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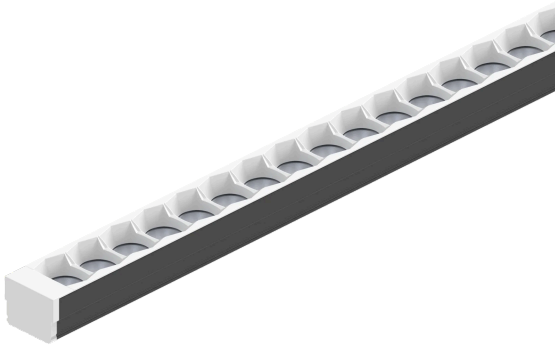
www.led-linear.com • info@led-linear.com • +49 2065 94322-100

View this configuration in the online product finder

ULTIMA IP40

ULTIMA TW HC20 2250 ___ _ ___ _ IP40



Project name

Company

Phase / Luminaire type for tech. spec. document

Date

Luminaire configuration: S - Stand-alone luminaire

Color of integrated glare control: B - Integrated anti-glare black

Color of integrated glare control: W - Integrated anti-glare white

Light color / light source: Tunable White (TW)

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

LED pitch / density: High Density

Profile color: B - Black

Profile color: S - Silver (Anodized)

Profile color: W - White (RAL9003)

Power supply position: E - External PSU

Cable / connector configuration: MO - Male connector one side

Cable / connector configuration: DC - Daisy chain

Cable / connector configuration: OO - Open cable one side only

Protection class: IP40

Input voltage [V]: 24V DC

CERTIFICATES

Conformité Européenne (CE)

Ecodesign Directive

Environmental Product Declaration (EPD)

ETL certified

IECEE CB Scheme

Protection Class III

WEEE

ELECTRICAL & OUTPUT DATA [1]

Power [W/m]	**20**
Efficiency [lm/W]	89.6
Max. daisy chain length [m]	3
CRI / R9	87/54
Rf / Rg	87/100
Ambient temperature [°C] max	40
Housing Temperature [°C] max	70

Power [W/m]	**20**
	Luminous flux [lm/m]
2250	1790

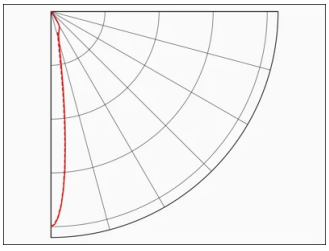
(1): Light engine family: VarioLED Flex IQ White NEXUS HDR HC ; Light distribution: 25° x 25° - nano optics ; Light color / light source: Tunable White (TW) ; Profile color: B - Black ; Color of integrated glare control: W - Integrated anti-glare white ; Optional glare control accessory: No Accessories

PRODUCT INFORMATION

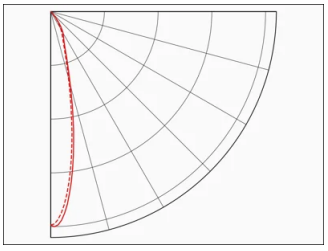
Product family	ULTIMA IP40
Luminaire type (rigid / flexible)	Rigid luminaire
Light color / light source	Tunable White (TW)
Color temperature (ANSI CCT)	2200K - 5000K
Power/channel [W/m]	W: 10 W/m, W: 10 W/m
TM30 - Rf	87
Light engine family	VarioLED Flex IQ White NEXUS HDR HC
Lumen maintenance (LED manufacturer specification)	L80/B10
ANSI LED binning	3 SDCM
Optional glare control accessory	No Accessories
Control technology	XX - No PSU with No Control Controller
Luminaire configuration	S - Stand-alone luminaire
Case temperature [°C]	TC(min): -25°, TC(max): 70°
Storage temperature [°C]	TS(min): -30°, TS(max): 85°
LED step length [mm]	125.00

Protection class	IP40
Luminaire profile size	Standard
Color rendering and efficiency	HC - CRI > 90, standard efficacy
Measured color temperature (CCT)	2200K / 5110K
Color rendering index (CRI/Ra)	87
TM30 - Rg	100
Light engine designation	VarioLED Flex IQ White NEXUS HDR 20
LED pitch / density	High Density
Cable outlet position	X - Not relevant
Power supply position	E - External PSU
Input voltage [V]	24V DC
DarkSky certification	Not DarkSky certified
Ambient temperature [°C]	TA(min): -25°, TA(max): 40°
Lifespan [h]	60,000

