# **VANISHING POINT TUBO SMALL**

LED 24VDC TRACK HEAD

DESIGNED BY GREGORY KAY | ASSEMBLED IN AMERICA | PATENT PENDING

REV 10.21.20





Vanishing Point .5" Opening Plaster-In, Remote Power supply (Order separately)

#### **DESCRIPTION:**

The Vanishing Point Tubo Small Plaster-In System with integrated LED. Offered in four distinct mounting options for drywall and millwork, the Vanishing Point Tubo Small achieves the most minimal connection producing a refined and continuous architecture within any indoor environment You may feed up to 15 Tubo Small fixtures, with our 24VDC, Class 2 remote power supply. Patent Pending.

#### **DRYWALL APPLICATIONS (PLASTER-IN)**

**VR** - Remote Power Supply has NO visible canopy line, just the small (0.5") point of connection where the fixture stem disappears into the ceiling. 24VDC remote power supply (Order Separately). Title 24 compliant.

**V2P** – ELV power supply fits within the junction box. The plaster-in and paint plate allows for the slightest outline of the 2.0" flush, magnetic canopy cover. 24 VDC/50W IC or 60W Non-IC ELV.

#### MILLWORK APPLICATIONS

**POWER SUPPLIES & DIMMING\*** 

Power Consumption: 6.5-8.8 watts

\*Remote power supplies are ordered separately

120VAC/24VDC

Dimming only

Remote Power Class 2 wiring,

50W IC or 60W Non-IC ELV

0-10V Dimming, up to 100 Watts

(power supply inside J-box) ELV

**V2MR** - Connection point at ceiling 2.0" canopy sits flush in Millwork ceilings for a clean look. 24VDC remote power supply (sold separately). Available in Black. Title 24 compliant.

**V2MP** - Connection point at ceiling 2.0" canopy sits flush in Millwork ceilings with included ELV power supply that fits inside J-BOX. Available in Black. 24 VDC/50W IC or 60W Non-IC ELV.

#### **APPLICATIONS**

Input Voltage

VR / V2MR:

V2P / V2MP:

Designed for indoor use only. Ideal applications in residential, commercial, retail and hospitality environments include kitchens, living rooms, offices, conference rooms, architectural spaces, lobbies, hotels, restaurants and luxury health spas.



V2P Vanishing Point 2" Flush Canopy to dry wall, with ELV power supply in J-Box

#### SPECIFICATIONS

Construction: Die Cast Aluminum

Aim/Adjustment: 90° Tilt, 360° Rotation
Color Rendering: COB Chromaticity range within a

2-step MacAdam Ellipse

Average LED life: 60,000 hrs



EAM ING								
		BEAM ANGLE REFERENCE 40°						
COLOR TEMPERATURE	24K	27K	30K	30D	35K			
TOTAL LUMENS	523	427	494	428	485			
WATTS	8.33	8.34	8.6	6.52	8.79			
LUMENS PER WATT (Im/w)	63	51.2	55.5	65.7	55.2			
CRI	93	97	93	97	98			
TM-30 DATA	R9: 61 Rf: 91.3 Rg: 98.9	R9: 95 Rf: 93.2 Rg: 99.3	R9: 65 Rf: 90.7 Rg: 99.9	R9: 83 Rf: 93.1 Rg: 100.5	R9: 99 Rf: 93.3 Rg: 99.5			
LAMP LIFE	60,000 Hours, 70% Lumen Maintenance							



**V2MP**Vanishing Point 2" Flush Canopy for Millwork
Ceiling with ELV power supply in J-Box

#### WARRANTY / LABELS

Pro-rated 5 year warranty. Assembled in America, ETL (Conforms to UL1598 and CSA 22.2 #250.0) Title 24 (Remote power supplies only), RoHs

#### **FINISH**



Black

RK



WН

Ce	System		Туре		Fixture		Head / Beam Spread Lens	С	olor Temperature		Finish
	VR -	-	FJ24	_	TUBS	_	WF	-	30K	-	WH
	Vanishing Point Drywall Plaster-in with .5" opening with Universal or 0-10 Remote Power supply (order separately) Vanishing Point 2" Flush, Magnetic Canopy Cover to dry wall, ELV power supply in J-box Vanishing Point 2" Flush canopy for Millwork, with Universal or 0-10 Remote Power supply (ordered separately) Vanishing Point 2" Flush canopy for Millwork with ELV power supply in J-box ELV	FJ24	Fast Jack 24VDC	1	TUBS Tubo Small	FI	P Spot 20° - Flood 40° F Wide Flood 60°	27 30 30	IK 2400K IK 2700K IK 3000K ID 3000K Warm Dim to 1800K IK 3500K	W	K Black H White*
											lot available

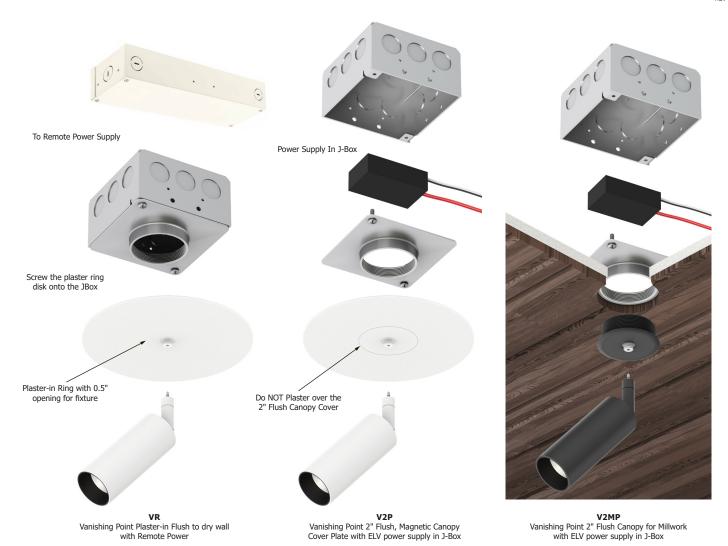
PROJECT FIXTURE TYPE DATE

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LED 24VDC TRACK HEAD



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D - Distance from TUBO SMALL fixture FC - Initial foot candles at the center of beam DIA - Diameter

SPOT E	BEAM ANGLE 20	0	T
D'	FC	DIA.	/ \
1'	1470	3	/ ! \
2'	397	6	
3'	177	9	/   \
4'	98	13	/   \
5'	65	16	/   \
6'	44	19	
7'	32	22	
8'	26	25	
			DIA.

