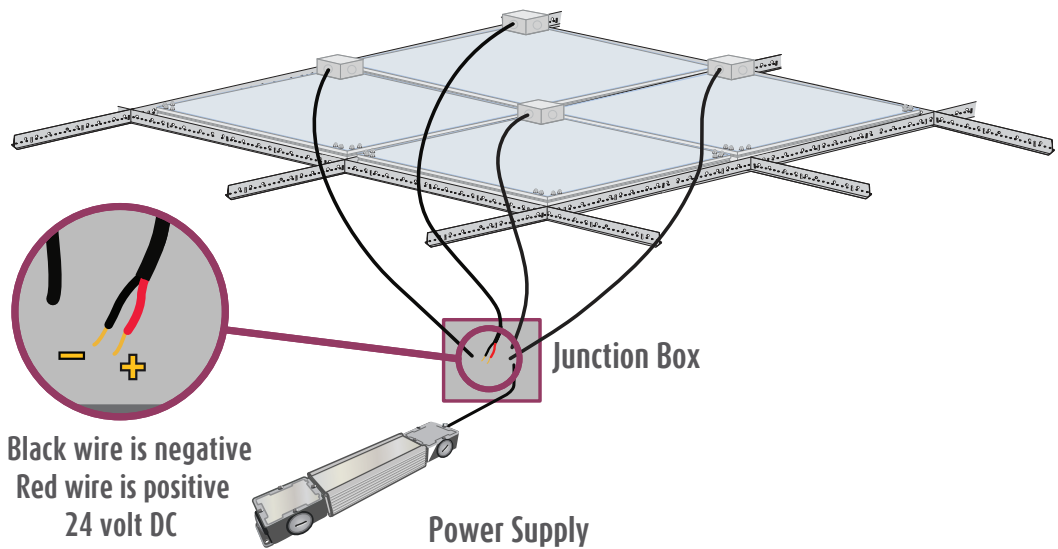




## Standard w/ EcoSlim Electrical Instructions (ES Only)



### Installation Instructions includes:

- Standard w/ EcoSlim Electrical Instructions (ES Only)
- Wiring Diagram EL001181
- Total Wattage per Number of EcoSlim Fixtures
- Wire Sizing Chart
- Custom SkyCeiling wiring diagram (where applicable)

For technical support at any time during the installation, please call us **toll free at 866-759-3228**.  
We want your installation to go as smoothly as possible. Thank you for choosing The Sky Factory.

## Standard w/ EcoSlim Electrical Requirements:

ES22 Series: ES22 (2' x 2'), ES22M (60cm x 60cm), ES22G (62.5cm x 62.5cm)

ES24 Series: ES24 (2' x 4'), ES24M (60cm x 120cm), ES24G (62.5cm x 125cm)

NOTE: For custom sizes, see Custom SkyCeiling wiring diagram (where applicable)

All EcoSlim fixtures are 24V DC only.

EcoSlim fixtures must be powered only by a UL Listed or CE Compliant 24V DC power supply with wattage greater than total wattage of EcoSlim fixtures.

Dry locations only.

For number of fixtures per power supply, see

“Total Wattage per Number of EcoSlim Fixtures” on page 6

For installations with one or more custom sizes, see

Custom SkyCeiling wiring diagram attached

For dimming requirements, see page 4.

RF filter, if used, is not provided by The Sky Factory.

*Electrical work must be performed by a qualified electrician who is familiar with DC lighting systems and must conform to all local and national codes.*

## Step 1: Wiring the EcoSlim fixtures to the power supply

See supporting drawing and charts on pages 5-7 and Custom SkyCeiling wiring diagram (where applicable)

EcoSlim Lighting System - ES22 and ES24				
TSF Model No.	Dimensions: WxLxH	Weight	System Wattage (Max)	Input Current @ 24 Volts DC
ES22	23.75 x 23.75 x 3.72 (inches)	10.5 lb	24	1.0 A
ES24	23.75 x 47.75 x 3.72 (inches)	19.7 lb	36	1.5 A
ES22M	59.4 x 59.4 x 9.45 (cm)	4.76 kg	24	1.0 A
ES24M	59.4 x 119.4 x 9.45 (cm)	8.94 kg	36	1.5 A
ES22G	61.9 x 61.9 x 9.45 (cm)	4.76 kg	24	1.0 A
ES24G	61.9 x 124.4 x 9.45 (cm)	8.94 kg	36	1.5 A

NOTE: For custom sizes, see also Custom SkyCeiling wiring diagram



**Notice:** The LED fixtures are 24V DC ONLY.  
AC voltage connected directly to the fixtures  
will destroy the lighting system.

