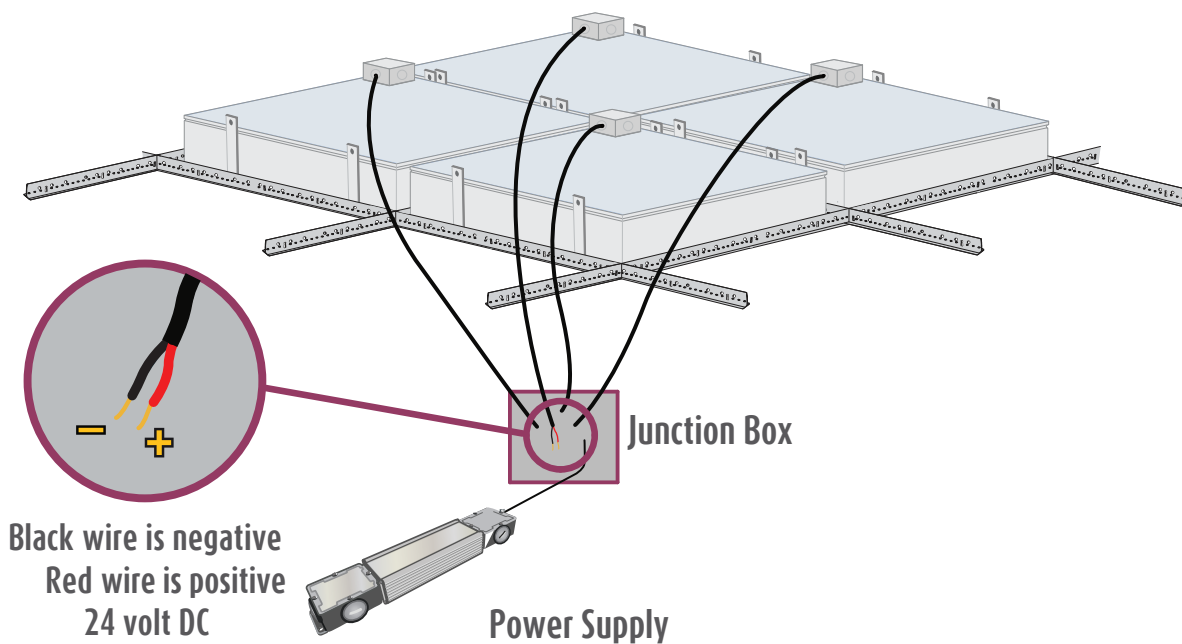




Standard w/ EcoPlus Electrical Instructions (HLG)



Installation Instructions includes:

Standard w/ EcoPlus Electrical Instructions (HLG)

Wiring Diagram EL001180

Number of EP22 Series Fixtures per HLG Power Supply

Number of EP24 Series Fixtures per HLG Power Supply

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/ EcoPlus Electrical Requirements:

EP22 Series: EP22 (2' x 2'), EP22M (60cm x 60cm), EP22G (62.5cm x 62.5cm)

EP24 Series: EP24 (2' x 4'), EP24M (60cm x 120cm), EP24G (62.5cm x 125cm)

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

All EcoPlus fixtures are 24V DC only.

EcoPlus fixtures must be powered only by provided UL Recognized, CE Compliant 24V DC power supply

Dry locations only.

For number of fixtures per power supply, see

“Number of EPXX Series Fixtures per HLG Power Supply” on page 6-7

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.

Sky Factory provided external dimmable power supply:

Input (Typ) 90-305V, 47 - 63 Hz

Output 24V DC

UL (U.S. and Canada) Recognized and CE Compliant

Surface mountable

HLG-80H only:

Class 2, UL8750 Listed and CE compliant

Junction box on both input and output ends

Junction box wiring access holes limited to 1/2" nominal trade size conduit

Suitable for dry/damp/wet locations

Sky Factory provided dimmer control (where specified)

Lutron Diva DVSTV 0 - 10V sliding dimmer/switch (UL & CSA compliant)

Input: auto-ranging 120 - 277V AC

Lutron Lyneo preset 0 - 10V sliding dimmer/switch and external relay (CE compliant):

