

VEROBOARD®

LED Type: VBDFS-5050-XXXX-60-12-NS
Colour: 3000K • 6000K

Job Name: _____

Distributor: _____

Type: _____

	Wattage	Brightness
Per Foot	4.5W/ft	360-402Lm/ft
Per Meter	14.4W/m	1200-1320Lm/m



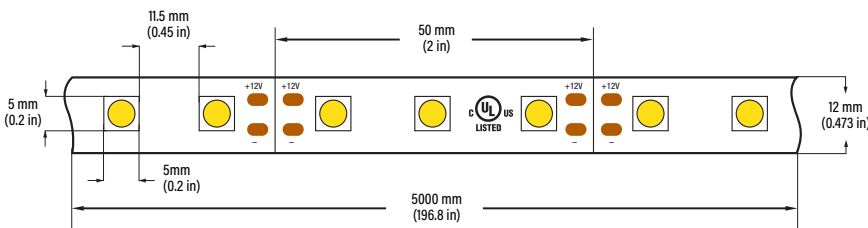
666561420161

666561423803

DESCRIPTION

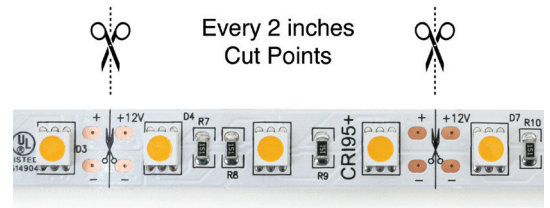
Flexible 12mm wide linear LED strip. Available in 5 meter (196.8 inches) rolls that can be cut every 3 LEDs (50mm or 2in). The LED Strip lights are manufactured with high-quality materials and designed for professional lighting. Every strip light begins with a heavy-duty dual-core copper printed circuit board (PC Board), it 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

Model:	VBDFS-5050-xxxx-60-12-NS
Color Temperature:	3000K • 6000K
LED Type:	5050 SMD
LED Qty:	60 LEDs per meter
LM/LED:	20-22 Lm per LED
Input Voltage (VF):	12V DC
Power:	14.4W per meter (4.5W/ft)
Brightness:	1200-1320 Lm/meter (360-402 Lm/ft)
Lifespan:	>50,000 hours
PCB:	4oz PCB, Double-side, white colour 12mm width
IP Rating:	IP20 (Indoor use only)
Rendering Index (Ra):	CRI>95
Beam Angle:	120°
Dimmable:	Yes
Cut Size:	Every 3 LED chips (2")
Operating Temperature:	-15°C to +40°C
Dimensions:	5,000 x 12 x 2.15mm (196.8" x 0.47" x 0.08")
Certificates:	UL / RoHs
Roll Length:	5 meter roll (16.4ft)



ORDERING GUIDE

Example part number: **VBDFS - 5050 - XXXX - 60 - 12 - NS**

MODEL	SERIES	COLOUR	LEDS/METER	VOLTAGE	LENGTH
VBDFS	5050	XXXX 3000K 6000K	60	12V	XXXX Custom Length Full Roll (5 Meter)

For more information about our products and services, please visit our website: www.veroboard.com

