

# VEROBOARD®

**LED Type:** VBDFS-3014-XXXX-240-12-NS  
**Colour:** 2700K • 3000K • 3500K • 4000K • 5000K

**Job Name:** \_\_\_\_\_

**Distributor:** \_\_\_\_\_

**Type:** \_\_\_\_\_

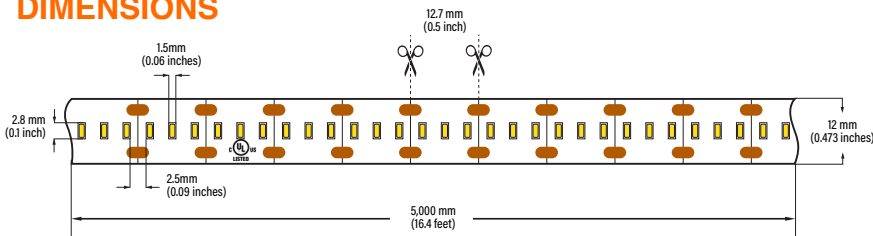
	Wattage	Brightness
Per Foot	7W/ft	727-873Lm/ft
Per Meter	22W/m	2400-2880Lm/m



## DESCRIPTION

Flexible 12 mm wide linear LED strip. Available in 5 meter (196.8 inches) rolls that can be cut every 3 LEDs (12.7 mm or 0.5 in). The LED Strip lights are manufactured with high-quality materials and designed for professional lighting. Every strip light begins with a heavy-duty dual-core copper printed circuit board (PC Board), which is then soldered with an array of chips and color options. They can be cut to any size (marked interval points) and rejoined by soldering.

## DIMENSIONS



## SPECIFICATIONS

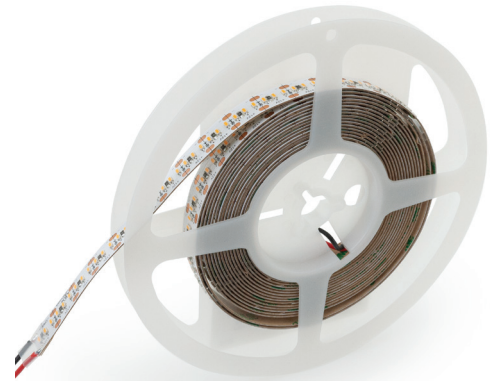
<b>Model:</b>	VBDFS-3014-XXXX-240-12-NS
<b>Color Temperature:</b>	2700K • 3500K • 3500K • 4000K • 5000K
<b>LED Type:</b>	3014 SMD
<b>LED Qty:</b>	240 LEDs per meter
<b>LM/LED:</b>	10-12 Lm per LED
<b>Input Voltage (VF):</b>	12V DC
<b>Power:</b>	22W per meter (7W/ft)
<b>Brightness:</b>	2400-2880 Lm/meter (727-873 Lm/ft)
<b>Lifespan:</b>	>50,000 hours
<b>PCB:</b>	4oz PCB, Double-side, white colour 12mm width
<b>IP Rating:</b>	IP20 (Indoor use only)
<b>Rendering Index (Ra):</b>	CRI>95
<b>Beam Angle:</b>	120°
<b>Dimmable:</b>	Yes
<b>Cut Size:</b>	Every 3 LED chips (0.5")
<b>Operating Temperature:</b>	-15°C to +40°C
<b>Dimensions:</b>	5,000 x 12 x 1.3mm (196.8" x 0.47" x 0.05")
<b>Certificates:</b>	UL / RoHs
<b>Roll Length:</b>	5-meter roll (16.4ft)



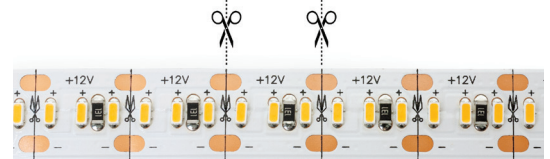
666561414474  666561423810  666561425838



666561425609  666561414504



Every 0.5 inch  
Cut Points

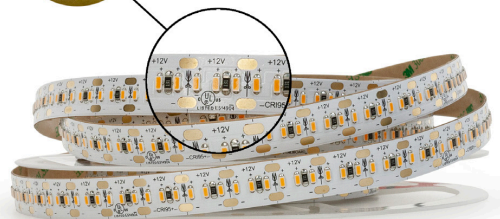


**ORDERING GUIDE**

Example part number: **VBDFS - 3014 - XXXX - 240 - 12 - NS**

MODEL	SERIES	COLOUR	LEDS/METER	VOLTAGE	LENGTH
VBDFS	3014	XXXX	240	12V	NS - XXXX
		2700K 3000K 3500K 4000K 5000K			Custom Length Full Roll (5 Meter)