Input: 220 - 240V AC

Step 1: Wiring the EcoPlus fixtures to the power supply

See supporting drawing and charts on pages 5-8 and Custom SkyCeiling wiring diagram (where applicable)

EcoPlus Lighting System - EP22 and EP24 Series				
TSF Model No.	Dimensions: WxLxH	Weight	System Wattage (Max)	Input Current @ 24 Volts DC
EP22	23.75 x 23.75 x 5.85 (inches)	7.1 lb	23	0.96 A
EP24	23.75 x 47.75 x 5.85 (inches)	11.7 lb	47	1.96A
EP22M	59.4 x 59.4 x 14.86 (cm)	3.22 kg	23	0.96 A
EP24M	59.4 x 119.4 x 14.86 (cm)	5.31 kg	47	1.96A
EP22G	61.9 x 61.9 x 14.86 (cm)	3.22 kg	23	0.96 A
EP24G	61.9 x 124.4 x 14.86 (cm)	5.31 kg	47	1.96A

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 provided power supply is polarized, positive (+) to positive (+) and negative (-) to negative (-):

EcoSlim fixture red "+" to power supply **V+ (RED)**

EcoSlim fixture black "-" to power supply **V- (BLACK)**

Power supply V DC wire size 18 AWG on 40-80w, 14 AWG on 100-600w.

Wire and additional junction boxes from fixtures to 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: Wiring the power supply to source V AC

Run power to V AC side of the power supply. Power supply V AC wire size 18 AWG.

Line to **ACL (BROWN)**

Neutral to **ACN (BLUE)**

Ground to  **(GREEN/YELLOW)**

Wire gauge must conform to local and national codes.

Install the power switch on the V AC input side of the power supply.

Step 3: Dimming requirements

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!

Wiring a Sky Factory provided dimmer control:

To wire the 0-10V dimmer control (and external relay where specified), refer to wiring diagram included with dimmer and relay and EL001180.

Step 4: 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

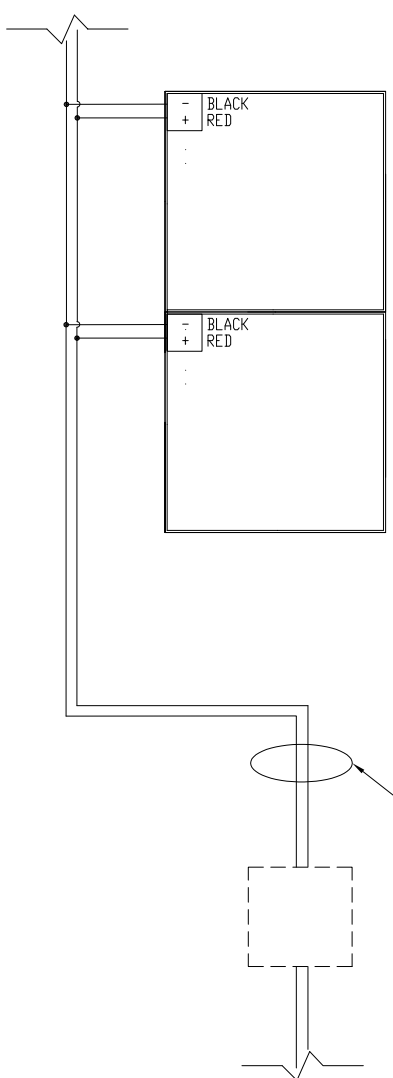
Black wires on the fixtures go to the “-” terminals of the power supply

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

EP AND ES SERIES FIXTURES
WITH HLG POWER SUPPLY
DIMMING OPTION

ECOPULS
EP22 SERIES, EP24 SERIES,
EP26 SERIES, EP33 SERIES,
EP34 SERIES, EP36 SERIES
AND EP44 SERIES

ECOSLIM
ES22 SERIES, ES24 SERIES,
ES26 SERIES, ES33 SERIES,
ES34 SERIES, ES36 SERIES
AND ES44 SERIES



- NOTES:
1. ALL FIXTURES 24V DC ONLY.
 2. JUNCTION BOX ATTACHED TO EACH FIXTURE.
 3. WIRE SIZE 18 AWG STRANDED
 4. WIRE COLORS:
 5. RED (+) (POSITIVE)
 6. BLACK (-) (NEGATIVE)

