LED Linear™ GmbH • Dr.-Alfred-Herrhausen-Allee 20, 47228 Duisburg, Germany
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View this configuration in the online product finder

LED LINEAR™
A Fagerhult Group Company

FUSION IP67

FUSION SW _ _ __ _ __ _ IP67

Project name

Company

Phase / Luminaire type for tech. spec. document

Date

Luminaire configuration: Stand-alone luminaire

B — Integrated anti-glare: Integrated anti-glare black

G — Integrated anti-glare: Integrated anti-glare grey

W — Integrated anti-glare: Integrated anti-glare white

White — Light color / light source: Static White

Color rendering and efficiency: HC - CRI > 90, standard efficacy

LED pitch / density: Low Density

B — Profile color: Black

G — Profile color: Grey (RAL9022)

W — Profile color: White (RAL9003)

Power supply position: External PSU

Cable / connector configuration: MOL - Male connector left side only

Cable / connector configuration: MO - Male connector one side

Cable / connector configuration: MOR - Male connector right side only

Cable / connector configuration: DC - Daisy chain

Cable / connector configuration: DCR - Daisy chain, male right / female left

Cable / connector configuration: DCL - Daisy chain, male left / female right

IP67 — Protection class: IP67

24V — Input voltage [V]: 24V DC

DESIGNED TO BE SMALL. ENGINEERED TO PERFORM.

FUSION is a high-precision, high-performance linear lighting system that unites robustness and precise light control in one compact platform. By combining our core technologies Reel-to-Reel, Nano Optics and PU encapsulation, it delivers durable outdoor performance with engineered accuracy. With an application efficiency up to 92% of total lumen flux, FUSION sets a benchmark for lasting performance and visual brilliance.

CERTIFICATES

Conformité Européenne (CE)

Ecodesign Directive

Environmental Product Declaration (EPD)

ETL certified

Protection Class III

WEEE

- IECEE CB Scheme
- IPx7 testing according to IEC 60529:1989 by Intertek
- Protection test up to IK10 according to IEC 62262 by Intertek
- Static load testing up to 20 kN according to EN 60598-2-13:2006 by Intertek

ELECTRICAL & OUTPUT DATA [1]

Power [W/m]	5	10	15	25	40
Efficiency [lm/W]	118.3	114.2	112.9	108.5	99.2
Max. daisy chain length [m]	7.5	5	5	3	2
CRI / R9	86/18	86/18	86/18	86/18	86/18
Rf / Rg	83/97	83/97	83/97	83/97	83/97
Ambient temperature [°C] max	50	50	50	50	40
Housing Temperature [°C] max	70	70	70	70	75

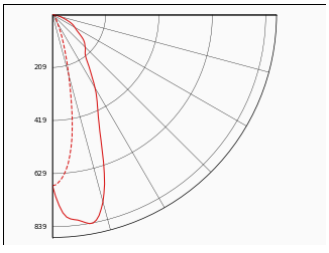
Power [W/m]	5	10	15	25	40
			Luminous flux [lm/m]		
W822	470	840	1330	1980	2790
W927	450	820	1260	1900	2840
W930	460	840	1300	1950	3200
W935	470	860	1330	2030	3230
W940	500	870	1350	2080	3320
W850	590	1140	1690	2710	3970

(1): Light engine family: VarioLED Flex NEXUS LD HC ; Light distribution: 15° x 15° - nano optics ; Light color / light source: Static White ; Profile color: Black ; Integrated anti-glare: Integrated anti-glare white ; Optional glare control accessory: Glare Shield Black (RAL9004)

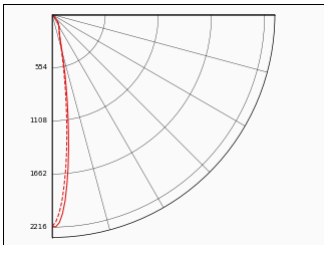
PRODUCT INFORMATION

Product family	FUSION IP67	**Protection class**	IP67
Luminaire type (rigid / flexible)	Rigid luminaire	**Luminaire profile size**	Standard
Light color / light source	Static White	**Color rendering and efficiency**	HC - CRI > 90, standard efficacy
Light engine family	VarioLED Flex NEXUS LD HC	**Lumen maintenance (LED manufacturer specification)**	L80/B10
LED pitch / density	Low Density	**ANSI LED binning**	3 SDCM
Cable outlet position	X - Not relevant	**Power supply position**	External PSU
Control technology	No PSU with No Control Controller	**Input voltage [V]**	24V DC
Luminaire configuration	Stand-alone luminaire	**Storage temperature [°C]**	TS(min): -30°, TS(max): 85°
Lifespan [h]	102,000	**fixed luminaire section [mm]**	33
LED step length [mm]	125		