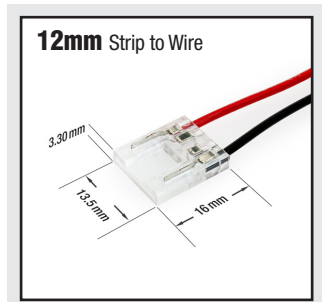
GOLD  
PLATED  
PCB



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# CONNECTORS (Sold Separately)

Note: Connectors fit in some aluminum channels only.



**12mm** Strip to Wire

**MODEL: VBD-BC-12MM-1S1W**

**Material:** Clear Plastic

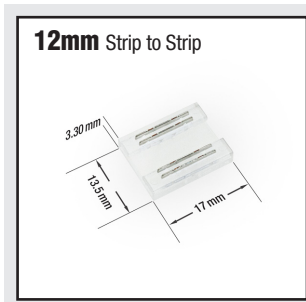
**Strip Light Width:** 12mm

**Package Content:** LED Strip to Wire Connectors (Pack of 3)

**Dimensions:** 16 x 13.5 x 3.5mm (0.62" x 0.53" x 0.13")

666561428914

\*with 7" wire on each connector



**12mm** Strip to Strip

**MODEL: VBD-BC-12MM-2S**

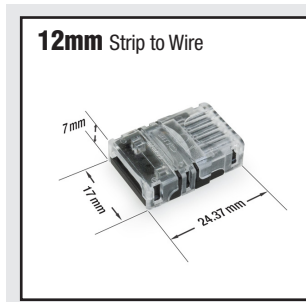
**Material:** Clear Plastic

**Strip Light Width:** 12mm

**Package Content:** LED Strip to Strip Wire Connectors (Pack of 3)

**Dimensions:** 17 x 13.5 x 3.5mm (0.66" x 0.53" x 0.13")

666561428921



**12mm** Strip to Wire

**MODEL: VBD-CON-12MM-1S1W**

**Material:** Clear Plastic

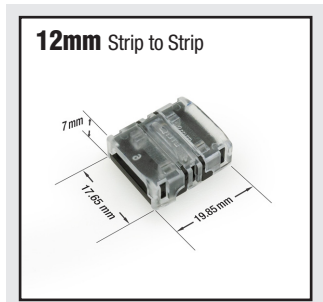
**Strip Light Width:** 12mm

**Package Content:** LED Strip to Wire Connectors (Pack of 5)

**Dimensions:** 24.2 x 17 x 8mm (0.95" x 0.66" x 0.31")

666561424633

\*Wire is NOT included



**12mm** Strip to Strip

**MODEL: VBD-CON-12MM-2S**

**Material:** Clear Plastic

**Strip Light Width:** 12mm

**Package Content:** LED Strip to Strip Connectors (Pack of 5)

**Dimensions:** 19.6 x 17.65 x 8mm (0.77" x 0.69" x 0.31")

666561424640

## Notes:

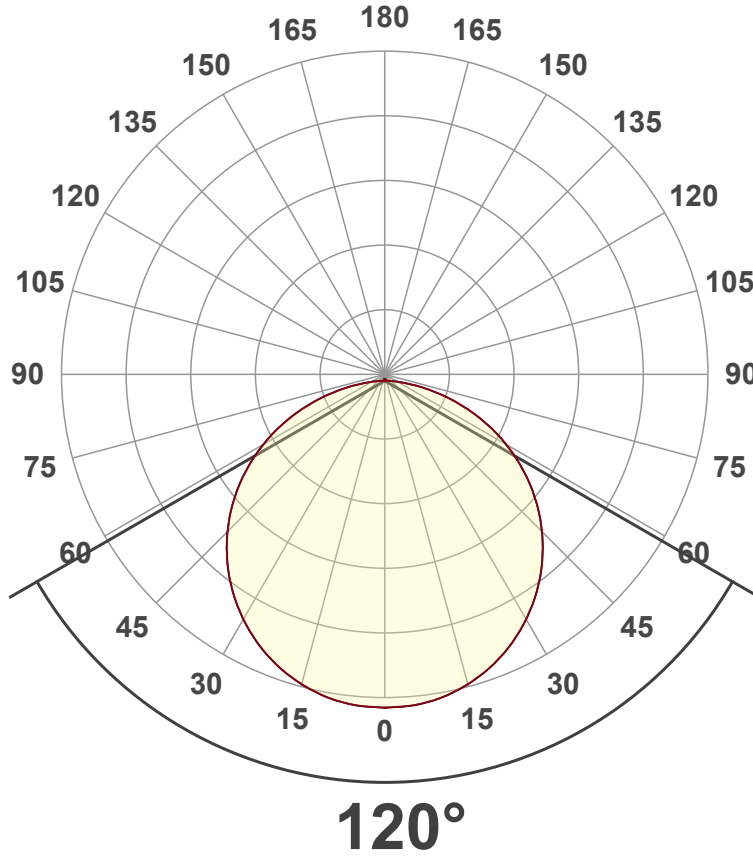
# Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 1:09:13 PM – Measurement no. VFR-230425-0164-MS