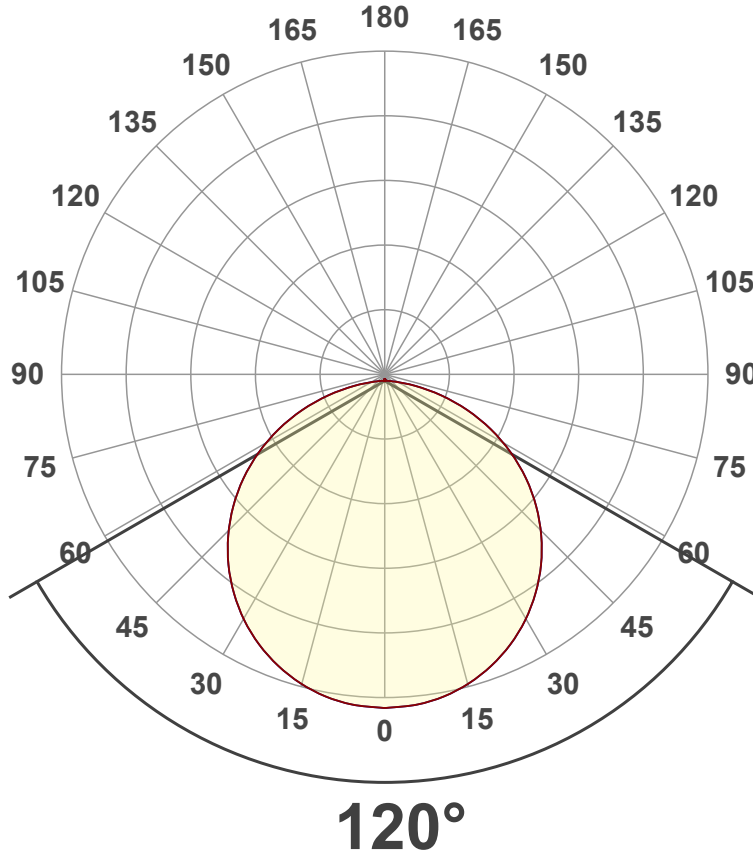
Light Measurement Report

Print date: 2023-04-26

Measurement date and time: 2023-04-25 1:48:46 PM – Measurement no. VFR-230425-0165-MS

Luminous Intensity diagram

Unit: 0-100% of peak intensity



Main Values

Lumen Up% / Down%	0.6% / 99.4%
Peak Intensity	145 cd
Beam Angle (50%)	120°
Beam Angle (90%)	115.5°
Beam Angle (10%)	115.5°

Cut-off Angle

Average 2,5%	173.9°
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Field Angle

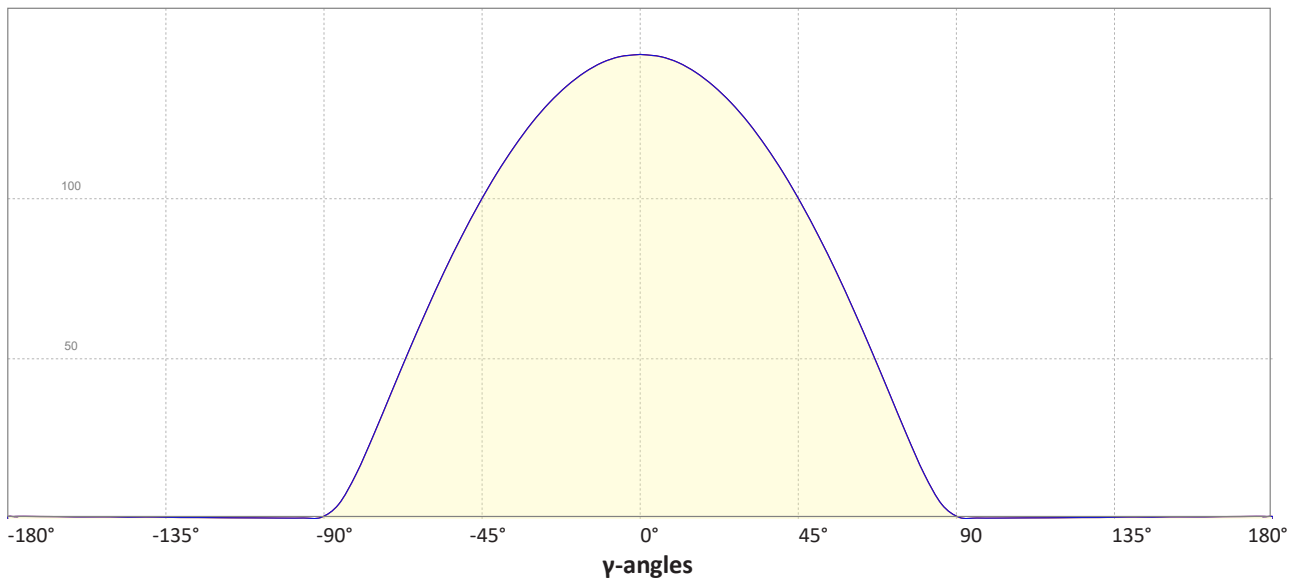
Average 10%	161.3°
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Intensity Ratio