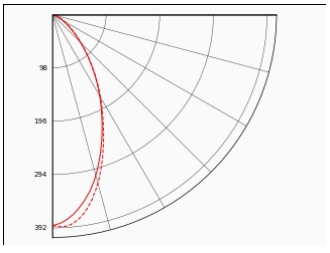
AVAILABLE OPTICS



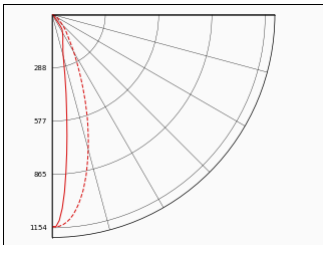
ASYM - asymmetric wall wash



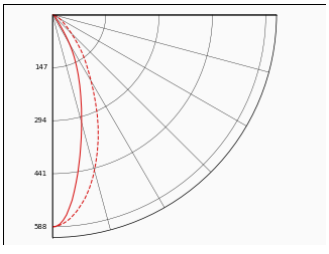
15° x 15° - nano optics

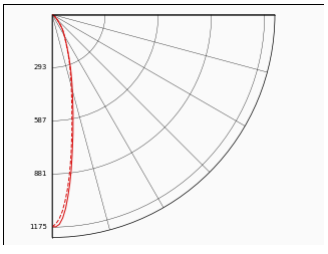


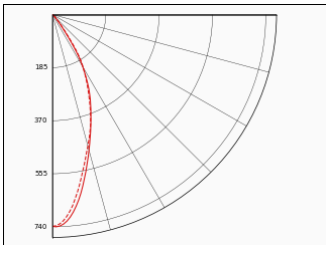
50° x 50° - nano optics



15° x 40° - nano optics







30° x 50° - nano optics

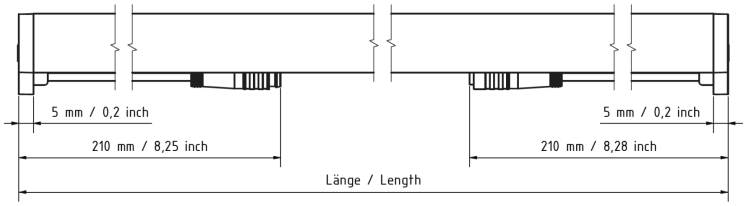
20° x 20° - nano optics

40° x 40° - nano optics

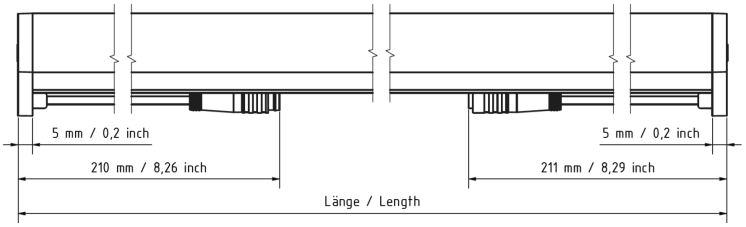
TECHNICAL SPECIFICATIONS

For general tolerances, including length tolerances, please refer to the technical drawing.

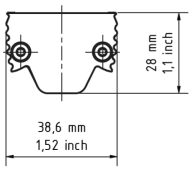
FUSION symmetric



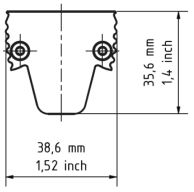
FUSION asymmetric



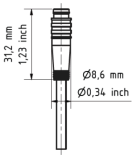
FUSION symmetric*



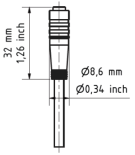
FUSION asymmetric*



VarioCon Male (Mono / TW)