## Luminous Intensity diagram

Unit: 0-100% of peak intensity



## Main Values

Lumen Up% / Down%	0.73% / 99.27%
Peak Intensity	193 cd
Beam Angle (50%)	120°
Beam Angle (90%)	116.4°
Beam Angle (10%)	116.4°

## Cut-off Angle

Average 2,5%	176.3°
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## Field Angle

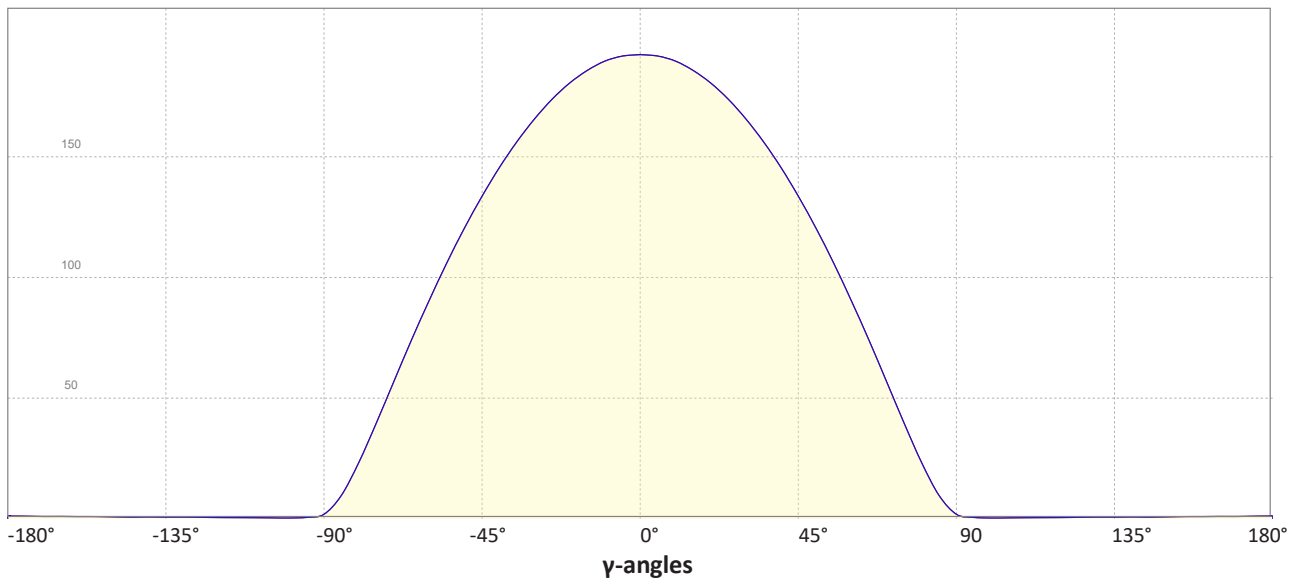
Average 10%	163.2°
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## Intensity Ratio

