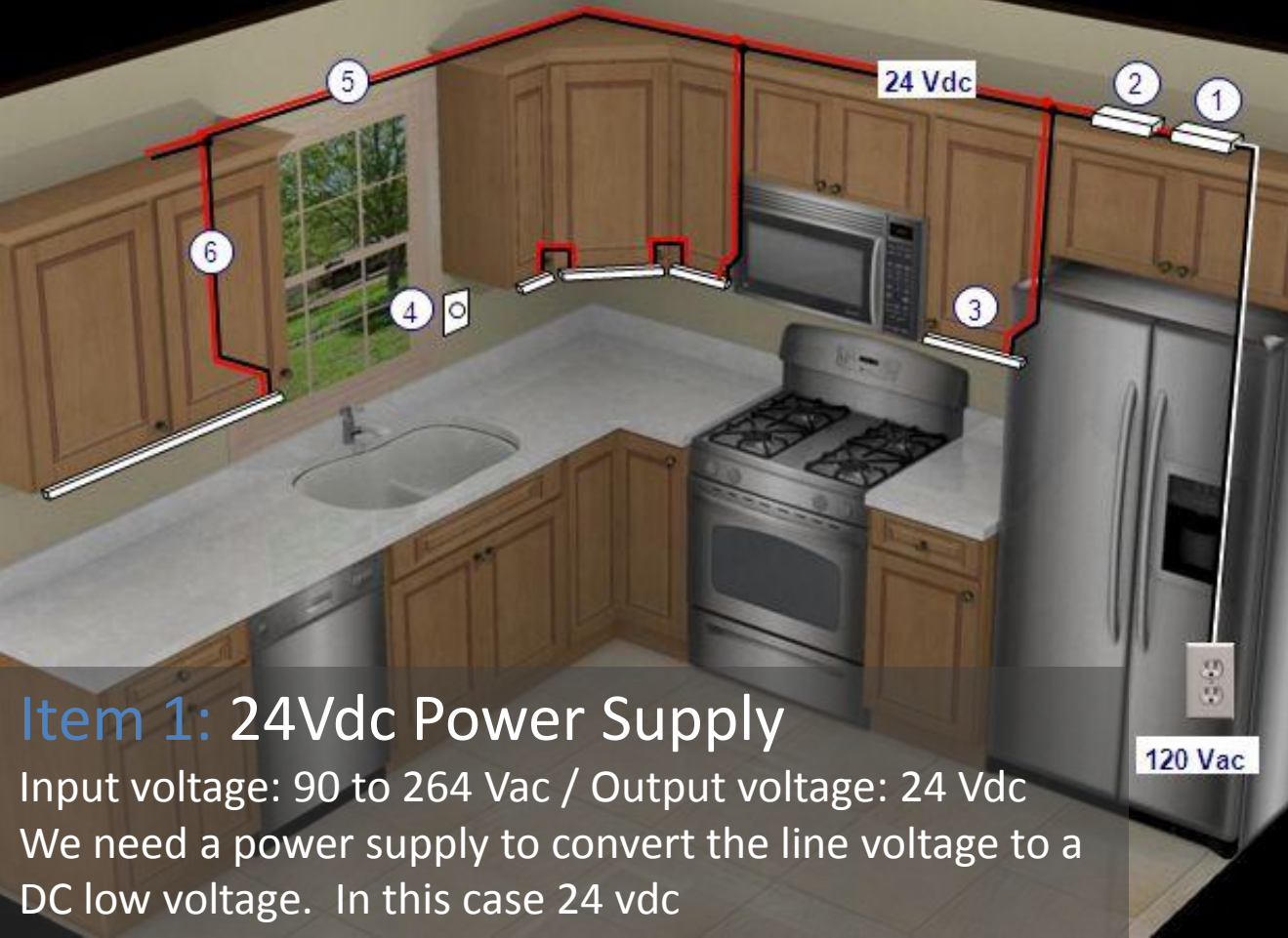
UC2 Series
Installation guide

Every kitchen is unique and therein lies the challenge. The installation process is simple but requires some planning.