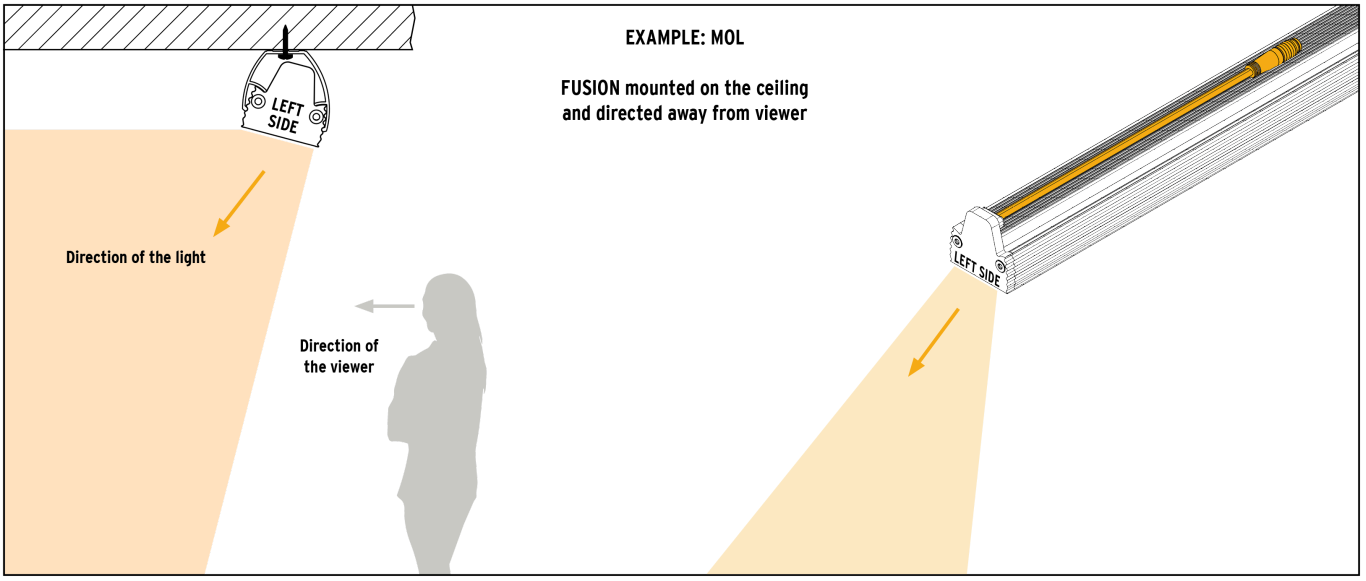


VarioCon Female (Mono / TW)



The ordercode options for the cable position refers only to asymmetrical optic „asym".

MOL = male connector on the left side when light is directed away from the viewer mounted on the ceiling
MOR = male connector on the right side when light is directed away from the viewer mounted on the ceiling
DCL = male connector on the left side when light is directed away from the viewer mounted on the ceiling (female connector on the right side)
DCR = male connector on the right side when light is directed away from the viewer mounted on the ceiling (female connector on the left side)



VARIOLED FLEX NEXUS LD HC

VarioLED™ Flex NEXUS LD combines advanced CSP LED technology with excellent thermal performance and color stability, delivering high efficacy while ensuring highly uniform light and color consistency across all viewing angles. Designed for demanding architectural lighting applications, it offers outstanding reliability, Reel-to-Reel production quality, and premium light output in a low-density LED format.

Electrical & Output Data

Power [W/m]	5	10	15	25	40
Efficiency [lm/W]	118.3	114.2	112.9	108.5	99.2
Max. daisy chain length [m]	7.5	5	5	3	2
CRI / R9	86/18	86/18	86/18	86/18	86/18
Rf / Rg	83/97	83/97	83/97	83/97	83/97
Ambient temperature [°C] max	50	50	50	50	40
Housing Temperature [°C] max	70	70	70	70	75

Power [W/m]	5	10	15	25	40
			Luminous flux [lm/m]		
W822	470	840	1330	1980	2790
W927	450	820	1260	1900	2840
W930	460	840	1300	1950	3200
W935	470	860	1330	2030	3230
W940	500	870	1350	2080	3320
W850	590	1140	1690	2710	3970

Light engine family: VarioLED Flex NEXUS LD HC ; Light distribution: 15° x 15° - nano optics ; Light color / light source: Static White ; Profile color: Black ; Integrated anti-glare: Integrated anti-glare white ; Optional glare control accessory: Glare Shield Black (RAL9004)

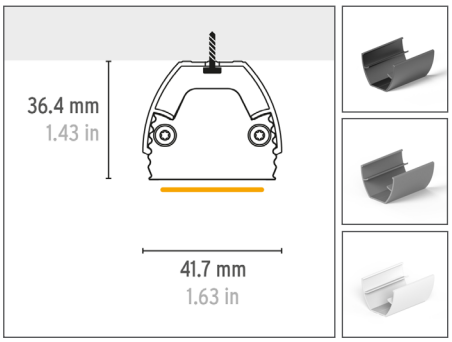
Available product options

Light color / light source	Class	Power [W/m]	Color temperature (ANSI CCT)	Profile color	Integrated anti-glare	Light distribution	Cable / connector configuration	Mounting type and accessory	Length [mm]	Protection class
Static White	High CRI	5	2200K	Black	Integrated anti-glare black	ASYM - asymmetric wall wash	MOL - Male connector left side only	A0 - Adjustable Arm L40	283	IP67
		10	2700K	Grey (RAL9022)	Integrated anti-glare grey	15° x 15° - nano optics	MO - Male connector one side	A1 - Adjustable Arm L100	408	
		15	3000K	White (RAL9003)	Integrated anti-glare white	50° x 50° - nano optics	MOR - Male connector right side only	A2 - Adjustable Arm L200	533	
		25	3500K			15° x 40° - nano optics	DC - Daisy chain	A3 - Adjustable Arm L300	...	
		40	4000K			30° x 50° - nano optics	DCR - Daisy chain, male right / female left	C00 - Clip 0°	1,783	
			5000K			20° x 20° - nano optics	DCL - Daisy chain, male left / female right	C15 - Clip 15°	1,908	
						40° x 40° - nano optics		C30 - Clip 30°	2,033	
								IF - Inground frame		
								ML - Mounting lock - vandal-proof clip		
								X - No supplied mounting accessory		

NOTE: The order code table shows all available options for each product. However some combinations are not possible, due to product design. Please use our online configurator to specify your final product order code.