In 120° cone	77.1%
In 90° cone	51.9%

**C000-C180**  
**C090-C270**

## Linear distribution diagram - Intensity (candela) vs $\gamma$ -angle



# Light Measurement Report

Print date: 2023-04-26

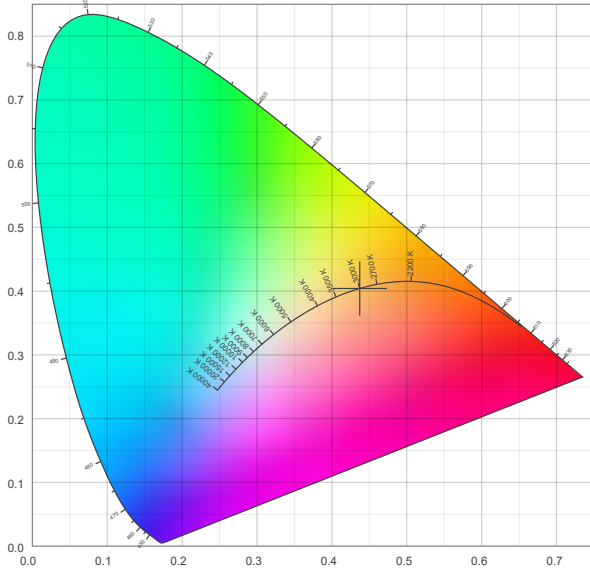
Measurement date and time: 2023-04-25 1:09:13 PM – Measurement no. VFR-230425-0164-MS

## Color details

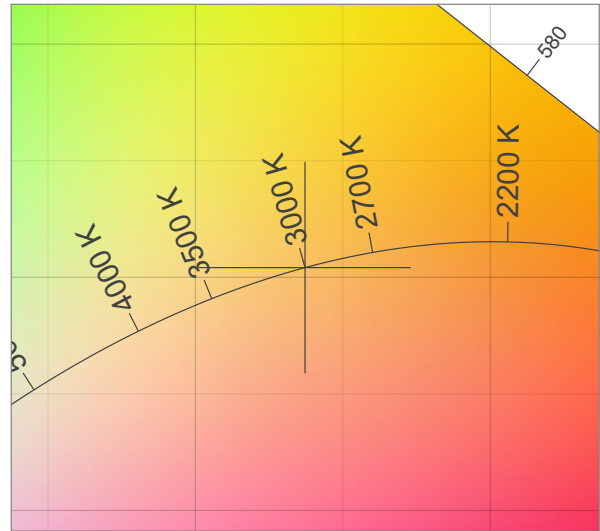
Correlated Color Temperature, Target CCT = 3000 K  
 Correlated Color Temperature, Measured CCT = 2976 K  
 Color Rendering Index CRI 95.7  
 Color Rendering Index, R9 (red component) R9 = 95.1  
 Color Rendering TM30-18 R<sub>f</sub> 95.3 – R<sub>g</sub> 102.5  
 Color Quality Scale CQS = 96.3

MacAdam Steps  
 Color coordinates CIE 1931 (x;y) = (0.437;0.404)  
 Color coordinate CIEs 1960 (u';v') = (0.251;0.348)  
 Color deviation from BBL Duv = -0.0031  
 Color coordinate CIEs 1976 (CIELUV) (u'';v'') = (0.251;0.251)

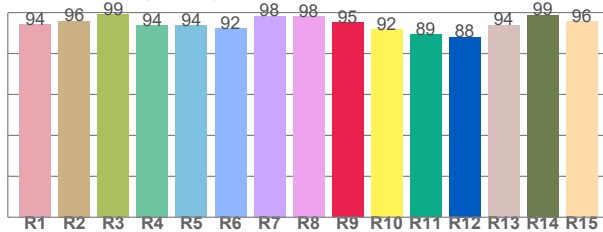
CIE 1931



CIE 1931 – zoomed on Planckian locus



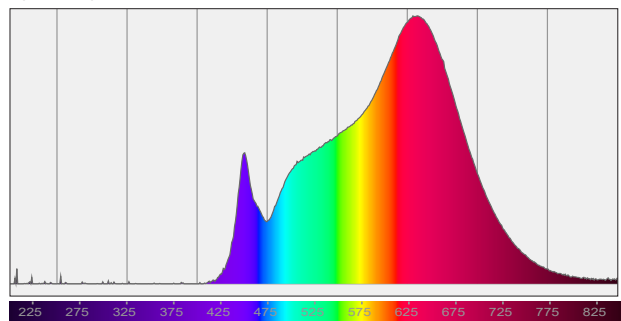
Color Rendering Index per reference color (CIE 1995)