NARRO	OW FLOOD BEAM	ANGLE 40°	
			$\bigwedge$
D'	FC	DIA.	/   \
1'	1242	5	/   \
2'	323	10	/   \
3'	144	15	/   \
4'	82	20	/   \
5'	52	26	/   \
6'	36	31	/   \
7'	26	36	/   \
8'	19	41	/   \
			DIA.

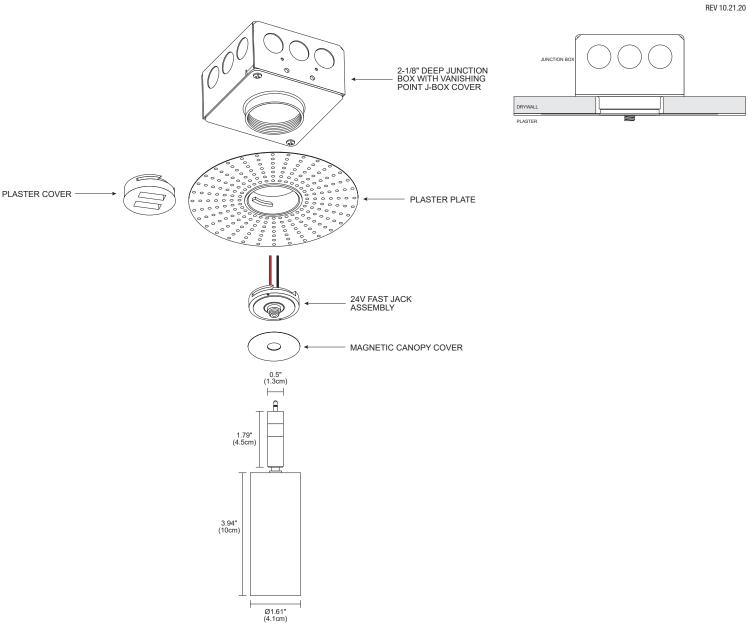
			$\Lambda$
D'	FC	DIA.	/   \
1'	837	8	/   \
2'	214	16	/   \
3'	96	23	/   \
4'	54	31	/   \
5'	35	39	/   \
6'	24	47	/   \
7'	18	55	/   '
8'	13	62	

PROJECT	FIXTURE TYPE		DATE	
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# **VANISHING POINT TUBO SMALL**

LED 24VDC TRACK HEAD





#### **ADDITIONAL LENSES & ACCESSORIES**

FILM LENS SOFT FOCUS FILM LENS LINEAR SPREAD		HEXCELL LOUVER			
DIFFUSES A BEAM PATTERN T	LINEAR SPREAD LENS DIRECTS LIGHT THROUGH 10° / 15°/ 25° DEGREE BEAM LENS CREATING AN ELONGATED SHAPE, USED FOR LONG RECTANGLE PAINTINGS OR ART WORK. LINEAR SPREAD LENS DIRECTS LIGHT THROUGH 35° / 40°/ 60° DEGREE BEAM LENS CREATING AN ELONGATED OVAL SHAPE, USED IN ART WORK AND WALL WASH APPLICATIONS.		HEXCELL LOUVER ACCESSORY FOR ADDITIONAL DIFFUS		
	TUBO SMALL		TUBO SMALL		HEXCELL LOUVER
PRODUCT		PRODUCT		PRODUCT	
ORDERING CODE	LF-TUBS-SF, MF, WF  SF = SMALL FILM  MF = MEDIUM FILM  WF = WIDE FILM	ORDERING CODE	LF-TUBS-LS	ORDERING CODE	LO16-H

FIXTURE TYPE PROJECT DATE

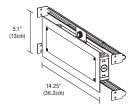




24VDC 0-10V REMOTE POWER SUPPLY, STATIC & DYNAMIC TUNABLE WHITE DUAL CONTROL.

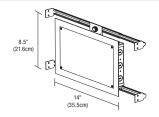
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	0-10 VOLT (010)	<b>POWER SUPPLIES &amp; RECOMMEND</b>	DED DIMMERS†			
	PSB-25W-010-24VDC	PSB-60W-010-24VDC	PSB-96W-010-24VDC	PSB-2X96W-010-24VDC		
ORDERING CODE	6	6	o'in	5 : (5 0 : 0 : 0		
		SPECIFICATIONS	'	-		
MAXIMUM LOAD	25W	60W	96W	2X96W		
INPUT VOLTAGE	120VAC	120-277VAC	120-277VAC	120-277VAC		
OUTPUT VOLTAGE	24VDC	24VDC	24VDC	24VDC		
DIMENSIONS	12.4" X 3.12" X 2.18"	12.4" X 3.12" X 2.18"	12.4" X 3.12" X 2.18"	12.15" X 6.48" X 2.18"		
CLASSIFICATION	CLASS 2	CLASS 2	CLASS 2	CLASS 2		
IN-WALL MOUNTING	PSB-25W-010-24VDC-IW	PSB-60W-010-24VDC-IW	PSB-96W-010-24VDC-IW	PSB-2X96W-010-24VDC-IW		
	0-10 VOLT (010)	POWER SUPPLIES & RECOMMENI	DED DIMMERS†			
ORDERING CODE	PSB-3X96W-010-24VDC			PSB-4X96W-010-24VDC		
		SPECIFICATIONS				
MAXIMUM LOAD	3X9	96W	4X96W			
INPUT VOLTAGE	120-2	77VAC	120-277VAC			
OUTPUT VOLTAGE	24\	/DC	24VDC			
DIMENSIONS	14" X 1	0" X 3"	17" X 13" X 3"			
CLASSIFICATION	CLA	SS 2	CLASS 2			
IN-WALL MOUNTING	N	/A	N/A			
		DIMMING & CONTROLS				
PHILIPS SUNRISE: SR1200ZTUNV		•	•			
LUTRON DIVA: DVTV-WH, DVSTV-WH		•	•			
LUTRON NOVA T: NTSTV-DV-XX		•	•			
LUTRON GRAFIX EYE QS: QSGRJ-XP		•		•		
LUTRON RADIO RA2: RRD-10ND		•		•		
LEVITON: LEV40050		•		•		
LEVITON IP710-LFZ		•		•		
LEGRAND: ADPD4FBL3P2W4		•	•			