In 120° cone	78.0%
In 90° cone	52.7%

C000-C180
C090-C270

Linear distribution diagram - Intensity (candela) vs γ -angle



Light Measurement Report

Print date: 2023-04-26

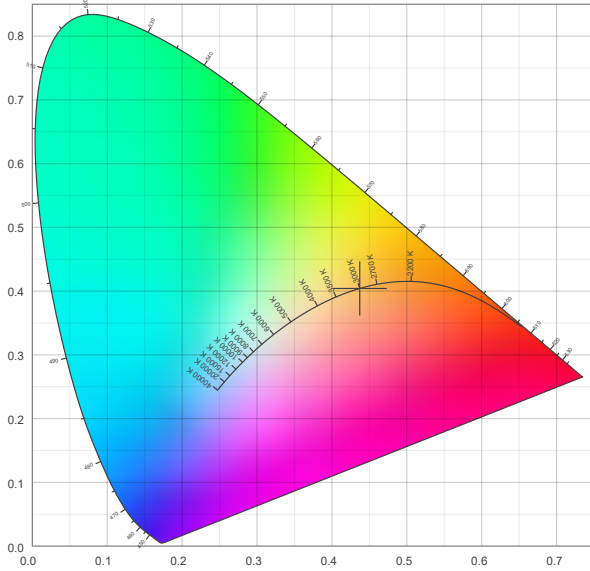
Measurement date and time: 2023-04-25 1:48:46 PM – Measurement no. VFR-230425-0165-MS

Color details

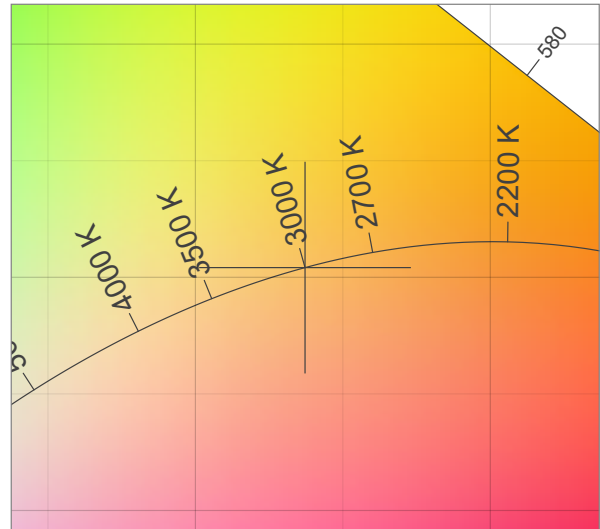
Correlated Color Temperature, Target CCT = 3000 K
 Correlated Color Temperature, Measured CCT = 2908 K
 Color Rendering Index CRI 97.9
 Color Rendering Index, R9 (red component) R9 = 92.3
 Color Rendering TM30-18 R_f 95.0 – R_g 102.0
 Color Quality Scale CQS = 95.1

MacAdam Steps SDCM = 3.4
 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 = -0.0017
 Color coordinate CIEs 1976 (CIELUV) (u'';v'') = (0.251;0.251)