MOUNTING ACCESSORIES (SELECTABLE WITH ORDER CODE)

Please note: Mounting accessory are automatically included with the luminaire with the required amount of clips or the correct length of the mounting profile when chosen as part of the order code - see the digits in the order code below.



Mounting accessories

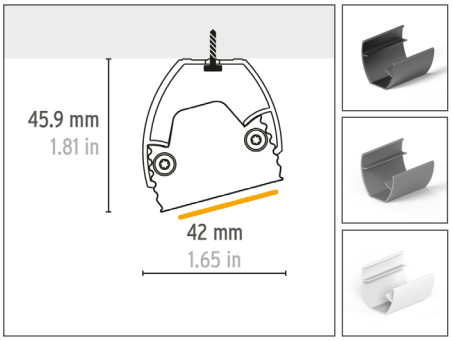
0° SURFACE CLIP
Digits in order code: C00

Description

Aluminium clip in 50 mm / 1.97 in length with drilling hole diameter 4.2 mm / 0.17 in. Fastened with screws to mounting surface. The product can be tilted 0° - 15° in steps of 5° with the exception of the asymmetrical product variant. RAL color tone will automatically match luminaires profile. The installation height is similar for all symmetrical and the asymmetrical versions of Fusion.

DarkSky requires a downward-facing installation.

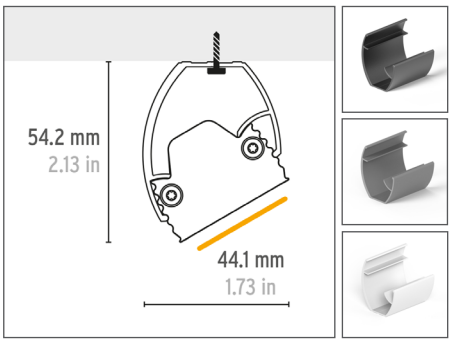
Use according to the mounting instruction.



15° SURFACE CLIP
Digits in order code: C15

Aluminium clip in 50 mm / 1.97 in length with drilling hole diameter 4.2 mm / 0.17 in. Fastened with screws to mounting surface. The product can be tilted 15° - 30° in steps of 5° with the exception of the asymmetrical product variant. RAL color tone will automatically match luminaires profile. The installation height is similar for all symmetrical and the asymmetrical versions of Fusion.

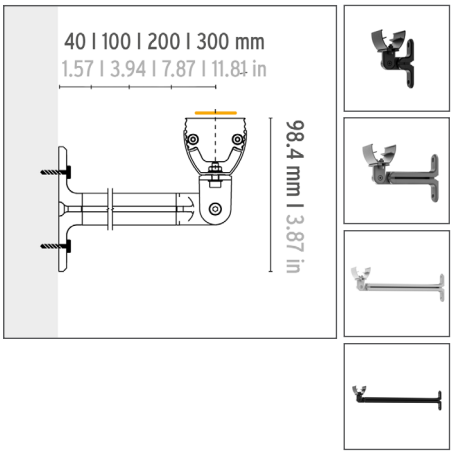
Use according to the mounting instruction.



30° SURFACE CLIP
Digits in order code: C30

Aluminium clip in 50 mm / 1.97 in length with drilling hole diameter 4.2 mm / 0.17 in. Fastened with screws to mounting surface. The product can be tilted 30° - 45° in steps of 5° with the exception of the asymmetrical product variant. RAL color tone will automatically match luminaires profile. The installation height is similar for all symmetrical and the asymmetrical versions of Fusion.

Use according to the mounting instruction.



SURFACE MOUNTING WITH ADJUSTABLE ARM 40 MM
Digits in order code: A0

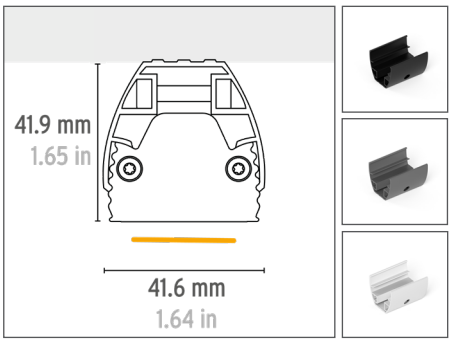
SURFACE MOUNTING WITH ADJUSTABLE ARM 100 MM
Digits in order code: A1

SURFACE MOUNTING WITH ADJUSTABLE ARM 200 MM
Digits in order code: A2

SURFACE MOUNTING WITH ADJUSTABLE ARM 300 MM
Digits in order code: A3

40 mm / 1.57 in (A0), 100 mm / 3.94 in (A1), 200 mm / 7.87 in (A2) or 300 mm / 11.81 in (A3) adjustable mounting arm. Supplied according to the selected profile color (RAL9003, RAL9005, RAL9022). The set includes VarioClip 0° (C00).
Allows tilting by 120° in any direction and features cable channel. The installation height is similar for all symmetrical and the asymmetrical versions of Fusion.