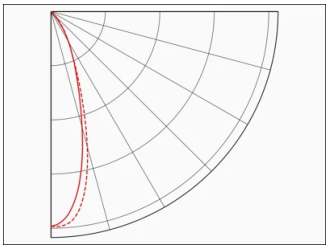
AVAILABLE OPTICS



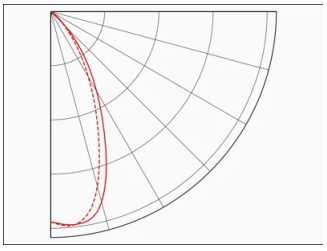
15° x 15° - nano optics



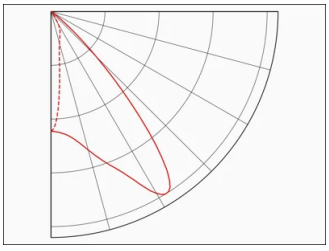
25° x 25° - nano optics



40° x 40° - nano optics



60° x 60° - nano optics



BW - Batwing

AVAILABLE PROFILE COLORS

B - Black

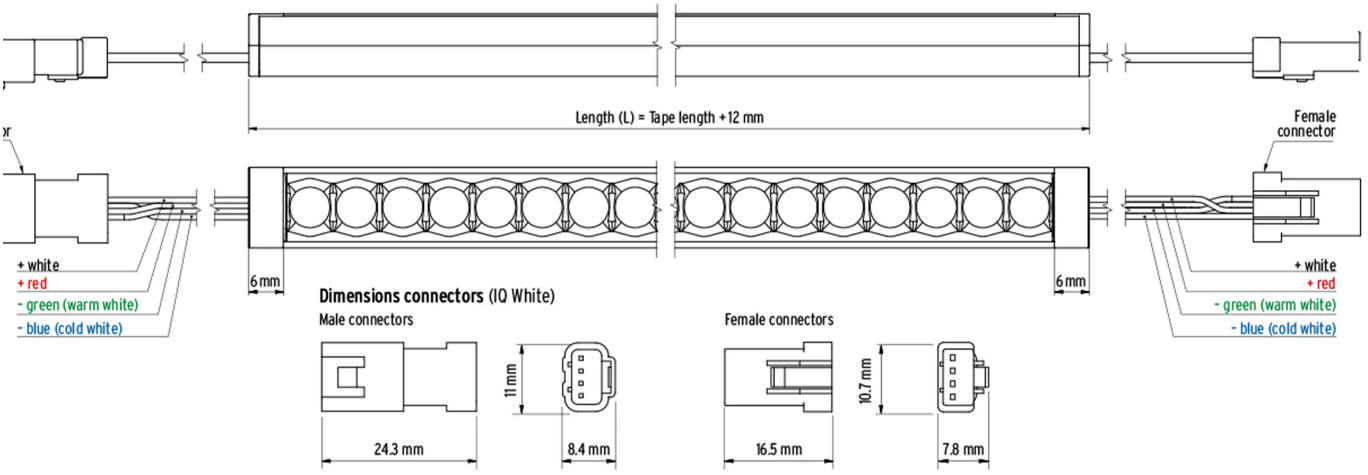
S - Silver (Anodized)

W - White (RAL9003)