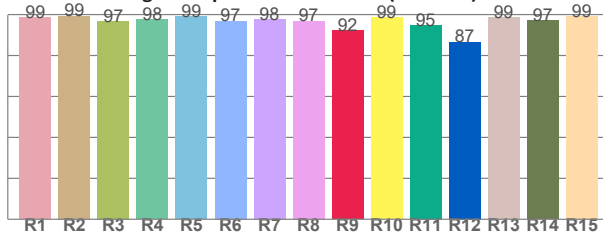
CIE 1931



CIE 1931 – zoomed on Planckian locus



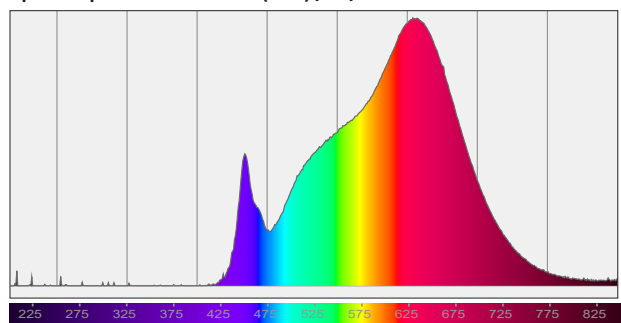
Color Rendering Index per reference color (CIE 1995)



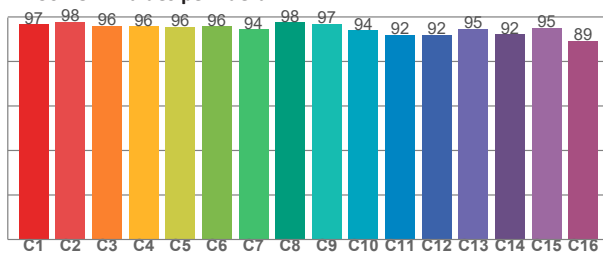
CRI R values, only R1-R8 are used to calculate final CRI value

R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
98.6	99.4	96.8	97.6	99.1	97.0	97.7	96.9	92.3	98.5	94.8	86.6	98.6	97.2	99.2

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



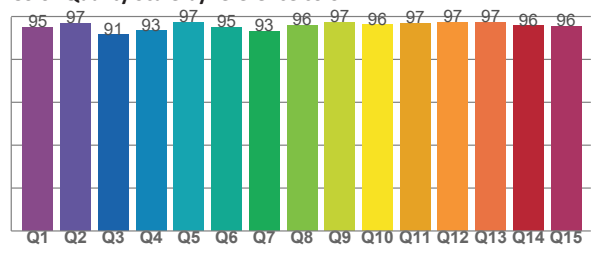
TM30-18 R_f-values per hue bin



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
96.8	97.9	96.1	95.8	95.7	95.9	94.5	97.6	97.0	94.0	92.0	92.0	94.7	92.2	95.2	89.4

