

ILLUMIWALL™ LED BACKLIGHTING SYSTEM

Backlighting solution for acrylic and glass for architectural wall and panel illumination.

CAT:	QTY:
TYPE:	PROJECT:

FEATURES

- Available in strip or panel design for any shape configuration
- Strips mount at 3" OC spacing between runs to create even back lit illumination with no hot spots at minimum 3" depth
- LED backlit panel illumination strips used to create architectural illumination walls with acrylic and glass backlighting
- Easy modular strips to fit any shape and configuration
- Modular connection track or individual wiring accessories available
- Smooth full range dimming capability with commercially available analog dimmers for magnetic low voltage transformers

SPECIFICATIONS

ILLUMIWALL	EFFICACY LM/WT	CRI	LM/FT	WT/FT	WT/SQ. FT
Delux Warm White 2400°K	61.67	75.7	185	3.0	12
Delux Warm White 2700°K	53.34	79.4	160	3.0	12
Warm White 3000°K	55.00	80.5	165	3.0	12
Neutral White 3500°K	64.39	79.8	193	3.0	12

Items in bold denote Title 24 High efficacy rating. Measurements are based on 24V DC power design calculations will vary based on power supply and run lengths

ILLUMIWALL	WATTAGE	LED LIFE* / COLOR TEMP	VIEWING ANGLE
LED Panel Light	0.085W per LED	40,000 hrs Delux Warm White 2400°K Delux Warm White 2700°K Warm White 3000°K Neutral White 3500°K	120°

* LEDs operate at 90% of LED manufacturers maximum current spec rating.

1. **LEDs** - Uses 36 LEDs per foot (²¹/₆₄" OC)
2. **Mounting** - Pre-mounted on installation-ready clear strips with pre-drilled mounting holes for simplified installation
3. **Installation** - Field trimmable modular assembly of connection track and LED strips
4. **Strip Spacing** - Strips mount at 3" OC spacing between runs



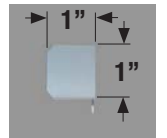
5. **Field Trimmable** - Can be trimmed to fit every 2"
6. **Power Supply** - Listed Class II 24V DC power supply required
7. **Listing** - cETLus listed File #4008134
8. **Compliance** - ROHS Compliant
9. **Warranty** - 3 Year Warranty

ILLUMIWALL SYSTEM ORDER SPECIFICATION GUIDE

ILLUMIWALL CONNECTOR TRACK

Example: ILW-CONN-1

PRODUCT CODE	CONFIGURATION	LENGTH
ILW	-	-
ILLUMIWALL™	CONN = Connection track	1 = 1 foot 2 = 2 foot 3 = 3 foot 4 = 4 foot C = Custom length



ILLUMIWALL LIGHT STRIPS

Example: ILW-S-I-27-4

PRODUCT CODE	CONFIGURATION	INSTALL	LED COLOR	LENGTH/FEET	REQUIRED POWER SUPPLY
ILW	-	S	-	I	-
ILLUMIWALL™	S = Strip	I = Indoor	24 = Delux Warm White (2400°K +/-100°K) 27 = Delux Warm White (2700°K +/-100°K) 30 = Warm White (3000°K +/-100°K) 35 = Neutral White (3500°K +/-100°K)	1 = 1 ft 2 = 2 ft 4 = 4 ft C = Custom lengths (Consult Factory)	PSU <small>See power supply specsheets</small>

REQUIRED POWER SUPPLY OPTIONS

- ADUL-120-1-4-24-D
- ADUL-240-2-4-24-D
- ADUL-320-3-4-24-D
- JT-100-1-4-24-D
- JT-300-3-4-24-D
- JTH-100-1-4-24-D
- JTH-300-3-4-24-D
- MT-100-1-4-24-DD
- MW-120-1-4-24-D

See power supply specifications for more information

OPTIONAL DIMMERS

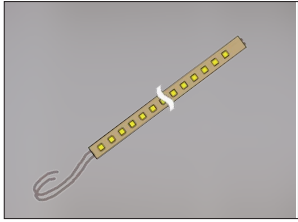
- N-600
- NH-600
- N-1000
- NH-1000
- NH-1500
- DIM-OT-1-4-D

See dimming specification sheet for more information

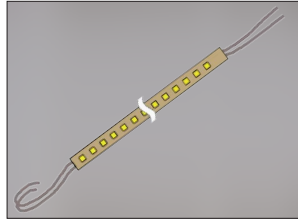


ILLUMIWALL™ LED BACKLIGHTING SYSTEM

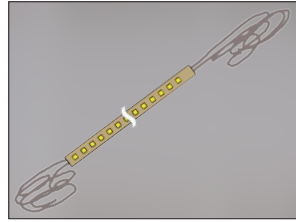
WIRING END PREP OPTIONS



ILW-2W-I-LEAD-C Lead/Dead End 24" 2 conductor 18ga lead wire factory attached to one end of tape with field trimmable dead end at other. Sold per each.