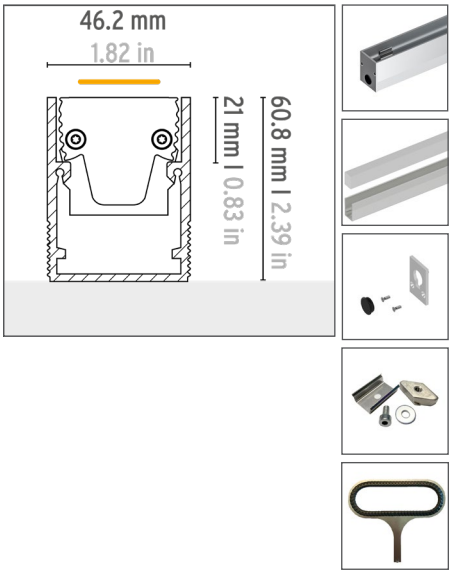
Use according to the mounting instruction.



0° SURFACE CLIP WITH MOUNTING LOCK
Digits in order code: ML

Aluminium clip in 50 mm / 1.97 in length with drilling hole diameter 4.2 mm / 0.17 in. Fastened with screws to mounting surface. The product can be tilted 0° - 15° in steps of 5°. RAL color tone will automatically match luminaires profile. Integrated screw will tighten the clip to make the fixture vandal resistant and secured for installations with high safety requirements. The installation height is similar for symmetrical and the asymmetrical light distribution of Fusion.

Use according to the mounting instruction.



INGROUND FRAME
Digits in order code: IF

Aluminium inground frame (silver anodized) cut to the length of the luminaire including styrofoam dummy and endcaps for standalone installations. Easy luminaire installation with sheetmetal clips. Usable for walk and drive over applications p to 20 kN. Drainage has to be prepared on site.

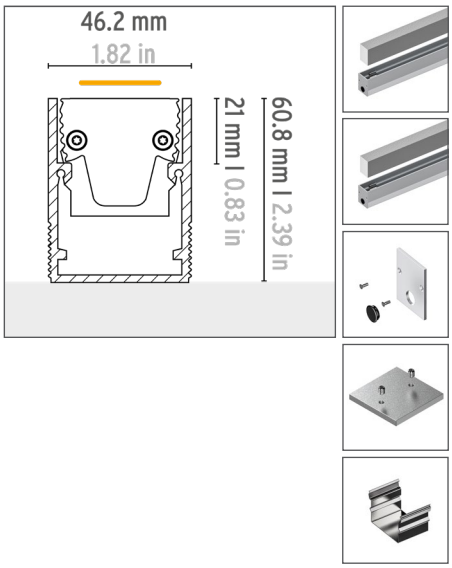
For a line installation choose „X" as part of the order code and order the inground frame and all accessories separately.

The installation height is similar for symmetrical and the asymmetrical light distribution of Fusion.

Use according to the mounting instruction.

ADDITIONAL ACCESSORY (OPTIONAL - ORDERED SEPARATELY)

Please note: Mounting accessories are not automatically included with the luminaire. Please order the right amount of accessories with the article numbers listed below. For any questions, please contact our customer service.



Mounting accessories

INGROUND FRAME 2M INCL. DUMMY
Art.-#: 10000655-SIL-2000

INGROUND FRAME 4M INCL. DUMMY
Art.-#: 10000655-SIL-4000

INGROUND FRAME END CAP SET
Art.-#: 11000321

INGROUND FRAME CONNECTOR SET
Art.-#: 13000536

INGROUND FRAME CLIP SET (2X)
Art.-#: 13000539

Description

Aluminum in-ground mounting frame, silver anodized, in 2 m or 4 m lengths including styrofoam dummy. Cut to size on site.

Additional accessories required:
End cap set includes one end cap with two screws.
Clip set includes two clips
(use 2 clips < 400 mm length and 1 clip for each additional 400 mm).
Mech. connector set includes one connector with two threaded pins.

Usable for walk- and drive-over applications up to 20 kN.
Drainage has to be prepared on site.