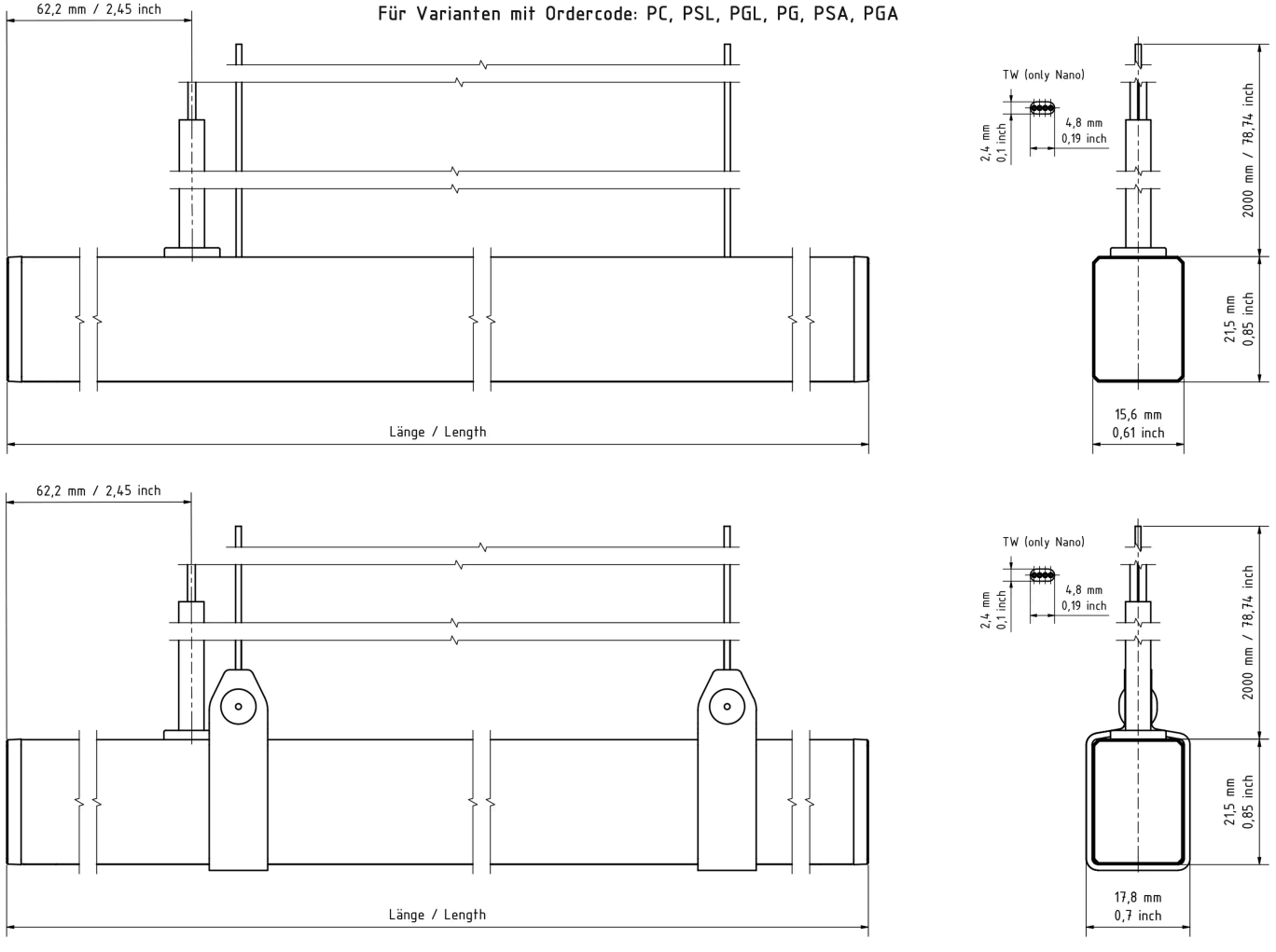
TECHNICAL SPECIFICATIONS

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

For variants with order code:
Für Varianten mit Ordercode: HMP, MAG, GCC, PCL, TMC, X



For variants with order code:
Für Varianten mit Ordercode: PC, PSL, PGL, PG, PSA, PGA



1 ULTIMA IP40 WITH VARIOLED FLEX IQ WHITE NEXUS HDR HC

VarioLED™ Flex IQ White NEXUS HDR is a tunable white LED strip featuring advanced CSP LED technology with an extra-wide 2,200 K to 5,000 K tuning range, delivering excellent efficiency and highly uniform color performance across all viewing angles. Designed for demanding architectural and human-centric lighting applications, it combines Reel-to-Reel production and Tj Away® thermal management to ensure reliable operation, smooth white-light transitions, and long-term stability.