The following will show the different steps of a typical installation and help you plan the project.

Presentation Content

- **Project Overview:** required items
- **Electrical Diagram**
- **Step 1:** how to power the system
- **Step 2:** luminaires installation
- **Step 3:** test the system
- **Step 4:** remote controller installation
- **How to Order:** luminaires length
- **How to Order:** light output – 2 options
- **How to Order:** light color – 2 options
- **How to Order:** power supply selection
- **How to Order:** controller selection
- **How to Order:** accessories
- **How to Order:** summary

Project Overview: required items

Example

Item 1: 24Vdc Power Supply

Input voltage: 90 to 264 Vac / Output voltage: 24 Vdc
We need a power supply to convert the line voltage to a
DC low voltage. In this case 24 vdc

24 Vdc

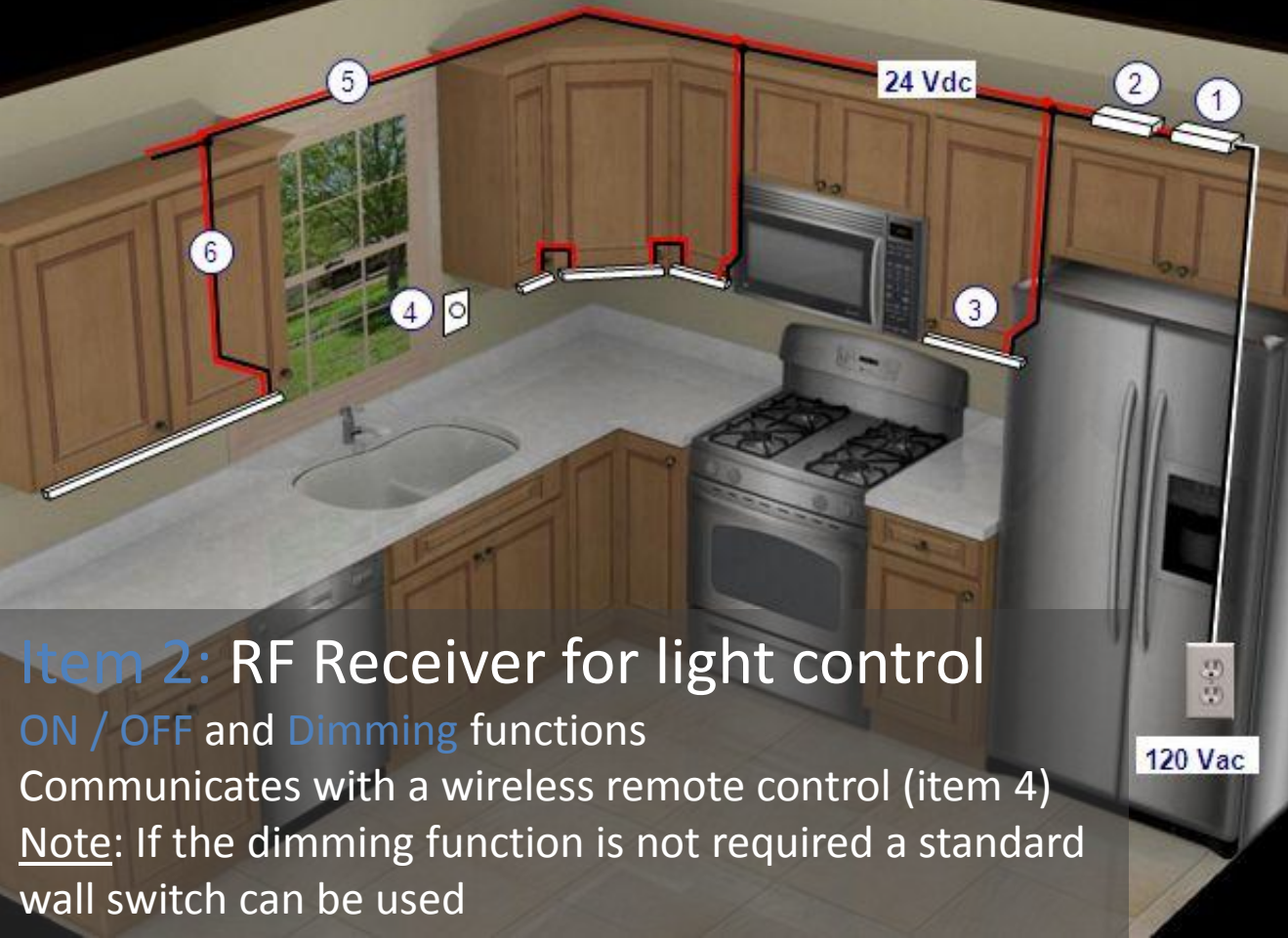120 Vac

LPV Series from Mean Well. Class II power supplies with good quality and low cost. *Available at*
www.iluxxinc.com

LPS CE c𝐔𝐋us

Project Overview: required items

5 | 24 Vdc | 2 | 1

6 | 4 | 3

120 Vac

Item 2: RF Receiver for light control
ON / OFF and Dimming functions
Communicates with a wireless remote control (item 4)
Note: If the dimming function is not required a standard wall switch can be used

Example

SR-2501NS
LED Dimmer
PRI:
Uin=12-36VDC
Iin=8.3A
SEC:
Uout=1x(12-36)VDC
Iout=1x8A
Pout=1x(96-288)W
TEMP RANGE:-20℃-+50℃
tc=75℃
0.5-1.5mm²