Fixtures may be arranged in rows or clusters, depending on the installation.

A junction box with 1/2" trade size knock-outs is attached on top corner of each fixture.

- Power leads inside fixture junction box are polarized, red (+) to (+) and black (-) to (-).
- Wire size 18 AWG stranded.

Wiring from fixtures to V DC side of client-provided power supply is polarized, positive (+) to positive (+) and negative (-) to negative (-):

Wire and additional junction boxes from the fixtures to the power supply provided by others.

Voltage drop will occur over long distances. For appropriate lengths and gauges, see Wire Sizing Chart.

Wire gauge must conform to local and national codes.

## Step 2: Dimming requirements

IMPORTANT: Use of Sky Factory approved dimming system only! Contact the Sky Factory if you plan on using a dimming system provided by others.



**Notice:** Dimming using non-approved systems may permanently damage LED's and will void the warranty!

In MRI applications, an RF Filter is required and is not provided by The Sky Factory.

## Step 3: Checking the polarity

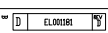


**Notice:** CHECK THE POLARITY BEFORE TURNING ON POWER. MAKE SURE:

Red wires on the fixtures go to the "+" terminals of the power supply

Black wires on the fixtures go to the "-" terminals of the power supply

**IF THE SYSTEM IS WIRED BACKWARD, IT WILL DESTROY THE LED'S!**



# Total Wattage per Number of EcoSlim Fixtures

ES22 Series and ES24 Series EcoSlim fixtures must be powered by a UL Listed or CE Compliant 24V DC power supply.  
This table provides information for properly sizing a power supply given the number of EcoSlims in a given installation.

	ES22 Series		ES24 Series	
No. of EcoSlims	Required Current Amps	Required Current Watts	Required Current Amps	Required Current Watts
1	1	24	1.5	36
2	2	48	3	72
3	3	72	4.5	108
4	4	96	6	144
5	5	120	7.5	180
6	6	144	9	216
7	7	168	10.5	252
8	8	192	12	288
9	9	216	13.5	324
10	10	240	15	360
11	11	264	16.5	396
12	12	288	18	432
13	13	312	19.5	468
14	14	336	21	504
15	15	360	22.5	540
16	16	384	24	576
17	17	408	25.5	612
18	18	432	27	648
19	19	456	28.5	684
20	20	480	30	720
21	21	504	31.5	756
22	22	528	33	792
23	23	552	34.5	828
24	24	576	36	864
25	25	600	37.5	900
26	26	624	39	936
27	27	648	40.5	972
28	28	672	42	1008
29	29	696	43.5	1044
30	30	720	45	1080
31	31	744	46.5	1116
32	32	768	48	1152
33	33	792	49.5	1188
34	34	816	51	1224
35	35	840	52.5	1260
36	36	864	54	1296

# Wire Sizing Chart

This chart is a guideline for recommended wiring practice.

Applies to 24V DC power only, i.e. from “fixture to power supply.”

Not meant for “V AC to power supply” nor “dimmer to power supply.”

Wire sizes in AWG Conversion chart below.

Distance: Feet (Meters)	AWG for 5A	AWG for 10A	AWG for 15A
20 (6)	18	14	12
30 (9)	16	12	10
40 (12)	14	10	10
50 (15)	12	10	*
60 (18)	12	10	*
80 (24)	10	*	*
100 (30)	10	*	*
* Terminal block wire range #10 - #22 Awg.			

AWG	MM
10	6.271
11	5.156
12	3.302
13	2.629
14	2.088
15	1.652
16	1.308
17	1.039
18	0.823