**5.1 x 14.25 inch In-Wall Mounting Kit:** Includes power supply, box cover and stud hangers for installing Junction Box in wall. Select "IW" in the options section of compatible power supply ordering codes if an In-Wall Mounting Kit is needed.

Ordering Codes: PSB-25W-010-24VDC-IW, PSB-60W-010-24VDC-IW PSB-96W-010-24VDC-IW

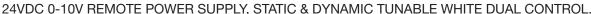


**8.5 x 14 inch In-Wall Mounting Kit:** Includes power supply, box cover and stud hangers for installing Junction Box in wall. Select "IW" in the options section of compatible power supply ordering codes if an In-Wall Mounting Kit is needed.

Ordering Codes: PSB-2X96W-010-24VDC-IW

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#### **SAMPLE WIRING DIAGRAMS 24VDC 010**

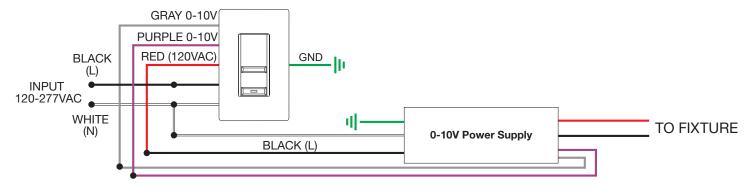
**Application:** 0-10V Dimming Applications For Static White and Warm Dim 0-10V Dual Dimming.

Dimming: Dimmable with 0-10V dimmers: Signify (Phillips) Sunrise: SR1200ZTUNV, Leviton D

Dimmable with 0-10V dimmers: Signify (Phillips) Sunrise: SR1200ZTUNV, Leviton Dimmers: LEV40050, IP710-LFZ, \*IP710-DLZ \*(Built in LED locator light) Legrand Dimmer: ADPD4FBL3P2W4 Lutron Systems: Lutron GRAFIX Eye QS Main Unit (with DRX-TVI) Radio

Ra2 (with GRX-TVI)

#### **0-10V DIMMER**



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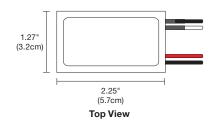
Product

24VDC, PS-60L-ELV



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Side View

#### **DESCRIPTION**

Compact, lightweight remote electronic 60W/24V LED Power Supply\* converts standard 120VAC voltage to 24VDC and features built-in short-circuit protection. The low voltage output may be dimmed using an electronic low voltage dimmer. The Power Supply is certified to be used inside a standard Junction Box enclosure. Power Supply features short circuit and overload protection. Indoor applications only.

\*Electrical Panels using Seimens/Murray AFCI breakers are not compatible with this ELV transformer. Use 0-10 Volt power supplies with this breaker.

## POWER INPUT 120 volts AC, 60Hz

POWER OUTPUT Class 2; 24 volts DC 2.5A 60 watt maximum

**DIMENSIONS** 2.25" x 1.25" x 0.83"

DIMMER TYPE Electronic Low Voltage Dimmer Lutron: Diva

#DVELV-300P; Skylark #SELV-300P; Maestro

#MAELV-600



#### **APPLICATIONS**

Indoor\*

To avoid overheating the power supply, install it in a ventilated remote location where air flows. Maintain proper spacing among power supplies when multiple power supplies are installed in the same remote location.

# PS Power Supply 60W 60 Watt ELV Electronic Low Voltage 24VDC 24 Volt DC

Dimming

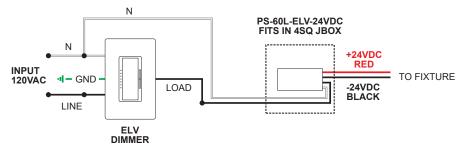
Wattage

#### **SAMPLE WIRING DIAGRAMS 24VDC ELV**

**Application:** ELV dimming for Static White

**Dimming:** Dimmable with ELV dimmer: Legrand, Adorne ADTP703TU; Lutron: Diva DVELV-300P, Skylark SELV-300P, Maestro MAELV-600 and

Radio Ra 2

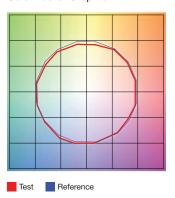




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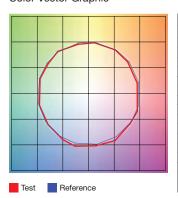
**TM-30-15 DATA:** The data below is for Tubo. Consistent color temperatures among multiple track heads is possible through a 3 phase binning process in which each order is inspected with a color meter to ensure uniformity.