ILW-2W-I-LEAD-D Lead/Lead 24" 2 conductor 18ga lead wire factory attached to both ends of tape. Sold per each.

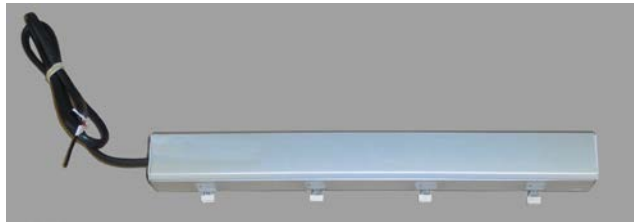


ILW-2W-I-XEP Extra lead wire Additional factory attached lead wire to extend lengths of LEAD-C and LEAD-D up to 20 ft max. Sold per foot (not shipped as spooled wire).



ILW-COUP-2-06/12 Coupler 2 conductor static coupler available in 6" or 12" lengths. Connects two tapelights with a 6" or 12" gap between strips.

WIRING ACCESSORIES FOR BACK LIT PANEL

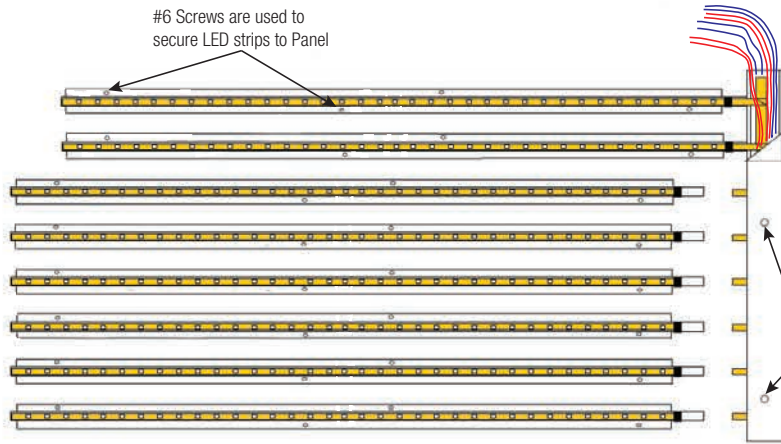


Connection track is manufactured as a complete unit with integral connectors at 3" OC spacing and 3/16" diameter mounting screw holes every 12" along the length.

- ILW-CONN-1** Connection Track - 1'
- ILW-CONN-2** Connection Track - 2'

- ILW-CONN-3** Connection Track - 3'
- ILW-CONN-4** Connection Track - 4'
- ILW-CONN-C** Connection Track - Custom Lengths (Consult Factory)

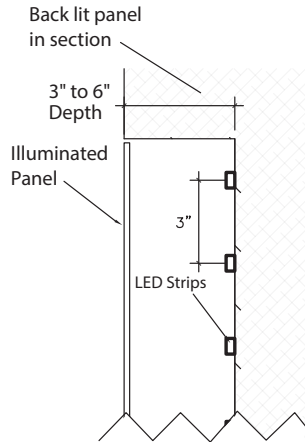
INSTALLATION WIRING DIAGRAMS - LARGE BACK LIT PANEL



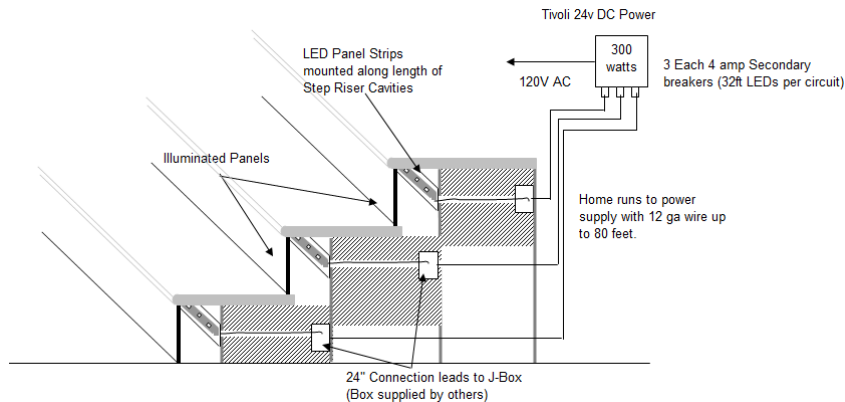
Section cut away so that internal wiring may be seen.