6-7mm
GND
Push Switch
Learning Key
CE RoHS
SEC
INPUT
12-36VDC

The no 1 reason to choose RF technology in this application:

Flexibility of installation
• No wiring between receiver and remote
• The remote is battery operated
• The RF signal goes through walls, doors, furnitures, etc
Available at www.iluxxinc.com

Project Overview: required items

5

6

24 Vdc

2

1

4

3

120 Vac

Item 3: UC2 Series Luminaires
Solid State LED device built to provide plenty of light on the work surface

UC2 Series

Features
- Hi-Output (126 or 70leds/meter)
- Many lengths available
- Fully dimmable
- Available in warm white (3000K) and neutral white (4000K)
- Super efficient
- Long lasting (50 000 hours +)
- Built with UL certifed LED engine
Available at www.iluxxinc.com

Project Overview: required items

24 Vdc

120 Vac

Item 4: Wireless RF Remote Controller
ON / OFF and Dimming functions
Communicates with the receiver (item 2)

Example

The no 1 reason to choose RF technology in this application:

Flexibility of installation
• No wiring between receiver and remote
• Battery operated
• The RF signal goes through walls, doors, furniture, etc
Available at www.iluxxinc.com

Project Overview: required items

Examples

24 Vdc

120 Vac

Item 5: Electrical Wiring
We recommend using a multi-strands 18AWG hook-up wire.

Item 6: Power Harness
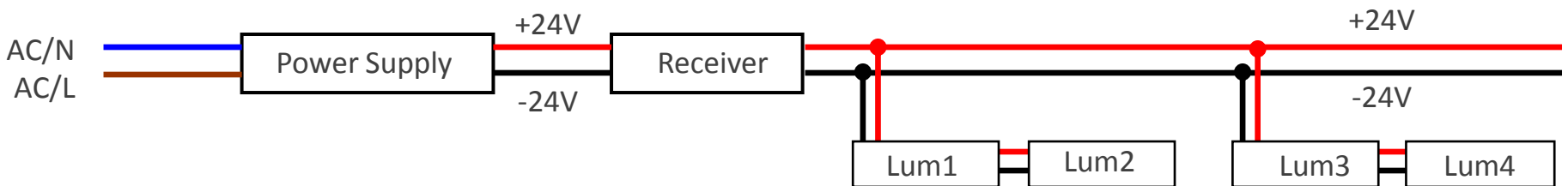Wire assembly with mating connector for the luminaires