**2400K** | Rf: 91.2 | Rg: 96.8 Color Vector Graphic



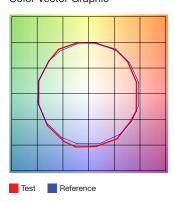
		GRAPHIC	SHIFTS %
HUE BIN	Rf	CHROMA	HUE
1	92.0	-2.4%	1.5%
2	94.7	-2.1%	0.0%
3	95.4	-1.9%	-0.1%
4	88.7	-6.7%	-3.1%
5	92.8	-5.6%	1.0%
6	92.7	-3.4%	3.4%
7	89.9	-4.3%	4.1%
8	92.4	-1.4%	4.4%
9	89.0	-0.6%	5.8%
10	88.9	0.4%	6.2%
11	89.7	4.0%	5.4%
12	92.6	3.0%	-0.7%
13	90.9	1.1%	-7.0%
14	89.9	0.5%	-5.8%
15	92.1	-3.2%	0.1%
16	88.9	-1.7%	-6.3%

**3000K** | Rf: 88.1 | Rg: 99.7 Color Vector Graphic



		GRAPHIC	SHIFTS %
HUE BIN	Rf	CHROMA	HUE
1	92.5	-3.1%	0.3%
2	93.3	-2.3%	1.9%
3	90.9	-0.8%	3.9%
4	94.3	-1.1%	1.4%
5	92.5	-2.6%	1.5%
6	96.4	1.2%	-0.3%
7	92.6	-2.5%	-0.0%
8	96.9	-1.4%	0.2%
9	92.3	-1.8%	4.3%
10	86.6	-0.7%	7.0%
11	86.5	2.4%	8.2%
12	89.8	5.9%	1.7%
13	93.9	2.6%	-2.7%
14	89.4	5.1%	-5.8%
15	90.1	-0.1%	-4.7%
16	86.5	0.3%	-9.7%

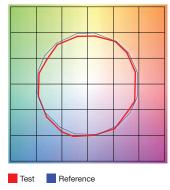
**3000D** | Rf: 89.8 | Rg: 101.4 Color Vector Graphic



		G15 ii 1110 01111 10 70			
HUE BIN	Rf	CHROMA	HUE		
1	90.2	-4.2%	1.5%		
2	90.9	-2.0%	3.7%		
3	87.9	0.8%	5.5%		
4	92.1	-0.9%	0.6%		
5	93.0	1.5%	1.6%		
6	92.2	3.9%	-0.2%		
7	92.1	-0.3%	-2.0%		
8	96.7	0.0%	-1.2%		
9	92.5	-0.6%	3.7%		
10	88.3	1.1%	7.0%		
11	87.2	4.1%	7.4%		
12	87.2	6.7%	-1.0%		
13	88.2	3.8%	-7.2%		
14	85.3	4.3%	-9.9%		
15	90.9	-2.2%	-3.6%		
16	83.4	-2.2%	-11.2%		

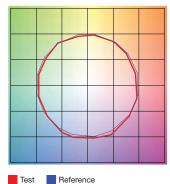
GRAPHIC SHIFTS %

# **2700K** | Rf: 87.7 | Rg: 96.1 Color Vector Graphic



		GRAPHIC	SHIFTS %
<b>HUE BIN</b>	Rf	CHROMA	HUE
1	88.0	-4.3%	2.6%
2	91.6	-2.4%	2.0%
3	93.7	-1.4%	1.9%
4	88.9	-5.6%	-3.1%
5	92.3	-5.5%	-0.5%
6	92.9	-3.5%	0.1%
7	84.5	-7.5%	4.6%
8	90.8	-3.0%	4.4%
9	84.5	-1.3%	8.3%
10	83.9	2.0%	9.8%
11	87.2	5.3%	7.1%
12	89.2	5.4%	-2.6%
13	88.7	0.3%	-7.8%
14	86.8	1.7%	-9.3%
15	87.6	-5.4%	-1.3%
16	83.6	-3.3%	-9.5%

**3500K** | Rf: 86.1 | Rg: 95.5 Color Vector Graphic



		GRAPHIC	SHIFTS %
<b>HUE BIN</b>	Rf	CHROMA	HUE
1	90.8	-3.8%	0.3%
2	92.3	-2.8%	2.1%
3	89.7	-1.0%	4.3%
4	92.6	-1.4%	1.7%
5	91.8	-3.1%	1.3%
6	96.2	0.8%	-0.4%
7	92.9	-3.2%	0.2%
8	94.3	-2.5%	1.5%
9	90.4	-2.5%	5.2%
10	84.3	-1.4%	9.5%
11	83.1	3.5%	9.8%
12	88.2	4.8%	3.4%
13	94.0	2.7%	-2.0%
14	88.7	5.9%	-5.8%
15	88.7	0.7%	-5.9%
16	86.8	-0.7%	-6.7%

PROJECT FIXTURE TYPE DATE

#### VANISHING POINT TUBO LARGE LED 24VDC



DESIGNED BY GREGORY KAY | ASSEMBLED IN AMERICA | PATENT PENDING

REV 10.21.20



Vanishing Point .5" Opening Plaster-In, Remote Power supply (Order separately)

#### **DESCRIPTION:**

The Vanishing Point Tubo Large Plaster-In System with integrated LED. Offered in four distinct mounting options for drywall and millwork, the Vanishing Point Tubo Large achieves the most minimal connection producing a refined and continuous architecture in any environment. You may feed up to 6 Tubo Large fixtures, with our 24VDC, Class 2 remote power supply. Patent Pending.

#### **DRYWALL APPLICATIONS (PLASTER-IN)**

VR - Remote Power Supply has NO visible canopy line, just the small (0.5") point of connection where the Fast Jack disappears into the ceiling, 24V remote power supply (Order Separately). Title 24 compliant.