Section Track Terminals extend outward from the track for simple connection to LED Strips. This configuration shows 2 each terminals to each pair of lead wires. Each terminal can power up to 11 feet of LED strip. Each LED set can power up to 22 feet.

Connection Track is manufactured as a complete unit with 3/16" DIA mounting screw holes every 12" along the length. Screw TBD by contractor based on mounting surface.



INSTALLATION WIRING DIAGRAMS - BACK LIT STAIR CASES AND NICHE

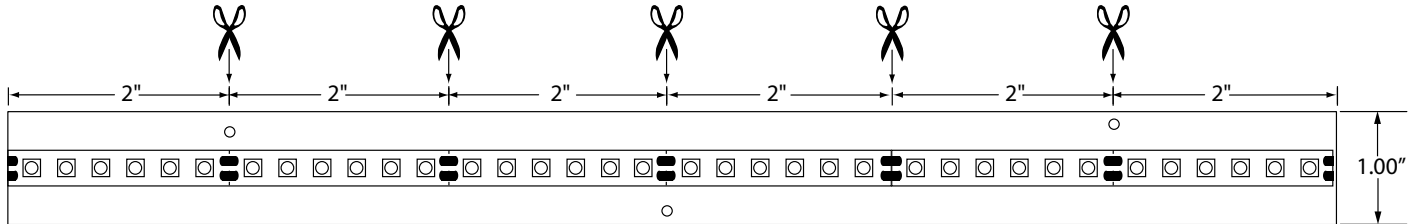


ILLUMIWALL™ LED BACKLIGHTING SYSTEM

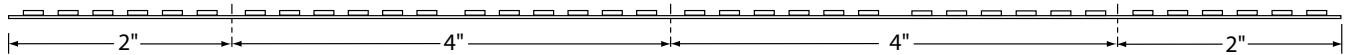
CAT NO	COLOR	VIEWING ANGLE	WAVELENGTH (COLOR TEMP)	WATTS PER STRIP (FOOT)	LUMENS PER STRIP (FOOT)	LUMENS PER WATT	LEDS PER STRIP	MAX LEDS PER CONTINUOUS RUN*
TPL-SB-3.0-I-24-C-24	Delux Warm White 2400°K	120°	2300-2500°K	3.0W	185	61.67	36	792 (22 ft)
TPL-SB-3.0-I-27-C-24	Delux Warm White 2700°K	120°	2600-2800°K	3.0W	160	53.34	36	792 (22 ft)
TPL-SB-3.0-I-30-C-24	Warm White 3000°K	120°	2900-3100°K	3.0W	165	55.00	36	792 (22 ft)
TPL-SB-3.0-I-35-C-24	Neutral White 3500°K	120°	3400-3600°K	3.0W	193	64.34	36	792 (22 ft)

*Max continuous run lengths based on 3.0A load.

FIELD CUTTABLE SECTIONS

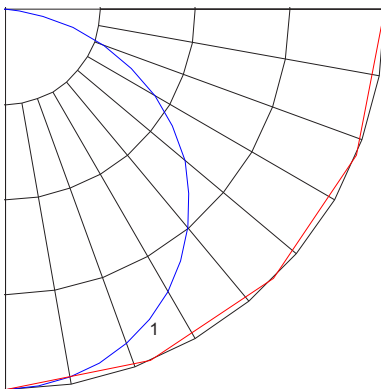


TOP VIEW



MOUNTING HOLE SPACING

SIDE VIEW



Maximum Candela = 95.16 Located at Horizontal Angle = 0, Vertical Angle = 0
 #1 - Vertical Plane through Horizontal Angles (1 - 180) (Through Max Cd)
 #2 - Horizontal Cone through Vertical Angle (0) (Through Max Cd)

LED BINNING

LEDs are made in lots and sorted into bins based on wavelength ranges that achieve specific colors. Generally, Tivoli uses a range of 2350°K to 2800°K for Delux Warm White, 2850°K to 3350°K for Warm White, 3400°K to 4100°K for Neutral White, and 4150°K to 5500°K for Cool White. Individual colors are bin sorted within a range that meets the specific requirements of each product. White LEDs vary slightly in color temperature within a particular bin. Tivoli references each sub-bin location on the packing list and also labels this information on each product. For replacement stock or color matching with existing product consult factory.