Color Quality Scale by reference color



CQS Q values

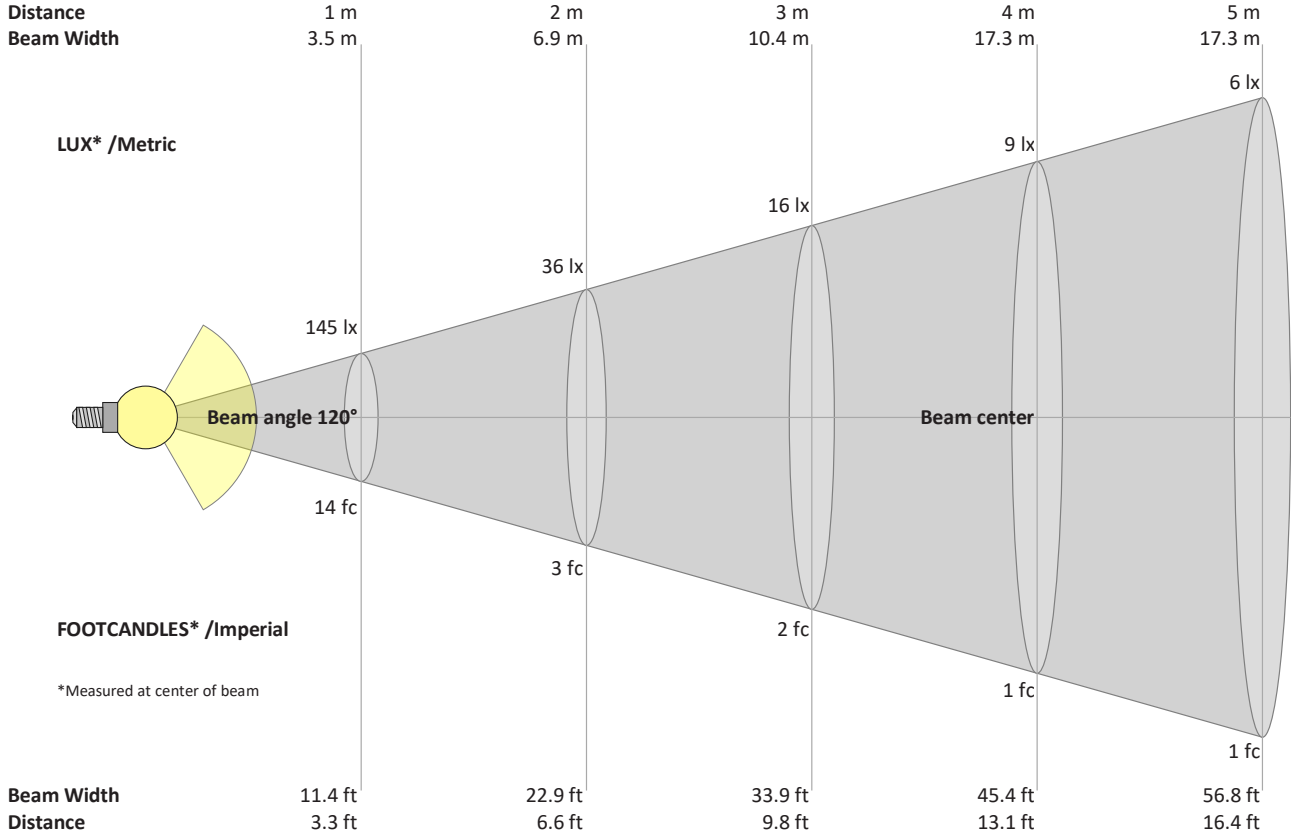
Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15
95.0	96.9	91.5	93.3	97.3	94.9	93.1	95.8	97.4	96.1	96.9	97.4	97.4	95.6	95.6

Light Measurement Report

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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
145	36	16	9	6	4	3	2	2	1	1	1	1	1	1	1	1	0	0	0	lux
13.5	3.4	1.5	0.8	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	0	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
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	11%	4%	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
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	11%	4%	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
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	11%	4%	1%	0%	of 0°val

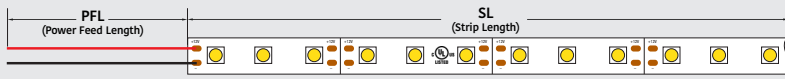
Intensities in 270° c-plane

0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	y
145	145	143	140	136	131	125	118	110	100	90	79	67	55	42	29	16	6	1	0	cd
100%	100%	99%	97%	94%	90%	86%	81%	75%	69%	62%	54%	46%	38%	29%	20%	11%	4%	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

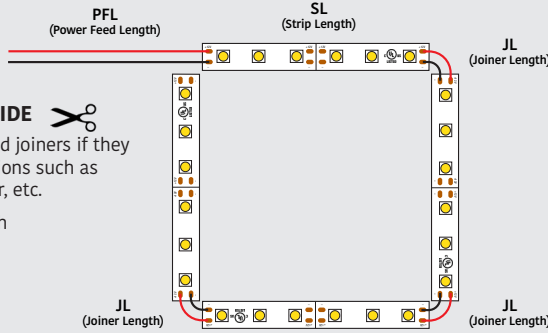


Example: 2 (QTY) x 36" (PFL) - 84" (SL) x -

CUSTOM ORDERING GUIDE ✂

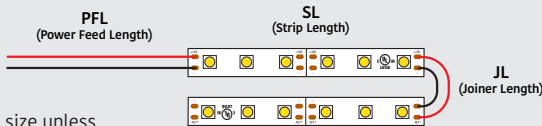
Joiner: LED strip lights need joiners if they are used for curve applications such as corner side, behind a mirror, etc.