V2P - ELV power supply fits within the junction box. The plaster-in and paint plate allow for the slightest outline of the 2.0" Magnetic, Flush canopy cover. 24 VDC/50W IC or 60W Non-IC ELV.

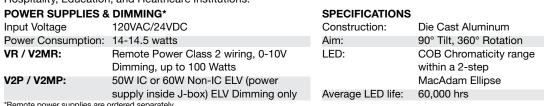
#### MILLWORK APPLICATIONS

V2MR - Connection point at ceiling 2.0" canopy sits flush in Millwork for a clean look, 24V remote power supply (order separately). Title 24 compliant.

V2MP - Connection point at ceiling 2.0" canopy sits flush in Millwork with included power supply that fits inside J-BOX. 24 VDC/50W IC or 60W Non-IC ELV.

#### APPLICATIONS:

Designed for indoor use only in drywall and millwork. Ideal applications in Commercial, Retail, Residential, Hospitality, Education, and Healthcare Institutions.







Vanishing Point 2" Flush Magnetic Canopy Cover to dry wall with ELV power supply in J-Box

V2MP Vanishing Point 2" Flush Canopy for Millwork, with ELV power supply in J-Box

#### **LAMPING**

		BEAM ANGLE REFERENCE 40°						
COLOR TEMPERATURE	24K	27K	30K	30D	35K			
TOTAL LUMENS	1324	1181	1317	1037	1356			
WATTS	14.37	14.36	14	14.45	14.43			
LUMENS PER WATT (Im/w)	92.2	82.2	91	72	94			
CRI	92.4	97	92	97	97			
TM-30 DATA	R9: 60 Rf: 91.3 Rg: 99.1	R9: 97 Rf: 93.1 Rg: 99	R9: 92 Rf: 90.8 Rg: 99	R9: 88.7 Rf: 90.8 Rg: 100	R9: 60 Rf: 91.3 Rg: 99.1			
LAMP LIFE		60,00	00 Hours, 70% Lumen Mainter	nance				

#### **ACCESSORIES**

Field adjustable single optic reflector gives a smooth uniform beam at 15° / 25° / 40° / 60° beam spread options

TUBO LARGE	ORDERING CODE
15° BEAM SPREAD	REF-1.75-SP
25° BEAM SPREAD	REF-1.75-NF
40° BEAM SPREAD	REF-1.75-FL
60° BEAM SPREAD	REF-1.75-WF

#### **WARRANTY / LABELS**

Pro-rated 5 year warranty. Assembled in America, RoHS, ETL (Conforms to UL1598 and CSA 22.2 #250.0), Title 24 (Remote power supplies only)

#### **FINISH**



Black White <b>BK WH</b>			Head / Beam		
System	Туре	Fixture	Spread Lens	Color Temperature	Finish
VR	- FJ24	- TUBL	- NF -	- 30K	- WH
VR Vanishing Point Drywall Plaster-in with .5" opening with Universal or 0-10 Remote Power supply (order separately) V2P Vanishing Point 2" Flush, Magnetic Canopy Cover to dry wall, ELV power supply in J-box V2MR Vanishing Point 2" Flush canopy for Millwork, with Universal or 0-10 Remote Power supply (ordered separately) V2MP Vanishing Point 2" Flush canopy for Millwork with ELV power supply in J-box ELV	<b>FJ24</b> Fast Jack 24	VDC TUBL Tubo Large	SP Spot 15° NF Narrow Flood 25° FL Flood 40° WF Wide Flood 60°	24K 2400K 27K 2700K 30K 3000K 30D 3000K Warm Dim to 1800K 35K 3500K	BK Black WH White* *Not available with Millwork
PROJECT	FIXTURE TYPE			DATE	

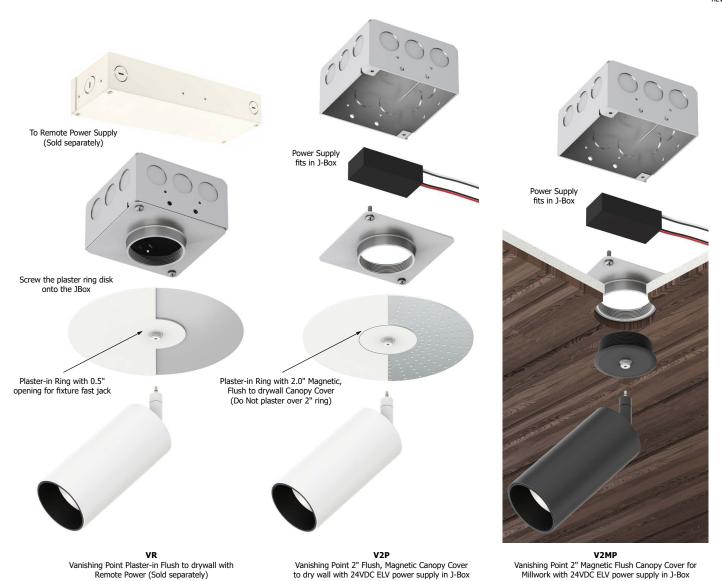


# **VANISHING POINT TUBO LARGE**

Remote Power (Sold separately)



REV 10.21.20



PROJECT FIXTURE TYPE DATE



# **VANISHING POINT TUBO LARGE** LED 24VDC



REV 10.21.20

D - Distance from TUBO LARGE DOWNLIGHT fixture FC - Initial foot candles at the center of beam DIA - Diameter

SPOT	BEAM ANGLE 15	0	
			$\Lambda$
D'	FC	DIA.	/ \
1'	2000+	3	/   \
2'	730	6	/   \
3'	343	9	/   \
4'	196	13	/   \
5'	127	16	/   \
6'	89	19	/   \
7'	66	22	/   \
8'	51	25	/   \
1			
			DIA.