COEFFICIENTS OF UTILIZATION-ZONAL CAVITY METHOD EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50				30				10				0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	109	104	99	96	106	101	98	94	97	94	91	93	91	88	90	88	86	84	84	84	84
2	99	90	83	78	96	88	82	77	85	79	75	82	77	73	78	75	71	69	69	69	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58	58	58	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49	49	49	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	49	45	43	43	43	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37	37	37	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33	33	33	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29	29	29	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	26	26	26	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24	24	24	24

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RECOMMENDED POWER SUPPLIES

CAT NO	APPLICATION	PRIMARY AND SECONDARY	TOTAL WATTAGE / AMPERAGE PER BREAKER	LISTING	DIMENSIONS	ELECTRONIC OR AC MAGNETIC	DIMMABLE (Y OR N)
ADUL-120-1-4-24-D	Indoor	120-277V AC / 24V DC	96W / 1X4A	cULus	10"W X 10"L X 4"D	Electronic	Y: F
ADUL-240-2-4-24-D		120-277V AC / 24V DC	192W / 2X4A	cULus	10"W X 10"L X 4"D	Electronic	Y: F
ADUL-320-3-4-24-D		120-277V AC / 24V DC	288W / 3X4A	cULus	10"W X 10"L X 4"D	Electronic	Y: F
JT-100-1-4-24-D		120V AC / 24V DC	96W / 1X4A	cETLus	4.25"W X 11.00"L X 4.00"D	Magnetic	Y: A, C & E
JTH-100-1-4-24-D		277V AC / 24V DC	96W / 1X4A	cETLus	4.25"W X 11.00"L X 4.00"D	Magnetic	Y: B & D
JT-300-3-4-24-D		120V AC / 24V DC	288W / 3X4A	cETLus	8.50"W X 16.00"L X 4.50"D	Magnetic	Y: A, C & E
JTH-300-3-4-24-D		277V AC / 24V DC	288W / 3X4A	cETLus	8.50"W X 16.00"L X 4.50"D	Magnetic	Y: B, D & E
MT-100-1-4-24-DD		120-240, 277V AC	96W / 1X4A	cULus	2.50"W X 12.32"L X 1.56"D	Electronic	Y: 0-10V
MW-120-1-4-24-D		120-277V AC / 24V DC	96W / 1X4A	UL/CE	8.66"W X 2.67"L X 1.53"D	Electronic	Y: F

DIMMERS

SELECTOR	DIMMER	TYPE	CONTROL SIGNAL	INPUT VOLTAGE	OUTPUT VOLTAGE	MAX LOAD	BREAKER RATING	DIMENSIONS
A	N-600	AC Magnetic	N/A	120V AC	120V AC	450W	N/A	Recessed Single Gang Box
B	NH-600	AC Magnetic	N/A	277V AC	277V AC	450W	N/A	Recessed Single Gang Box
C	N-1000	AC Magnetic	N/A	120V AC	120V AC	800W	N/A	Recessed Dual Gang Box
D	NH-1000	AC Magnetic	N/A	277V AC	277V AC	800W	N/A	Recessed Dual Gang Box
E	N-1500	AC Magnetic	N/A	120V AC	120V AC	1200W	N/A	Recessed Dual Gang Box
F	DIM-OT-1-4-D	Control Interface	0-10V DC	24V DC	24V DC	96W	4A*	7"L X 1½"W X ¾"H

DIM-OT is a full range control interface that receives dimming signal from various controllers (0-10V DC).
Consult factory for more information.

*DIM-OT applications require 1 each DIM-OT per 4 amp circuit

PRODUCT SPECIFICATION GUIDE

LIGHT SOURCE	MAX CONTINUOUS RUN LENGTH*
All color temperatures	22 ft

*Max continuous run lengths based on 3.0A load.

MTBF

Mean Time Between Failures (MTBF) for LEDs: While Tivoli utilizes LEDs provided by industry leading vendors, these are electrical components with calculated manufacturers mean time between failures (MTBF). MTBF is rated as the average point at which ½ of color LEDs will lose 50% of their original brightness. MTBF for White LEDs is based on when ½ are reduced to 70% of their original brightness.

Typically, LED product failures occur within fixture construction, interdependent component failure, or operation under adverse conditions. Tivoli operates LEDs at a derated current to insure that LED MTBF values are based on product fixture construction and real application standards.

Still, conditions such as excessive voltage, vibration, heat, and other adverse conditions may negatively effect the life of LEDs.

TIVOLI 24 V DC POWER SUPPLY