- **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 - - -

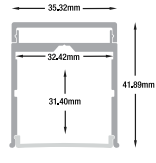
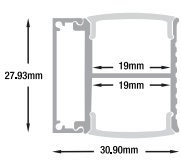
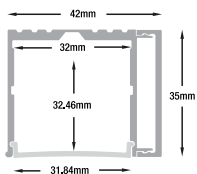
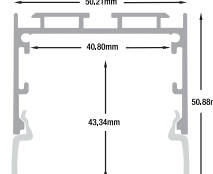
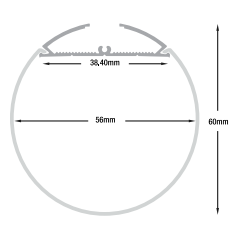
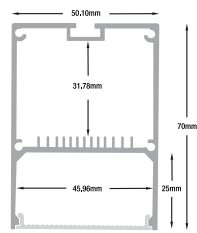
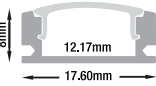
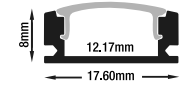
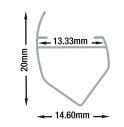
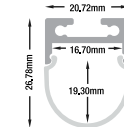
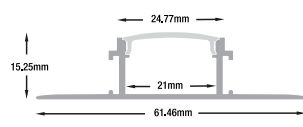
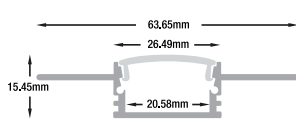
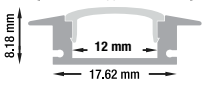
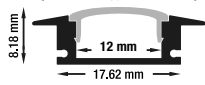
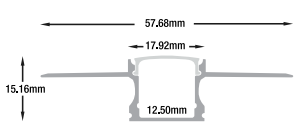
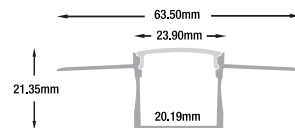
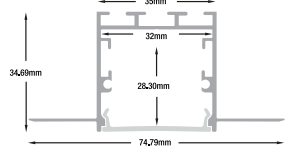
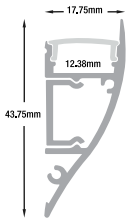
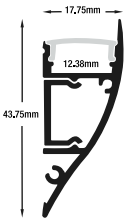
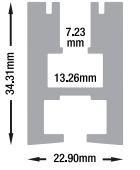
Example: 2 (QTY) x 24" (PFL) - 52" (SL) - 1" (JL) - 52" (SL)

RECOMMENDED LED ALUMINUM CHANNELS

(Sold Separately)