NARRO	OW FLOOD BEAN	1 ANGLE 25°	•
			$\bigwedge$
D'	FC	DIA.	/   \
1'	2000+	5	/   \
2'	570	11	/   \
3'	258	16	/   \
4'	146	21	/ \
5'	93	27	/   \
6'	65	32	/   \
7'	45	37	/ \
8'	36	43	/
			DIA.

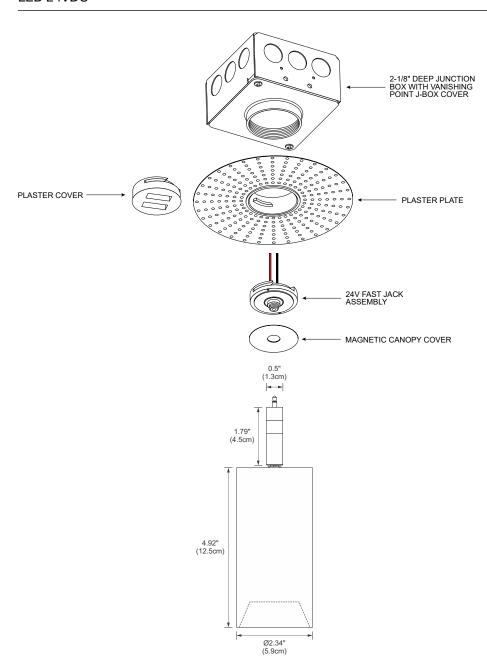
FLOOD	BEAM ANGLE 4	10°		P
				$\setminus$
D'	FC	DIA.	/	
1'	1440	8	/	\
2'	382	17	/	\
3'	172	25	/	\
4'	97	33		\
5'	63	41	/	\
6'	44	50	/	\
7'	32	58	/	\
8'	23	66	/	\
			/	
			DI	Α.

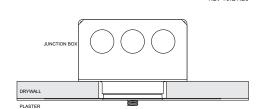
WIDE F	LOOD BEAM AN	IGLE 60°	
D'	FC	DIA.	
1'	913	14	
2'	249	28	
3'	113	42	
4'	65	55	
5'	41	69	
6'	30	83	
7'	21	97	
8'	19	111	
			DIA.

# VANISHING POINT TUBO LARGE LED 24VDC









#### **FILM LENS ACCESSORIES**

FILM LENS SOFT FOCUS		FIL	FILM LENS LINEAR SPREAD		HEXCELL LOUVER		
DIFFUSES A BEAM PATTERN T	O PROVIDE EVEN ILLUMINATION	DEGREE BEAM LE FOR LONG RECTANG LENS DIRECTS LIGH CREATING AN ELON	LENS DIRECTS LIGHT THROUGH 10° / 15°/ 25° ENS CREATING AN ELONGATED SHAPE, USED SILE PAINTINGS OR ART WORK. LINEAR SPREAD IT THROUGH 35° / 40° 60° DEGREE BEAM LENS NGATED OVAL SHAPE, USED IN ART WORK AND WALL WASH APPLICATIONS.	HEXCELL LOUV	ER ACCESSORY FOR ADDITIONAL DIFFUSION.		
	TUBO LARGE		TUBO LARGE		HEXCELL LOUVER		
PRODUCT		PRODUCT		PRODUCT			
ORDERING CODE	LF-TUBL-SF, MF, WF	ORDERING CODE	LF-TUBL-LS	ORDERING CODE	L016-H		

PROJECT FIXTURE TYPE DATE	PROJECT	FIXTURE TYPE	DATE	
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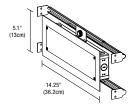




24VDC 0-10V REMOTE POWER SUPPLY, STATIC & DYNAMIC TUNABLE WHITE DUAL CONTROL.

REV 10.21.20

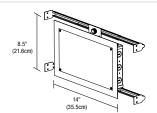
	0-10 VOLT (010)	POWER SUPPLIES & RECOMMEND	DED DIMMERS†		
ORDERING CODE	PSB-25W-010-24VDC	PSB-60W-010-24VDC	PSB-96W-010-24VDC	PSB-2X96W-010-24VDC	
		SPECIFICATIONS	I.		
MAXIMUM LOAD	25W	60W	96W	2X96W	
NPUT VOLTAGE	120VAC	120-277VAC	120-277VAC	120-277VAC	
DUTPUT VOLTAGE	24VDC	24VDC	24VDC	24VDC	
DIMENSIONS	12.4" X 3.12" X 2.18"	12.4" X 3.12" X 2.18"	12.4" X 3.12" X 2.18"	12.15" X 6.48" X 2.18"	
CLASSIFICATION	CLASS 2	CLASS 2	CLASS 2	CLASS 2	
IN-WALL MOUNTING	PSB-25W-010-24VDC-IW	PSB-60W-010-24VDC-IW	PSB-96W-010-24VDC-IW	PSB-2X96W-010-24VDC-IW	
	0-10 VOLT (010	) POWER SUPPLIES & RECOMMENI	DED DIMMERS†		
ORDERING CODE		E 3 2	PSB-4X96W-010-24VDC		
		SPECIFICATIONS			
MAXIMUM LOAD	3X	96W	4X	96W	
INPUT VOLTAGE	120-	277VAC	120-2	277VAC	
DUTPUT VOLTAGE		IVDC	24VDC		
DIMENSIONS		10" X 3"	17" X 13" X 3"		
CLASSIFICATION		ASS 2	CLASS 2		
IN-WALL MOUNTING	<u> </u>	V/A	N/A		
		DIMMING & CONTROLS			
PHILIPS SUNRISE: SR1200ZTUNV		•		•	
LUTRON DIVA: DVTV-WH, DVSTV-WH		•	•		
LUTRON NOVA T: NTSTV-DV-XX		•		•	
LUTRON GRAFIX EYE QS: QSGRJ-XP		•		•	
LUTRON RADIO RA2: RRD-10ND		•		•	
LEVITON: LEV40050		•		•	
LEVITON IP710-LFZ		•		•	
LEGRAND: ADPD4FBL3P2W4		•	•		



**5.1 x 14.25 inch In-Wall Mounting Kit:** Includes power supply, box cover and stud hangers for installing Junction Box in wall. Select "IW" in the options section of compatible power supply ordering codes if an In-Wall Mounting Kit is needed.