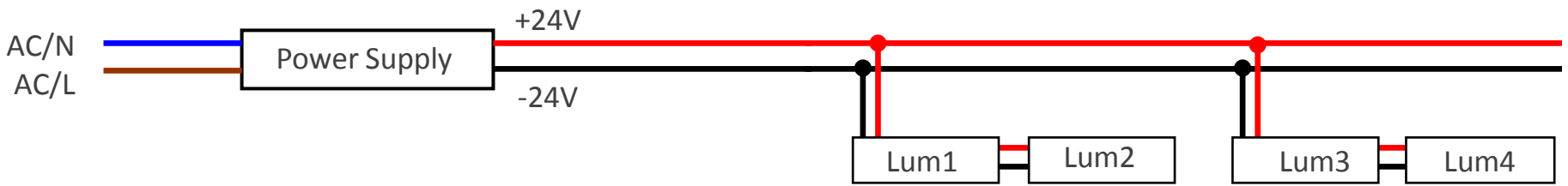*Both items available at*
www.iluxxinc.com

Electrical Diagram

With optional receiver

AC/N

AC/L

| Power Supply | +24V | Receiver | +24V |

Lum1 — Lum2   Lum3 — Lum4

-24V   -24V

Without receiver

AC/N

AC/L

| Power Supply | +24V |

-24V

Lum1 — Lum2   Lum3 — Lum4

Working with low DC voltage

Being exposed to a voltage of 24Vdc constitute a minimal risk to humans however, under certain conditions, you may be exposed to an electrical shock. Disconnect the power supply before making any electrical connections.

Make sure the polarity is respected when making electrical connections. Failure to do so may damage the luminaires or receiver.

Step 1: How to power the system

Luminaires from the UC2 Series operate from a 24Vdc source. So a power supply is needed. Essentially, the following must be determined:
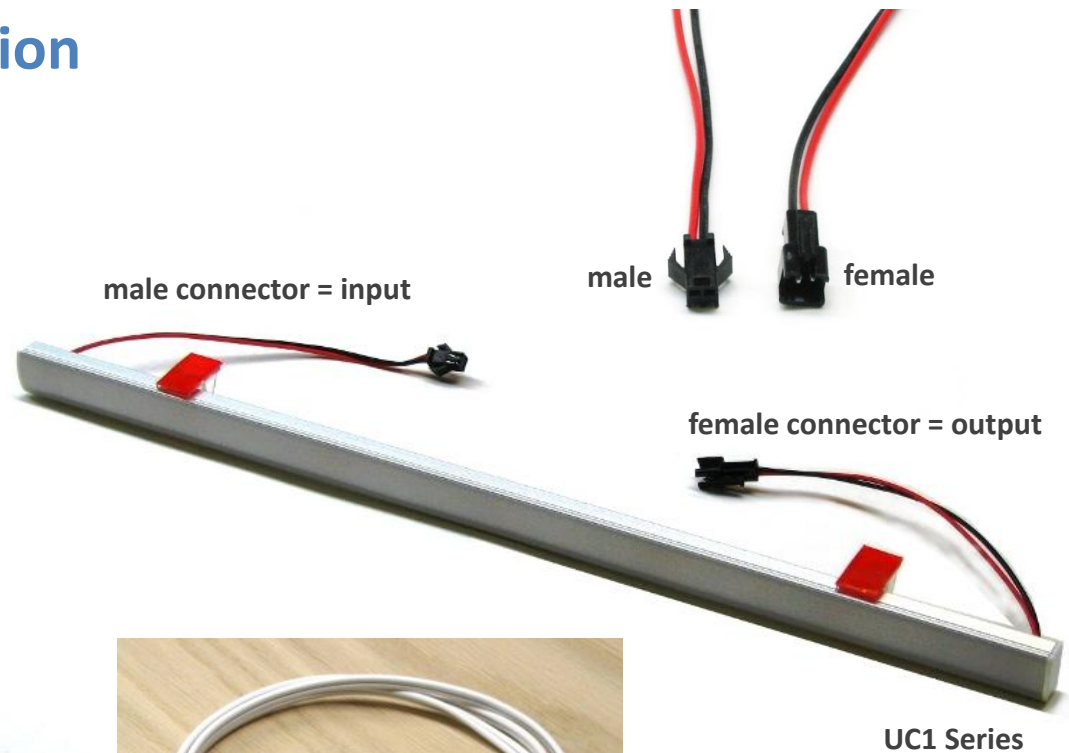
1. The location of the power supply
2. How to connect the power supply to a 120Vac power source.
3. How to power the luminaires from the 24 vdc power supply