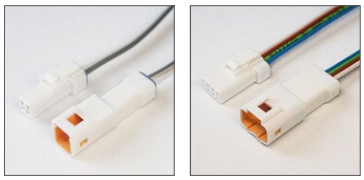
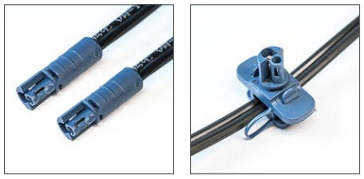
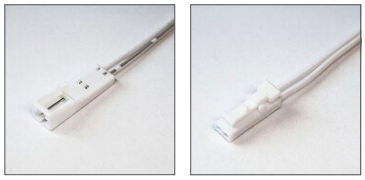
For a line installation choose „X" as part of the order code and order the inground frame (2 m or 4 m length) and all accessories separately.

Use according to the mounting instructions.

CABLING ACCESSORIES

Cables & Connectors: A complete overview of all extension cables and connectors and additional cabling accessory can be found on the global website: https://www.led-linear.com/products/cables-connectors

Not every product can be extended and used with every cable and connector system. Please contact your local sales team for further information.

PRODUCT FAMILY	CABLE ACCESSORY	INFORMATION	EXAMPLE
VENUS TC Family IP67 AMOR IP67 VARIO LED FLEX IP67 XOOLINE IP40 / IP67 ULTIMA Family IP40 LUNA IP40	VarioConnect IP67 Mini	Single shielded, flat, white cable IP67 connector male / female Different lengths for 2 up to 5 wires 2 wires = 0.34 mm² / 4 wires = 0.25 mm² 5 wires = 0.2 mm²	
VENUS Family IP67 ADONIS IP67* FUSION IP67 XOOLUM IP40 / IP67* XOOLIGHT IP67 VARIOLED IP67	VarioConnect IP67	Double shielded, oval, black, IP68 cable IP67 connector male / female w/o nut Different lengths for 2 up to 4 wires 2 wires = 0.34 mm² / 4 wires = 0.25 mm²	
XOOCOVE IP40	VarioConnect IP20 Cove	IP20 connector system with 2 x 0.75mm²	
OCEANOS IP67	VarioCon Oceanos	IP67 connector system with 4 x 0.75mm² Stainless Steel Newton-Meter Clutch	
VARIO CABLE	Most products can be ordered with a open lead cable. Use the configurator „cable and connector configuration" to choose between „00" (open one side) and „0T"(open two side) cables, if possible.		
Assembled Solutions (North America only)	VarioConnect IP20 Mini	Single shielded, flate, white cable IP20 connector male / female Different lengths for 2 wires 2 wires = 0.34 mm²	

*RGBW cable is always a flat ribbon IP67 Mini cable and connector system.

POWER SUPPLY UNIT (PSU) & CONTROLS

Recommended PSU: A complete overview of all PSUs and controls with different power ratings can be found on the website:

GLOBAL https://www.led-linear.com/products/drivers-controls
USA https://www.ledlinearusa.com/products/drivers-controllers

Recommended controls: A complete overview of all controls can be found on the website:

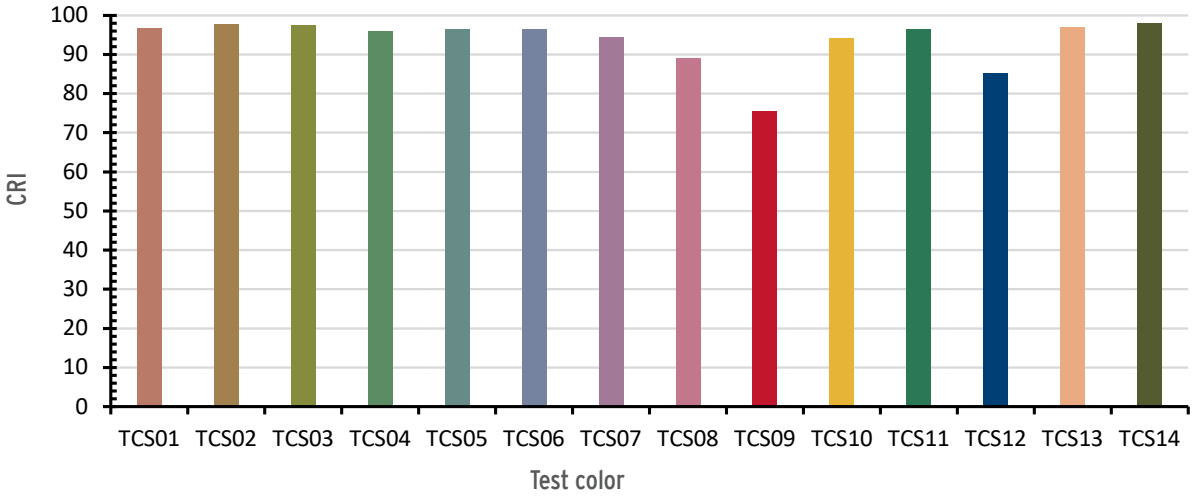
GLOBAL https://www.led-linear.com/products/smart-lighting
USA https://www.ledlinearusa.com/products/drivers-controllers