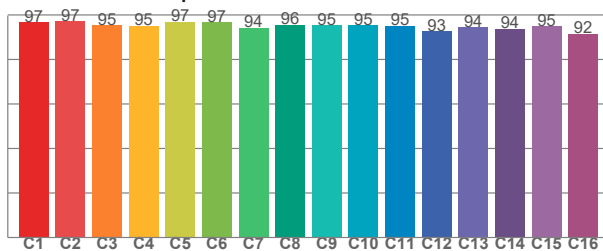
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
94.1	95.9	99.0	93.8	93.6	92.2	98.3	98.2	95.1	91.8	89.3	88.2	94.0	98.8	95.6

Spectral power distribution (SPD) / W/nm – 0-100%



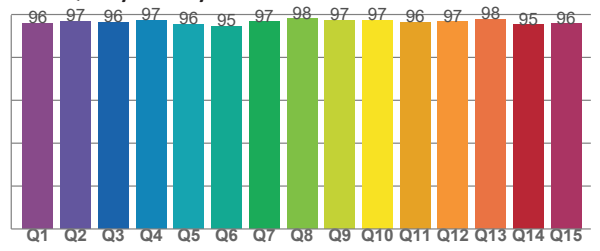
TM30-18 Rf-values per hue bin



TM30 C values, 16 binned values out of total of 99 C values

C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12	C13	C14	C15	C16
96.7	97.1	95.4	95.1	97.0	96.6	94.3	95.6	95.4	95.4	95.1	92.7	94.4	93.8	95.0	91.6

Color Quality Scale by reference color



CQS Q values

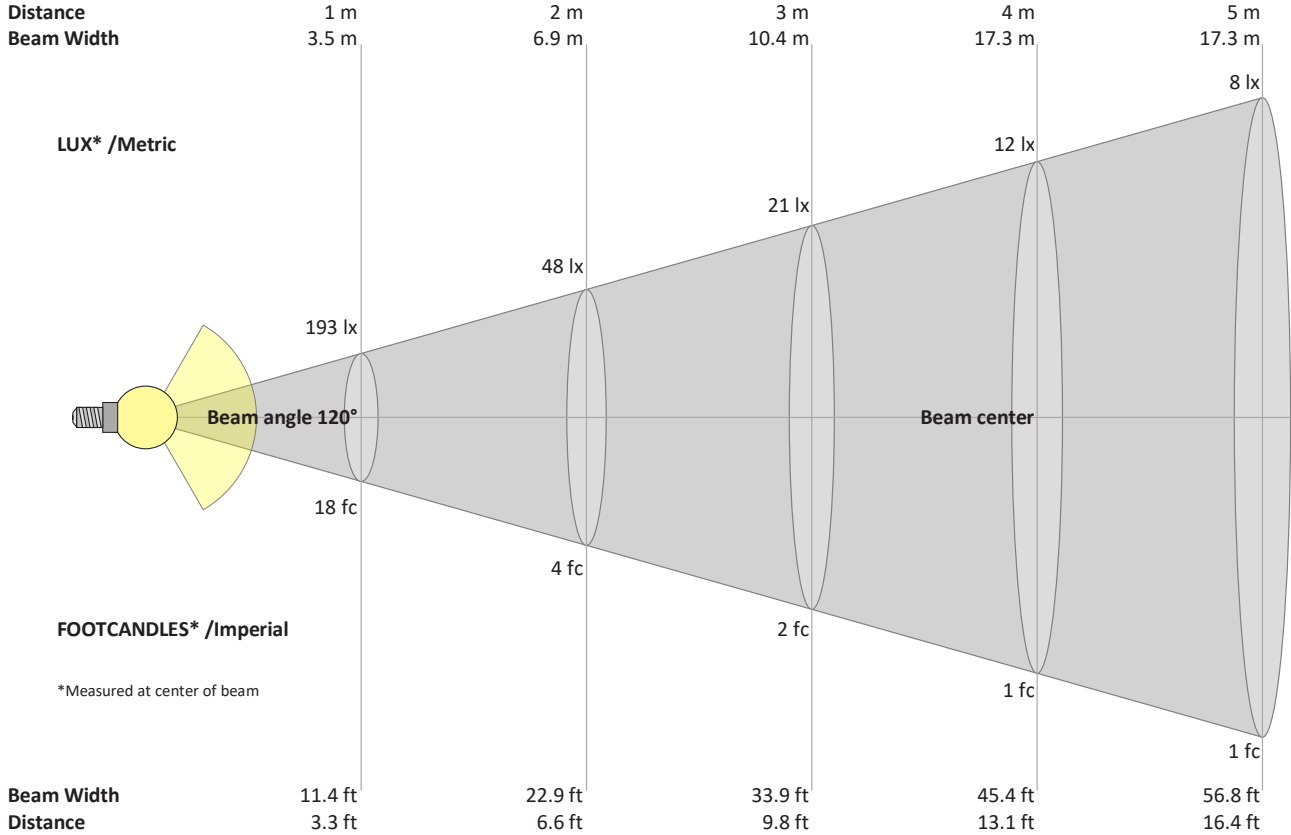
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95.9	96.7	96.4	97.3	95.6	94.6	96.5	98.0	97.4	97.3	96.4	96.7	97.6	95.2	95.7

# Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 1:09:13 PM – Measurement no. VFR-230425-0164-MS

## Beam Details



### Beam intensities from 1 – 20 m

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	m
3.3	6.6	9.8	13.1	16.4	19.7	23	26.2	29.5	32.8	36.1	39.4	42.7	45.9	49.2	52.5	55.8	59.1	62.3	65.6	ft
193	48	21	12	8	5	4	3	2	2	2	1	1	1	1	1	1	1	1	0	lux
17.9	4.5	2	1.1	0.7	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0	0	fc

### Intensities in 0° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	y
193	192	190	186	181	174	166	157	146	134	121	106	91	75	57	40	24	10	2	1	cd
100%	100%	99%	97%	94%	90%	86%	81%	76%	69%	63%	55%	47%	39%	30%	21%	12%	5%	1%	0%	of 0°val

### Intensities in 90° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	y
193	192	190	186	181	174	166	157	146	134	121	106	91	75	57	40	24	10	2	1	cd
100%	100%	99%	97%	94%	90%	86%	81%	76%	69%	63%	55%	47%	39%	30%	21%	12%	5%	1%	0%	of 0°val

### Intensities in 180° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	y
193	192	190	186	181	174	166	157	146	134	121	106	91	75	57	40	24	10	2	1	cd
100%	100%	99%	97%	94%	90%	86%	81%	76%	69%	63%	55%	47%	39%	30%	21%	12%	5%	1%	0%	of 0°val

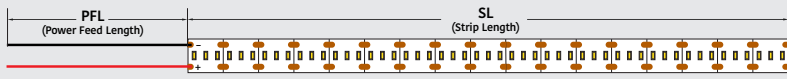
### Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	y
193	192	190	186	181	174	166	157	146	134	121	106	91	75	57	40	24	10	2	1	cd
100%	100%	99%	97%	94%	90%	86%	81%	76%	69%	63%	55%	47%	39%	30%	21%	12%	5%	1%	0%	of 0°val

## CUSTOM ORDERING GUIDE ✂

**Single Run (Straight Run):** The below ordering guide will be used for single run LED strip.

- **PFL:** Power Feed Length
- **SL:** Strip Length

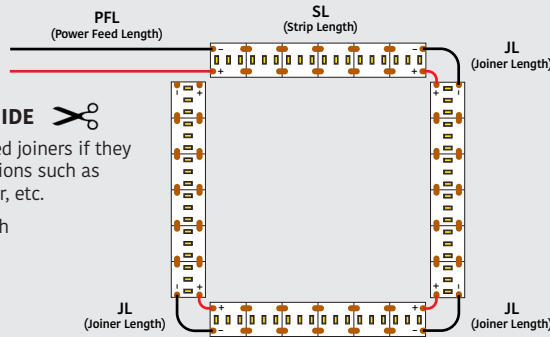


Example: 2 (QTY) x 36" (PFL) - 84" (SL)  x  -

## CUSTOM ORDERING GUIDE ✂

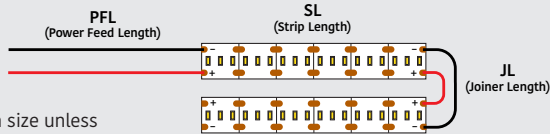
**Joiner:** LED strip lights need joiners if they are used for curve applications such as corner side, behind a mirror, etc.