Step 2: Luminaires installation

Basic Concept

The luminaires don't have a specific direction meaning that the input supply could be applied to one side or the other but by convention we use the male connector of the luminaire as the input and the female connector as the output. Make sure the luminaires are installed in the same direction so connections between them is possible.

The power harness connecting the main wiring and the luminaire is available with a female or male connector depending on your need.

male   **female**

male connector = input
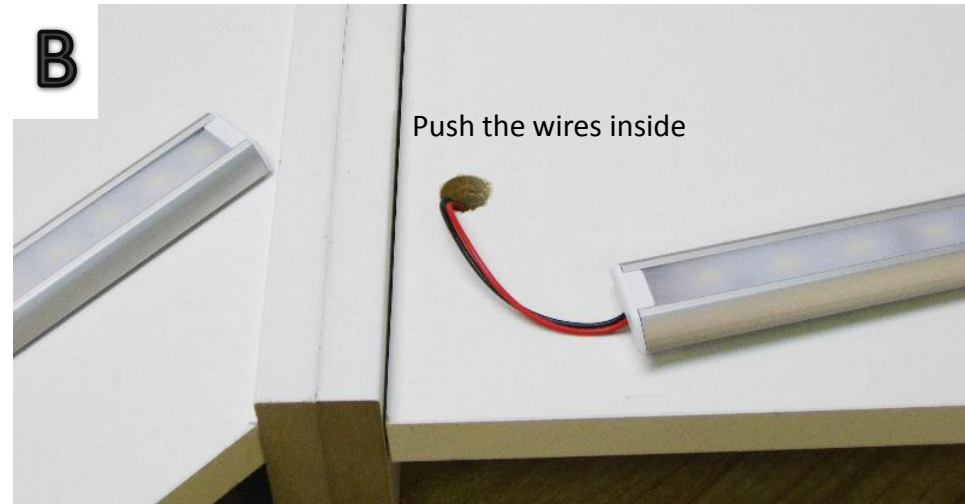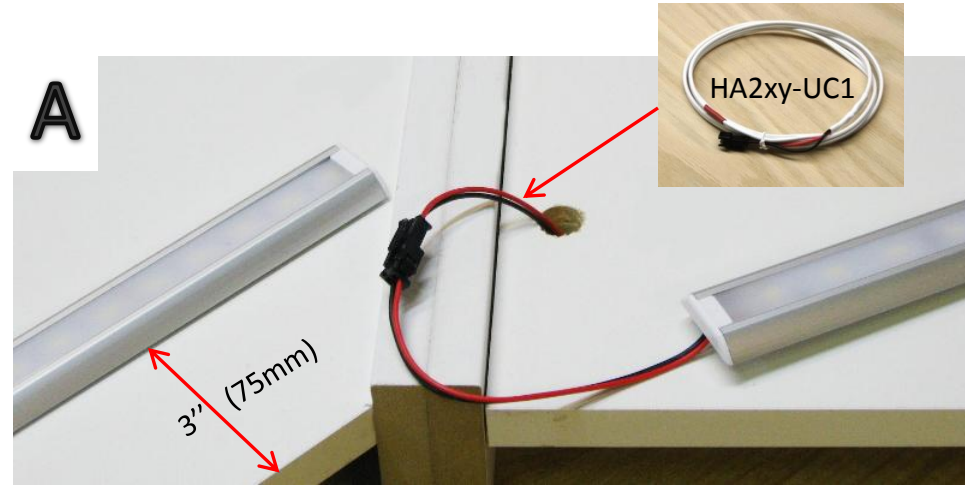
female connector = output

UC1 Series

Step 2: Luminaires installation

A- Luminaires should be installed at approx. 3'' (75mm) from the front edge of the cabinet.