Ordering Codes: PSB-25W-010-24VDC-IW, PSB-60W-010-24VDC-IW

PSB-96W-010-24VDC-IW



**8.5 x 14 inch In-Wall Mounting Kit:** Includes power supply, box cover and stud hangers for installing Junction Box in wall. Select "IW" in the options section of compatible power supply ordering codes if an In-Wall Mounting Kit is needed.

Ordering Codes: PSB-2X96W-010-24VDC-IW

PROJECT	FIXTURE TYPE	DATE	





24VDC 0-10V REMOTE POWER SUPPLY, STATIC & DYNAMIC TUNABLE WHITE DUAL CONTROL.

REV 10.21.20

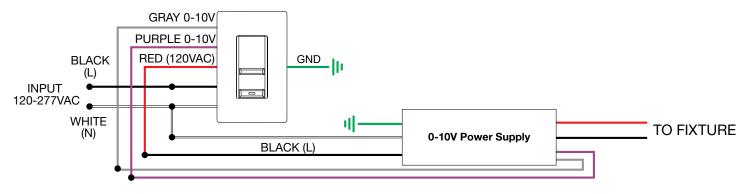
#### **SAMPLE WIRING DIAGRAMS 24VDC 010**

**Application:** 0-10V Dimming Applications For Static White and Warm Dim 0-10V Dual Dimming.

Dimming: Dimmable with 0-10V dimmers: Signify (Phillips) Sunrise: SR1200ZTUNV, Leviton Dimmers: LEV40050, IP710-LFZ, \*IP710-DLZ \*(Built in LED locator light) Legrand Dimmer: ADPD4FBL3P2W4 Lutron Systems: Lutron GRAFIX Eye QS Main Unit (with DRX-TVI) Radio

Ra2 (with GRX-TVI)

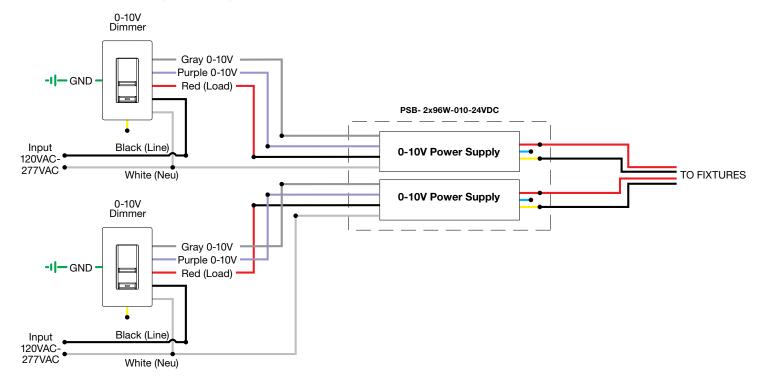
#### 0-10V DIMMER



**Application:** Dual 0-10V dimming for Dynamic/Tunable White 2000K-4000K

Dimming:

Dimmable with Dual 0-10V dimmers: Signify (Phillips) Sunrise: SR1200ZTUNV, Leviton Dimmers: LEV40050, IP710-LFZ, \*IP710-DLZ \*(Built in LED locator light), Legrand Dimmer: ADPD4FBL3P2W4, Lutron Systems: Lutron GRAFIX Eye QS Main Unit (with DRX-TVI) Radio Ra2 (with GRX-TVI)

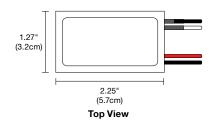


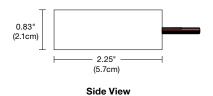
24VDC, PS-60L-ELV



REV 10.21.20







#### **DESCRIPTION**

Compact, lightweight remote electronic 60W/24V LED Power Supply\* converts standard 120VAC voltage to 24VDC and features built-in short-circuit protection. The low voltage output may be dimmed using an electronic low voltage dimmer. The Power Supply is certified to be used inside a standard Junction Box enclosure. Power Supply features short circuit and overload protection. Indoor applications only.

\*Electrical Panels using Seimens/Murray AFCI breakers are not compatible with this ELV transformer. Use 0-10 Volt power supplies with this breaker.

#### **APPLICATIONS**

Indoor\*

To avoid overheating the power supply, install it in a ventilated remote location where air flows. Maintain proper spacing among power supplies when multiple power supplies are installed in the same remote location.

POWER INPUT 120 volts AC, 60Hz

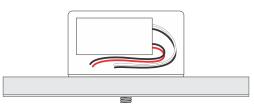
POWER OUTPUT Class 2; 24 volts DC 2.5A 60 watt maximum

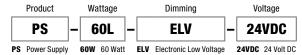
**DIMENSIONS** 2.25" x 1.25" x 0.83"

**DIMMER TYPE** Electronic Low Voltage Dimmer Lutron: Diva

#DVELV-300P; Skylark #SELV-300P; Maestro

#MAELV-600



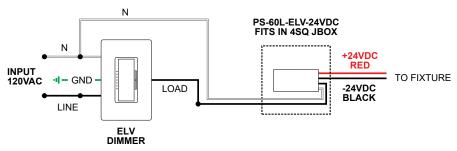


#### **SAMPLE WIRING DIAGRAMS 24VDC ELV**

**Application:** ELV dimming for Static White

**Dimming:** Dimmable with ELV dimmer: Legrand, Adorne ADTP703TU; Lutron: Diva DVELV-300P, Skylark SELV-300P, Maestro MAELV-600 and

Radio Ra 2



# **CEILING TM30 DATA**

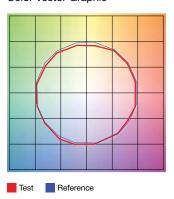
LED 24VDC



REV 10.21.20

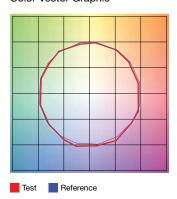
TM-30-15 DATA: The data below is for Tubo. Consistent color temperatures among multiple track heads is possible through a 3 phase binning process in which each order is inspected with a color meter to ensure uniformity.