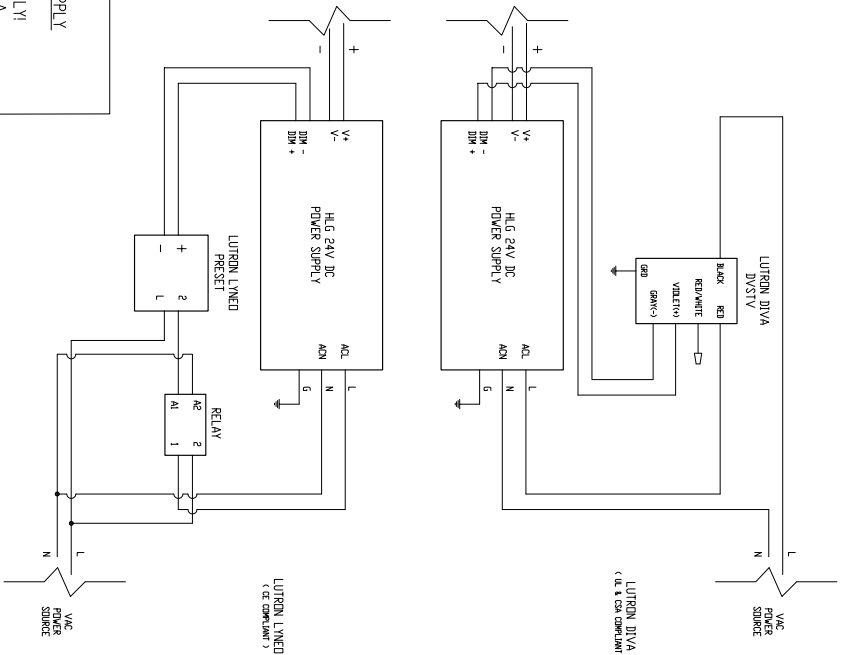
3. SEE ALSO NUMBER OF FIXTURES PER HLG POWER SUPPLY AND WIRE SIZING CHART.

4. USE OF SKY FACTORY APPROVED DIMMING SYSTEM ONLY!

5. CONTACT THE SKY FACTORY IF YOU PLAN ON USING A DIMMING SYSTEM PROVIDED BY OTHERS.

6. FOR MRI APPLICATIONS, ONE RF FILTER REQUIRED PER HLG POWER SUPPLY.

NOTICE: DIMMING USING NON-APPROVED SYSTEMS MAY PERMANENTLY DAMAGE LED'S AND WILL VOID THE WARRANTY!



Sky Factory	
MANUFACTURED BY SKY FACTORY, INC. 10000 WILSON BLVD. SUITE 1000 DALLAS, TX 75243-4692	DATE: 01/18/2018
DESIGNED BY: SKY FACTORY, INC.	DATE: 01/18/2018
DRAWN BY: SKY FACTORY, INC.	DATE: 01/18/2018
CHECKED BY: SKY FACTORY, INC.	DATE: 01/18/2018
SCALE: NOT TO SCALE	SHEET 1 OF 1

Number of EP22 Series Fixtures per HLG Power Supply

This table provides information for properly sizing an HLG power supply given the number of fixtures in a given installation.