- **PFL:** Power Feed Length
- **SL:** Strip Length
- **JL:** Joiner Length



x  -  -  -  -  -  -  -

Example: 1 (QTY) x 12" (PFL) - 46" (SL) - 1" (JL) - 36" (SL) - 1" (JL) - 46" (SL) - 1" (JL) - 36" (SL)



**Note:** Joiners will be 1-inch size unless customers require a specific size.

x  -  -  -

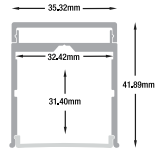
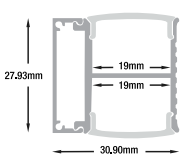
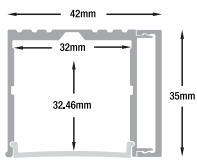
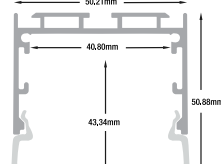
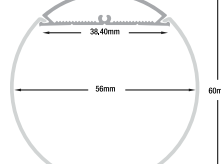
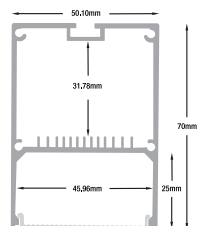
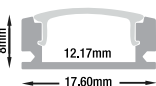
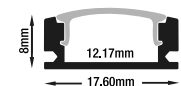
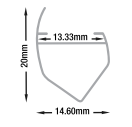
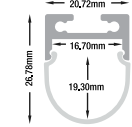
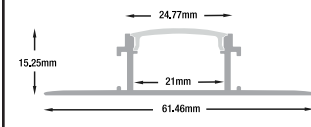
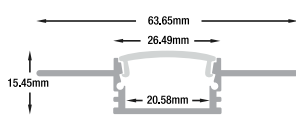
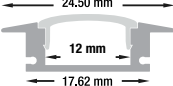
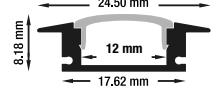
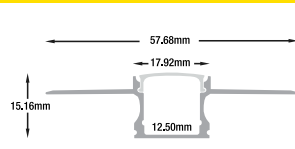
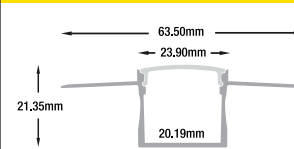
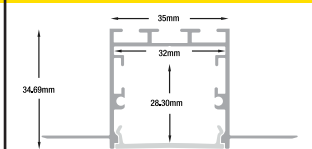

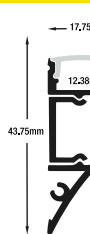
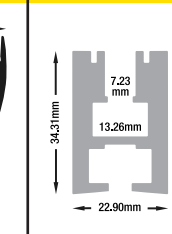
Example: 2 (QTY) x 24" (PFL) - 52" (SL) - 1" (JL) - 52" (SL)

## RECOMMENDED LED ALUMINUM CHANNELS

(Sold Separately)

<b>VBD-CH-S4</b>  <b>SKU: 666561423278</b>	<b>VBD-CH-S4B</b>  <b>SKU: 666561423285</b>	<b>VBD-CH-S6</b>  <b>SKU: 666561423315</b>			
<b>VBD-CH-S5</b>  <b>SKU: 666561423292</b>	<b>VBD-CH-S5B</b>  <b>SKU: 666561423308</b>	<b>VBD-CH-B1</b>  <b>SKU: 666561423360</b>			
<b>VBD-CH-C2</b>  <b>SKU: 666561423506</b>	<b>VBD-CH-C2B</b>  <b>SKU: 666561423513</b>	<b>VBD-CH-RF4</b>  <b>SKU: 666561423377</b>			
<b>VBD-CH-RF1</b>  <b>SKU: 666561423339</b>	<b>VBD-CH-RF1B</b>  <b>SKU: 666561423346</b>	<b>VBD-CH-C1</b>  <b>SKU: 666561423490</b>			
<b>VBD-CH-C3</b>  <b>SKU: 666561423520</b>	<b>VBD-CH-C3B</b>  <b>SKU: 666561423537</b>	<b>VBD-CH-W1</b>  <b>SKU: 666561423445</b>			
<b>VBD-CH-RF7</b>  <b>SKU: 666561423407</b>	<b>VBD-CH-RF8</b>  <b>SKU: 666561423414</b>	<b>VBD-CH-S2</b>  <b>SKU: 666561423254</b>	<b>VBD-CH-C4</b>  <b>SKU: 666561423544</b>	<b>VBD-CH-C4B</b>  <b>SKU: 666561423551</b>	<b>VBD-CH-D10</b>  <b>SKU: 666561420023</b>
<b>VBD-CH-WC4</b>  <b>SKU: 666561423629</b>	<b>VBD-CH-WC5</b>  <b>SKU: 666561423636</b>	<b>VBD-CH-ST2</b>  <b>SKU: 666561423582</b>	<b>VBD-CH-RF2</b>  <b>SKU: 666561423353</b>	<b>VBD-CH-RF3</b>  <b>SKU: 666561423360</b>	
<b>VBD-CH-S3</b>  <b>SKU: 666561423261</b>	<b>VBD-CH-RF6</b>  <b>SKU: 666561423391</b>	<b>VBD-CH-RF5</b>  <b>SKU: 666561423384</b>	<b>VBD-CH-R2</b>  <b>SKU: 666561423742</b>	<b>VBD-CH-R2B</b>  <b>SKU: 666561428280</b>	