Smart Lighting accessory: A complete overview of all smart lighting accessories and controls can be found on the website:

GLOBAL https://www.led-linear.com/products/smart-lighting

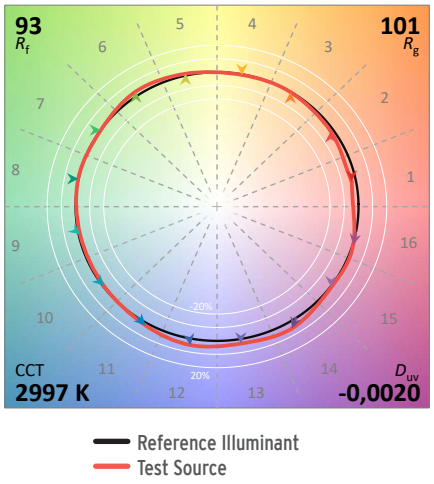
Example for „NEXUS HD and LD“ at 3.000K

CRI

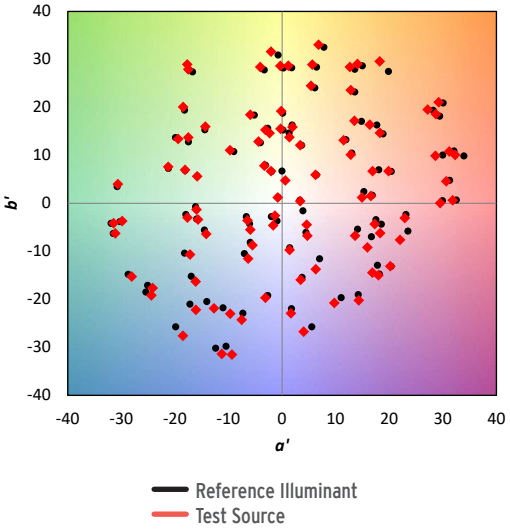


TM-30-18

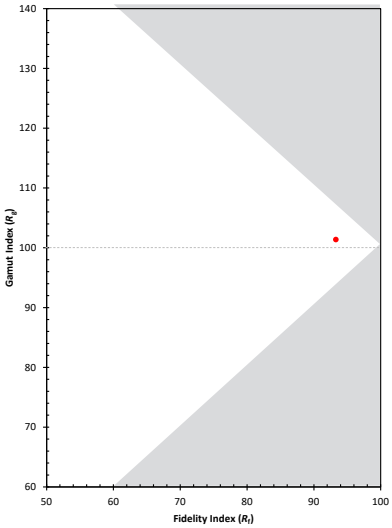
Color Vector Graphig

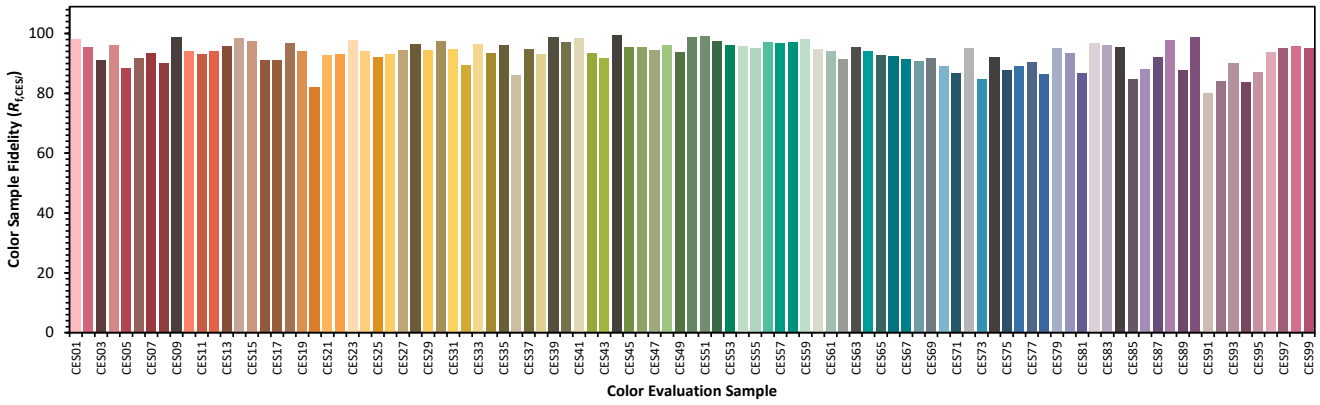


Shift in Hue-Chroma Plane



Gamut Index vs. Fidelity Index





The Fidelity Index chart shows the color fidelity index for each of the 99 reference colors. The reference colors are arranged under the 5000 K reference source, which was also used to determine the color of each bar. The colors are approximate and depend on the correct monitor calibration. Some colors may be outside the color gamut of the monitor used and will not be displayed accurately.