VBD-CH-S4 15.5mm x 12mm x 17.5mm	VBD-CH-S4B 15.5mm x 12mm x 17.5mm	VBD-CH-S6 10.6mm x 20.15mm x 23.44mm
SKU: 666561423278	SKU: 666561423285	SKU: 666561423315
VBD-CH-S5 6mm x 13mm x 17mm	VBD-CH-S5B 6mm x 13mm x 17mm	VBD-CH-B1 6.14mm x 13.89mm x 18.77mm
SKU: 666561423292	SKU: 666561423308	SKU: 666561423360
VBD-CH-C2 18.5mm x 14mm x 18.5mm	VBD-CH-C2B 18.5mm x 14mm x 18.5mm	VBD-CH-RF4 23.4mm x 18.6mm x 18.6mm
SKU: 666561423506	SKU: 666561423513	SKU: 666561423377
VBD-CH-RF1 12.5mm x 15mm x 17mm	VBD-CH-RF1B 12.5mm x 15mm x 17mm	VBD-CH-C1 25.68mm x 15.07mm x 21.19mm
SKU: 666561423339	SKU: 666561423346	SKU: 666561423490
VBD-CH-C3 30mm x 20mm x 30mm	VBD-CH-C3B 30mm x 20mm x 30mm	VBD-CH-W1 26.16mm x 12mm x 21.43mm
SKU: 666561423520	SKU: 666561423537	SKU: 666561423445
VBD-CH-RF7 32.16mm x 75mm x 90mm	VBD-CH-RF8 32mm x 70.15mm x 75mm	VBD-CH-S2 9.68mm x 56.75mm x 17.29mm
SKU: 666561423407	SKU: 666561423414	SKU: 666561423254
VBD-CH-WC4 45.50mm x 85mm x 37.85mm	VBD-CH-WC5 39mm x 43.0mm x 43.0mm	VBD-CH-ST2 21mm x 95mm x 13mm
SKU: 666561423629	SKU: 666561423636	SKU: 666561423582
VBD-CH-S3 55.38mm x 13.56mm x 7.96mm	VBD-CH-RF6 31.90mm x 46.42mm x 50.20mm	VBD-CH-RF5 32mm x 30.84mm x 34.79mm
SKU: 666561423261	SKU: 666561423391	SKU: 666561423384
VBD-CH-R2 25.95mm x 22.94mm x 17.46mm	VBD-CH-R2B 25.95mm x 22.94mm x 17.46mm	VBD-CH-D10 136mm x 13.66mm x 12mm
SKU: 666561423742	SKU: 666561428280	SKU: 666561420023

For more information about our products and services, please visit our website: www.veroboard.com

VBD-CH-WC1  SKU: 666561423599	VBD-CH-WC2  SKU: 666561423605	VBD-CH-WC3  SKU: 666561423612	VBD-CH-S1  SKU: 666561423247	VBD-CH-R3  SKU: 666561423759	VBD-CH-RF10  SKU: 666561423438	
VBD-CH-S55  SKU: 666561429966	VBD-CH-S55B  SKU: 666561429973	VBD-CH-C5  SKU: 666561423568	VBD-CH-R1  SKU: 666561423735	VBD-CH-D1  SKU: 666561423643	VBD-CH-D5  SKU: 666561423681	
VBD-CH-RS5  SKU: 666561428631	VBD-CH-RS5B  SKU: 666561428648	VBD-CH-D7  SKU: 666561423704			VBD-CH-D8  SKU: 666561423711	VBD-CH-D9  SKU: 666561423728
VBD-CH-M1  SKU: 666561423773	VBD-CH-M1B  SKU: 666561431013	VBD-CH-E1  SKU: 666561423483		Note: 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: sales@veroboard.com		

RECOMMENDED LED POWER SUPPLIES (Sold Separately)

For more options and varieties, please visit our website: www.veroboard.com

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	5.3ft	666561425999
VBD-012-060C2DM5i1	100-277V	12V	60W	IP67	Class 2	10.6ft	666561426002
VBD-012-100C2DM5i1	100-277V	12V	100W	IP65	Type HL	17.7ft	666561428426
VBD-012-150C2DM5i1	100-277V	12V	150W	IP65	Type HL	26.6ft	666561428433
VBD-012-180C2DM5i1	100-277V	12V	180W (3x60W)	IP67	Class 2	32ft	666561426019
VBD-012-300C2DM5i1	100-277V	12V	300W (5x60W)	IP67	Class 2	53.3ft	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	4.2ft	666561415761
VBD-012-048DM	100-130V	12V	48W	IP20	Class 2	8.6ft	666561415754
VBD-012-060DM	100-130V	12V	60W	IP20	Class 2	10.6ft	666561415747
VBD-012-096DM	100-130V	12V	96W	IP67	-	17ft	666561415730
VBD-012-150DM	100-130V	12V	150W	IP67	-	26.6ft	666561415723
VBD-012-200DM	100-130V	12V	200W	IP67	-	35.5ft	666561415716
VBD-012-300VTHWJ	100-277V	12V	300W	IP65	-	53.3ft	666561419790

For more information about our products and services, please visit our website: www.veroboard.com