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<b>VBD-CH-WC1</b>  SKU: 666561423599	<b>VBD-CH-WC2</b>  SKU: 666561423605	<b>VBD-CH-WC3</b>  SKU: 666561423612	<b>VBD-CH-S1</b>  SKU: 666561423247	<b>VBD-CH-R3</b>  SKU: 666561423759	<b>VBD-CH-RF10</b>  SKU: 666561423438	
<b>VBD-CH-S55</b>  SKU: 666561429966	<b>VBD-CH-S55B</b>  SKU: 666561429973	<b>VBD-CH-C5</b>  SKU: 666561423568	<b>VBD-CH-R1</b>  SKU: 666561423735	<b>VBD-CH-D1</b>  SKU: 666561423643	<b>VBD-CH-D5</b>  SKU: 666561423681	
<b>VBD-CH-RS5</b>  SKU: 666561428631	<b>VBD-CH-RS5B</b>  SKU: 666561428648	<b>VBD-CH-D7</b>  SKU: 666561423704			<b>VBD-CH-D8</b>  SKU: 666561423711	<b>VBD-CH-D9</b>  SKU: 666561423728
<b>VBD-CH-M1</b>  SKU: 666561423773	<b>VBD-CH-M1B</b>  SKU: 666561431013	<b>VBD-CH-E1</b>  SKU: 666561423483		<b>Note:</b> To avoid a dark spot on the sides of these channels (RF10, RF6, RF8, R3, S1, R3) we recommend installing more than one Run LED Strip. For more details please contact us at: <a href="mailto:sales@veroboard.com">sales@veroboard.com</a>		

## RECOMMENDED LED POWER SUPPLIES (Sold Separately)

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## Constant Voltage Dimmable LED Drivers (5 in 1), Triac/Phase, 0-10V, 1-10V, Potentiometer, 10V PWM 5 in 1 Dimming



Model No.	Input Voltage	Output Voltage	Wattage	IP Rating	Class	Max. Strip Length	SKU#
VBD-012-030C2DM5i1	100-277V	12V	30W	IP67	Class 2	3.4ft	666561425999
VBD-012-060C2DM5i1	100-277V	12V	60W	IP67	Class 2	6.8ft	666561426002
VBD-012-100C2DM5i1	100-277V	12V	100W	IP65	Type HL	11.4ft	666561428426
VBD-012-150C2DM5i1	100-277V	12V	150W	IP65	Type HL	17.1ft	666561428433
VBD-012-180C2DM5i1	100-277V	12V	180W (3x60W)	IP67	Class 2	20.5ft	666561426019
VBD-012-300C2DM5i1	100-277V	12V	300W (5x60W)	IP67	Class 2	34.2ft	666561426026

## Constant Voltage Triac LED Drivers forward Phase, Magnetic Low Voltage & Triac Dimmers



Model No.	Input Voltage	Output Voltage	Wattage	IP Rating	Class	Max. Strip Length	SKU#
VBD-012-024DM	100-130V	12V	24W	IP20	Class	2.7ft	666561415761
VBD-012-048DM	100-130V	12V	48W	IP20	Class 2	5.4ft	666561415754
VBD-012-060DM	100-130V	12V	60W	IP20	Class 2	6.8ft	666561415747
VBD-012-096DM	100-130V	12V	96W	IP67	-	11ft	666561415730
VBD-012-150DM	100-130V	12V	150W	IP67	-	17.1ft	666561415723
VBD-012-200DM	100-130V	12V	200W	IP67	-	22.8ft	666561415716
VBD-012-300VTHWJ	100-277V	12V	300W	IP65	-	34.2ft	666561419790

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