VOLTAGE DROP INFORMATION FOR THE FEED-IN LINE (EXTERNAL PSU / CONTROL TO FIXTURE)

Cable cross section	mm²						
	0.25	0.34	0.5	0.75	1.0	1.5	2.5
Total wattage of light line* [W]	MAX. CABLE LENGTH BETWEEN PSU / CONTROL UNIT AND THE LUMINAIRE						
	m						
0 - 5	29	39	58	87	116	174	291
0 - 10	14	19	29	43	58	87	145
10 - 15	9.7	13	19	29	38	58	97
15 - 20	7.2	9.9	14	21	29	43	72
20 - 25	5.8	7.9	11	17	23	34	58
25 - 30	4.8	6.6	9.7	14	19	29	48
30 - 35	4.1	5.6	8.3	12	16	24	41
35 - 40	3.6	4.9	7.2	10	14	21	36
40 - 45	3.2	4.4	6.4	9.7	12	19	32
45 - 50	2.9	3.9	5.8	8.7	11	17	29
50 - 60	2.4	3.3	4.8	7.2	9.7	14	24
60 - 70	2.0	2.8	4.1	6.2	8.3	12	20
70 - 80	1.8	2.4	3.6	5.4	7.2	10	18
80 - 90	1.6	2.2	3.2	4.8	6.4	9.7	16
90 - 100	1.4	1.9	2.9	4.3	5.8	8.7	14
100 - 110	1.3	1.8	2.6	3.9	5.2	7.9	13
110 - 120	1.2	1.6	2.4	3.6	4.8	7.2	12.
120 - 130	1.1	1.5	2.2	3.3	4.4	6.7	11
130 - 140	1.0	1.4	2.0	3.1	4.1	6.2	10
140 - 150	0.9	1.3	1.9	2.9	3.8	5.8	9.7
150 - 160	0.9	1.2	1.8	2.7	3.6	5.4	9.1
170 - 180	0.8	1.1	1.6	2.4	3.2	4.8	8.0
180 - 190	0.7	1.0	1.5	2.3	3.0	4.6	7.6
190 - 200	0.7	0.9	1.4	2.1	2.9	4.3	7.2

Cable cross section	AWG						
	24	22	21	19	18	16	14
Total wattage of light line* [W]	MAX. CABLE LENGTH BETWEEN PSU / CONTROL UNIT AND THE LUMINAIRE						
	ft						
0 - 5	95	130	191	286	382	573	956
0 - 10	47	65	95	143	191	286	478
10 - 15	31	43	63	95	127	191	318
15 - 20	23	32	47	71	95	143	239
20 - 25	19	26	38	57	76	114	191
25 - 30	15	21	31	47	63	95	159
30 - 35	13	18	27	40	54	81	136
35 - 40	11	16	23	35	47	71	119
40 - 45	10	14	21	31	42	63	106
45 - 50	9.5	13	19	28	38	57	95
50 - 60	7.9	10	15	23	31	47	79
60 - 70	6.8	9.2	13	20	27	40	68
70 - 80	5.9	8.1	11	17	23	35	59
80 - 90	5.3	7.2	10	15	21	31	53
90 - 100	4.7	6.5	9.5	14	19	28	47
100 - 110	4.3	5.9	8.6	13	17	26	43
110 - 120	3.9	5.4	7.9	11.9	15	23	39
120 - 130	3.6	5.0	7.3	11	14	22	36
130 - 140	3.4	4.6	6.8	10	13	20	34
140 - 150	3.1	4.3	6.3	9.5	12	19	31
150 - 160	2.9	4.0	5.9	8.9	11	17	29
170 - 180	2.6	3.6	5.3	7.9	10.6	15	26
180 - 190	2.5	3.4	5.0	7.5	10	15	25
190 - 200	2.3	3.2	4.7	7.1	9.5	14	23

*** Multiply the number of lights within the light line by the wattage per m or ft to determine the total power of the light line.**

Please note, these cables are not supplied by the factory. For table calculation, the underscored power level is used.
Calculation refers to the cable configuration on site for static white applications.
For tunable white, RGB, RGBW or other multichannel luminaires, the individual wattage per channel must be considered.
This might differ due the control type used.
The information listed in the table only refers to the conductor-based voltage drop of max. 0.85V at 24V DC input voltage.

Regarding the electromagnetic combability (EMC) the maximum cable length is defined by the power supply manufacturer.
A cable length between power supply and planned product longer than indicated by the datasheet of the power supply is possible. However the electromagnetic combability can then be influenced by the conditions of the installation site. There is no data on electromagnetic compatibility for longer cable lengths, which might lead to the necessity of an evaluation of the electromagnetic compatibility by a third party.
Datasheets and mounting instructions of the components in combination with the planned product must be carefully read and followed.