Drill a 1/2" hole to run the power wiring.

B- Luminaires connect via the power harness no: HA2xy-UC1
x = Male / Female / Male + Female
y = Length in feet

A

HA2xy-UC1

3'' (75mm)

B

Push the wires inside

Step 2: Luminaires installation
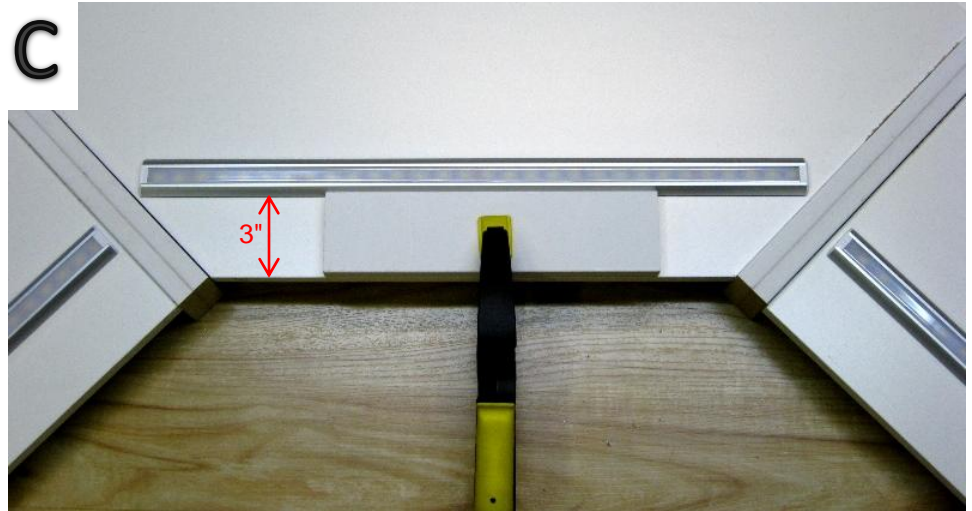
Luminaires from the UC2 Series are equipped with a UHB double-sided tape for a simple installation without screws.

C- Position the luminaire at about 3'' (75mm) from the front edge of the cabinet and fasten. This is the ideal position to conceal the light and get even lighting over the counter.

Remove the red liner and stick.

C

3"

Step 2: Luminaires installation

...Voilà!

Step 3: Test the system

Once the first luminaire is connected, check that the system is working. Make sure the polarity is correct throughout the system before proceeding.

System without receiver / remote control
1. Apply power to the power supply (probably via the wall switch)
2. The light should be ON

System with receiver / remote control
1. Apply power to the power supply
2. Use the remote control to turn on the light

Note: Each remote controller must be paired to a receiver in order to work. This operation was carried out for you in our factory. If need be, please refer to the controller datasheet for the pairing / unpairing procedure.

Step 4: Remote controller installation

iLuXx is offering remote controllers based on the RF technology. It means that the device is wireless (no electrical connections is required – battery operated). So basically it means that you find a location and stick it to the wall. Please refer to your controller datasheet for more details.