No. of Fixtures	Amperage [A]	Power [W]	HLG Power Supply 24V DC	Fixtures per Power Supply
1	0.96	23.0	Contact Sky Factory	Contact Sky Factory
2	1.92	46.1	60	2 per 60
3	2.88	69.1	80	3 per 80
4	3.84	92.2	120	4 per 120
5	4.8	115.2	150	5 per 150
6	5.76	138.2	150	6 per 150
7	6.72	161.3	185	7 per 185
8	7.68	184.3	240	8 per 240
9	8.64	207.4	240	9 per 240
10	9.6	230.4	240	10 per 240
11	10.56	253.4	320	11 per 320
12	11.52	276.5	320	12 per 320
13	12.48	299.5	320	13 per 320
14	13.44	322.6	185+185	7 per 185
15	14.4	345.6	185+185	7 per 185
16	15.36	368.6	240+240	8 per 240
17	16.32	391.7	Contact Sky Factory	Contact Sky Factory
18	17.28	414.7	240+240	9 per 240
19	18.24	437.8	Contact Sky Factory	Contact Sky Factory
20	19.2	460.8	600	20 per 600
21	20.16	483.8	600	21 per 600
22	21.12	506.9	600	22 per 600
23	22.08	529.9	600	23 per 600
24	23.04	553.0	600	24 per 600
25	24	576.0	600	25 per 600
26	24.96	599.0	320+320	13 per 320
27	25.92	622.1	240+240+240	9 per 240
28	26.88	645.1	240+600	8 per 240, 20 per 600
29	27.84	668.2	Contact Sky Factory	Contact Sky Factory
30	28.8	691.2	150+150+600	5 per 150, 20 per 600
31	29.76	714.2	Contact Sky Factory	Contact Sky Factory
32	30.72	737.3	Contact Sky Factory	Contact Sky Factory
33	31.68	760.3	150+240+600	5 per 150, 8 per 240, 20 per 600
34	32.64	783.4	Contact Sky Factory	Contact Sky Factory
35	33.6	806.4	240+600	10 per 240, 25 per 600
36	34.56	829.4	320+320+320	12 per 320
37	35.52	852.5	Contact Sky Factory	Contact Sky Factory
38	36.48	875.5	Contact Sky Factory	Contact Sky Factory
39	37.44	898.6	320+320+320	13 per 320
40	38.4	921.6	600+600	20 per 600
Please contact the Sky Factory for additional or custom configurations				

Number of EP24 Series Fixtures per HLG Power Supply

This table provides information for properly sizing an HLG power supply given the number of fixtures in a given installation.

No. of Fixtures	Amperage [A]	Power [W]	HLG Power Supply 24V DC	Fixtures per Power Supply
1	1.96	47.0	60	1 per 60
2	3.92	94.1	120	2 per 120
3	5.88	141.1	185	3 per 185
4	7.84	188.2	240	4 per 240
5	9.8	235.2	320	1 per 320
6	11.76	282.2	320	6 per 320
7	13.72	329.3	185+240	2 per 185, 4 per 240
8	15.68	376.3	240+240	4 per 240
9	17.64	423.4	185+185+185	3 per 185
10	19.6	470.4	600	10 per 600
11	21.56	517.4	600	11 per 600
12	23.52	564.5	320+320	6 per 320
13	25.48	611.5	Contact Sky Factory	Contact Sky Factory
14	27.44	658.6	240+600	4 per 240, 10 per 600
15	29.4	705.6	Contact Sky Factory	Contact Sky Factory
16	31.36	752.6	Contact Sky Factory	Contact Sky Factory
17	33.32	799.7	Contact Sky Factory	Contact Sky Factory
18	35.28	846.7	320+320+320	6 per 320
19	37.24	893.8	Contact Sky Factory	Contact Sky Factory
20	39.2	940.8	600+600	10 per 600
21	41.16	987.8	60+600+600	1 per 60, 10 per 600
22	43.12	1034.9	120+600+600	2 per 120, 10 per 600
23	45.08	1081.9	Contact Sky Factory	Contact Sky Factory
24	47.04	1129.0	240+600+600	4 per 240, 10 per 600
25	49	1176.0	Contact Sky Factory	Contact Sky Factory
26	50.96	1223.0	Contact Sky Factory	Contact Sky Factory
27	52.92	1270.1	Contact Sky Factory	Contact Sky Factory
28	54.88	1317.1	Contact Sky Factory	Contact Sky Factory
29	56.84	1364.2	Contact Sky Factory	Contact Sky Factory
30	58.8	1411.2	600+600+600	10 per 600
31	60.76	1458.2	Contact Sky Factory	Contact Sky Factory
32	62.72	1505.3	Contact Sky Factory	Contact Sky Factory
33	64.68	1552.3	600+600+600	11 per 600
Please contact the Sky Factory for additional or custom configurations				

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