2400K | Rf: 91.2 | Rg: 96.8 Color Vector Graphic



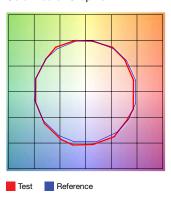
		<b>GRAPHIC SHIFTS</b> %		
<b>HUE BIN</b>	Rf	CHROMA	HUE	
1	92.0	-2.4%	1.5%	
2	94.7	-2.1%	0.0%	
3	95.4	-1.9%	-0.1%	
4	88.7	-6.7%	-3.1%	
5	92.8	-5.6%	1.0%	
6	92.7	-3.4%	3.4%	
7	89.9	-4.3%	4.1%	
8	92.4	-1.4%	4.4%	
9	89.0	-0.6%	5.8%	
10	88.9	0.4%	6.2%	
11	89.7	4.0%	5.4%	
12	92.6	3.0%	-0.7%	
13	90.9	1.1%	-7.0%	
14	89.9	0.5%	-5.8%	
15	92.1	-3.2%	0.1%	
16	88.9	-1.7%	-6.3%	

3000K | Rf: 88.1 | Rg: 99.7 Color Vector Graphic



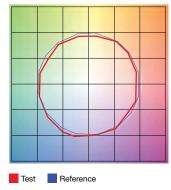
		GRAPHIC SHIFTS %		
HUE BIN	Rf	CHROMA	HUE	
1	92.5	-3.1%	0.3%	
2	93.3	-2.3%	1.9%	
3	90.9	-0.8%	3.9%	
4	94.3	-1.1%	1.4%	
5	92.5	-2.6%	1.5%	
6	96.4	1.2%	-0.3%	
7	92.6	-2.5%	-0.0%	
8	96.9	-1.4%	0.2%	
9	92.3	-1.8%	4.3%	
10	86.6	-0.7%	7.0%	
11	86.5	2.4%	8.2%	
12	89.8	5.9%	1.7%	
13	93.9	2.6%	-2.7%	
14	89.4	5.1%	-5.8%	
15	90.1	-0.1%	-4.7%	
16	86.5	0.3%	-9.7%	

3000D | Rf: 89.8 | Rg: 101.4 Color Vector Graphic



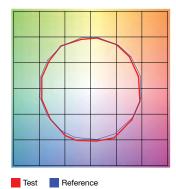
		GRAPHIC SHIFTS %		
HUE BIN	Rf	CHROMA	HUE	
1	90.2	-4.2%	1.5%	
2	90.9	-2.0%	3.7%	
3	87.9	0.8%	5.5%	
4	92.1	-0.9%	0.6%	
5	93.0	1.5%	1.6%	
6	92.2	3.9%	-0.2%	
7	92.1	-0.3%	-2.0%	
8	96.7	0.0%	-1.2%	
9	92.5	-0.6%	3.7%	
10	88.3	1.1%	7.0%	
11	87.2	4.1%	7.4%	
12	87.2	6.7%	-1.0%	
13	88.2	3.8%	-7.2%	
14	85.3	4.3%	-9.9%	
15	90.9	-2.2%	-3.6%	
16	83.4	-2.2%	-11.2%	

#### 2700K | Rf: 87.7 | Rg: 96.1 Color Vector Graphic



		<b>GRAPHIC SHIFTS</b> %		
HUE BIN	Rf	CHROMA	HUE	
1	88.0	-4.3%	2.6%	
2	91.6	-2.4%	2.0%	
3	93.7	-1.4%	1.9%	
4	88.9	-5.6%	-3.1%	
5	92.3	-5.5%	-0.5%	
6	92.9	-3.5%	0.1%	
7	84.5	-7.5%	4.6%	
8	90.8	-3.0%	4.4%	
9	84.5	-1.3%	8.3%	
10	83.9	2.0%	9.8%	
11	87.2	5.3%	7.1%	
12	89.2	5.4%	-2.6%	
13	88.7	0.3%	-7.8%	
14	86.8	1.7%	-9.3%	
15	87.6	-5.4%	-1.3%	
16	83.6	-3.3%	-9.5%	

3500K | Rf: 86.1 | Rg: 95.5 Color Vector Graphic



		GRAPHIC SHIFTS %		
HUE BIN Rf		CHROMA	HUE	
1	90.8	-3.8%	0.3%	
2	92.3	-2.8%	2.1%	
3	89.7	-1.0%	4.3%	
4	92.6	-1.4%	1.7%	
5	91.8	-3.1%	1.3%	
6	96.2	0.8%	-0.4%	
7	92.9	-3.2%	0.2%	
8	94.3	-2.5%	1.5%	
9	90.4	-2.5%	5.2%	
10	84.3	-1.4%	9.5%	
11	83.1	3.5%	9.8%	
12	88.2	4.8%	3.4%	
13	94.0	2.7%	-2.0%	
14	88.7	5.9%	-5.8%	
15	88.7	0.7%	-5.9%	
16	86.8	-0.7%	-6.7%	

PROJECT FIXTURE TYPE DATE