How to order: Luminaires length

Many standard lengths available

iLuXx offers a wide selection of standard lengths. That level of flexibility is unique and an important advantage over other solutions. Dim A is the overall length.
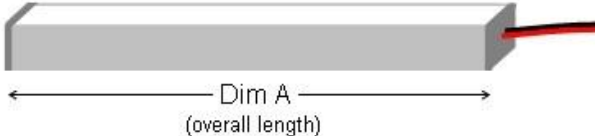
Table 1: Very High Output

Dim A (in/mm)	Power (Watt)	Part Number (1)
UC2 126 LED / meter version		
5,5 / 140	2,2 W	UC2-12624xy-140
7,7 / 195	3,2 W	UC2-12624xy-195
9,8 / 250	4,3 W	UC2-12624xy-250
12,0 / 305	5,4 W	UC2-12624xy-305
14,2 / 360	6,5 W	UC2-12624xy-360
16,3 / 415	7,6 W	UC2-12624xy-415
18,5 / 470	8,6 W	UC2-12624xy-470
20,7 / 525	9,7 W	UC2-12624xy-525
22,8 / 580	10,8 W	UC2-12624xy-580
25,0 / 635	11,9 W	UC2-12624xy-635
27,2 / 690	13,0 W	UC2-12624xy-690
29,3 / 745	14,0 W	UC2-12624xy-745
31,5 / 800	15,1 W	UC2-12624xy-800
33,7 / 855	16,2 W	UC2-12624xy-855
35,8 / 910	17,3 W	UC2-12624xy-910
38,0 / 965	18,4 W	UC2-12624xy-965

Table 2: High Output

Dim A (in/mm)	Power (Watt)	Part Number (1)
UC2 70 LED / meter version		
4,9 / 125	1,3 W	UC2-7024xy-125
8,9 / 225	2,6 W	UC2-7024xy-225
12,8 / 325	4,0 W	UC2-7024xy-325
16,7 / 425	5,3 W	UC2-7024xy-425
20,7 / 525	6,6 W	UC2-7024xy-525
24,6 / 625	7,9 W	UC2-7024xy-625
28,5 / 725	9,2 W	UC2-7024xy-725
32,5 / 825	10,6 W	UC2-7024xy-825
36,4 / 925	11,9 W	UC2-7024xy-925

(1) x = Color
     y = Single or Dual connexion

Dim A
(overall length)

How to Order: Light Output – 2 Options

Select your light output

We deliver more light than anyone out there. Both versions will do a great job but there's a Wow! factor with the 126 Led /meter version that you won't find anywhere else.

Very High Output

- Best results
- 126 Led / meter
- 494 Lumen / feet
- 5.4 Watt / feet

High Output

- Very good results - economical
- 70 Led / meter
- 334 Lumen / feet
- 3.8 Watt / feet

Table 1: Very High Output

Dim A (in/mm)	Power (Watt)	Part Number (1)
UC2 126 LED / meter version		
5,5 / 140	2,2 W	UC2-12624xy-140
7,7 / 195	3,2 W	UC2-12624xy-195
9,8 / 250	4,3 W	UC2-12624xy-250
12,0 / 305	5,4 W	UC2-12624xy-305
14,2 / 360	6,5 W	UC2-12624xy-360
16,3 / 415	7,6 W	UC2-12624xy-415
18,5 / 470	8,6 W	UC2-12624xy-470
20,7 / 525	9,7 W	UC2-12624xy-525
22,8 / 580	10,8 W	UC2-12624xy-580
25,0 / 635	11,9 W	UC2-12624xy-635
27,2 / 690	13,0 W	UC2-12624xy-690
29,3 / 745	14,0 W	UC2-12624xy-745
31,5 / 800	15,1 W	UC2-12624xy-800
33,7 / 855	16,2 W	UC2-12624xy-855
35,8 / 910	17,3 W	UC2-12624xy-910
38,0 / 965	18,4 W	UC2-12624xy-965

Table 2: High Output

Dim A (in/mm)	Power (Watt)	Part Number (1)
UC2 70 LED / meter version		
4,9 / 125	1,3 W	UC2-7024xy-125
8,9 / 225	2,6 W	UC2-7024xy-225
12,8 / 325	4,0 W	UC2-7024xy-325
16,7 / 425	5,3 W	UC2-7024xy-425
20,7 / 525	6,6 W	UC2-7024xy-525
24,6 / 625	7,9 W	UC2-7024xy-625
28,5 / 725	9,2 W	UC2-7024xy-725
32,5 / 825	10,6 W	UC2-7024xy-825
36,4 / 925	11,9 W	UC2-7024xy-925

(1) x = Color
     y = Single or Dual connexion

How to Order: Light Color – 2 Options

Select your nuance of white
Because white is not always the same as white.

Neutral White – 4000K
Close to natural light. A good match for cooler colors, whites, stainless steel, modern style kitchens.

Warm White – 3000K
Close to soft white incandescent lighting. A good match for warmer colors, wood, more traditional style kitchens.

Neutral White	Warm White
4000K	3000K

How to Order: Power supply selection

Power supply selection

Type: 24Vdc Constant Voltage

Power:
1. Calculate the total lighting power that will be connected to the power supply. (see table 1 or 2 for wattage according to luminaire length)
2. Select a power supply that covers your total lighting power and keep a safety margin of about 10%.

Example:
- Total lighting power: 55W
- Choose a power supply of 60W or more

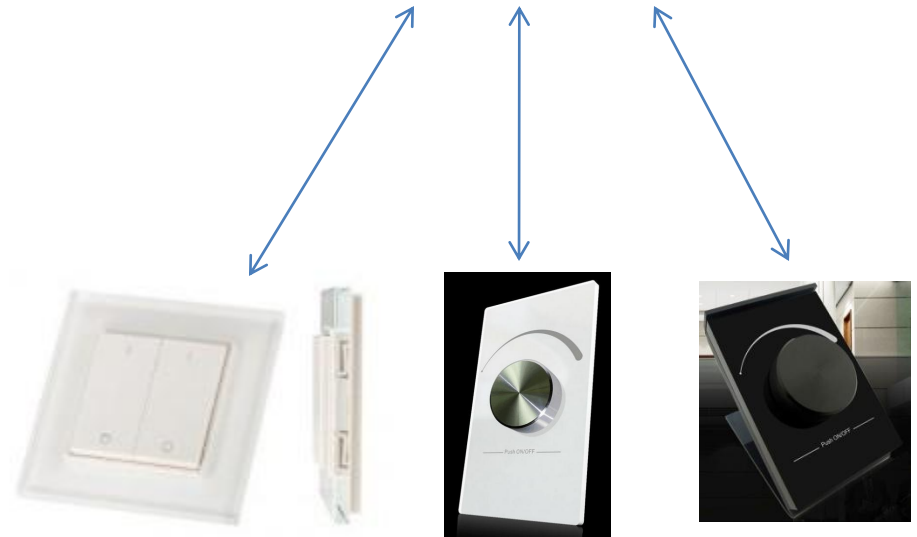# How to Order: Controller selection

Receiver example

Controlling the light

The controller is composed of a PWM type receiver and a remote control that can be permanently fixed to the wall. Controller characteristics:

1. Switch ON or Off the lights
2. Adjust the lighting level - Dimming.
3. Can handle a total of 192W @ 24vdc

Note that you can also use a standard wall switch if the dimming function is not required.

Remote Control examples ; more on website

How to Order: Accessories

Accessories

These accessories are meant to make your job easier. Most are common items you can get at your local hardware store but for added convenience we make them available at www.iluxxinc.com.

18 awg Stranded Wire	Power Harness – Male or Female	Inline Wire Tap

How to Order: Summary

In summary here are the required items for a typical project.

1- Luminaires

- Determine the required lengths
- 2 light ouput options
- 2 light color options

2- Power Supply

- Determine luminaires total wattage
- Select the power supply that covers the total wattage.

3- Controller

- Optional
- Required for the dimming function

4- Accessories

18 awg stranded wire for 24vdc power distribution.

Power Harness male or female to connect luminaires with 24vdc power distribution.

« Wire Tap » for simple electrical connections.

Required tools

Wire stripper