Electrical & Output Data

Power [W/m]	**20**
Efficiency [lm/W]	89.6
Max. daisy chain length [m]	3
CRI / R9	87/54
Rf / Rg	87/100
Ambient temperature [°C] max	40
Housing Temperature [°C] max	70

Power [W/m]	**20**
	Luminous flux [lm/m]
2250	1790

Light engine family: VarioLED Flex IQ White NEXUS HDR HC ; Light distribution: 25° x 25° - nano optics ; Light color / light source: Tunable White (TW) ; Profile color: B - Black ; Color of integrated glare control: W - Integrated anti-glare white ; Optional glare control accessory: No Accessories

Order code structure

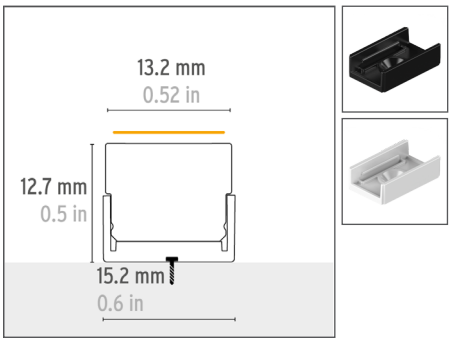
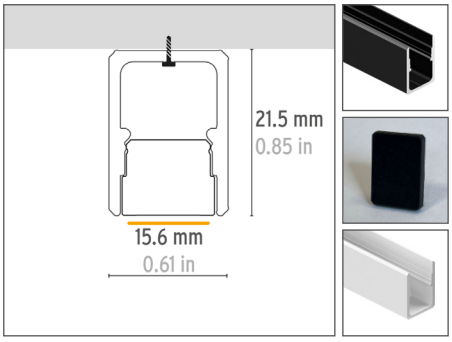
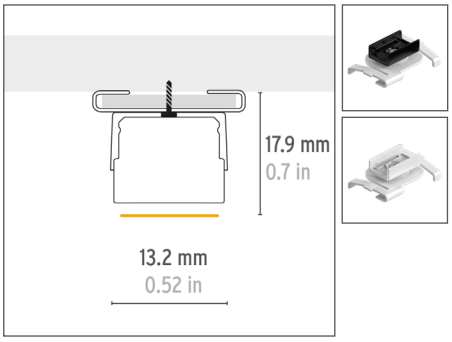
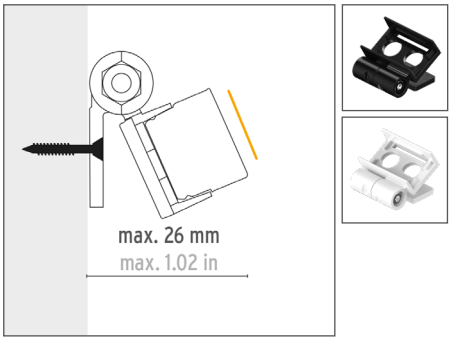
ULTIMA TW HC20 2250 _____ IP40

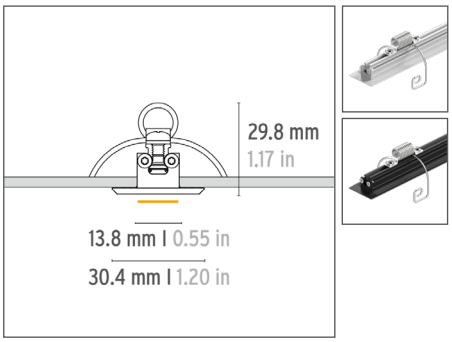
Light color / light source	Class	Power [W/m]	Color temperature (ANSI CCT)	Profile color	Color of integrated glare control	Light distribution	Cable / connector configuration	Mounting type and accessory	Length [mm]	Protection class
Tunable White (TW)	High CRI	20	2200K - 5000K	B - Black	B - Integrated anti-glare black	15° x 15° - nano optics	MO - Male connector one side	GCC - Grid ceiling clip	137	IP40
				S - Silver (Anodized)	W - Integrated anti-glare white	25° x 25° - nano optics	DC - Daisy chain	HMP - High mounting profile	262	
				W - White (RAL9003)		40° x 40° - nano optics	OO - Open cable one side only	MAG - Magnetic	387	
						60° x 60° - nano optics		PCL - Plastic Clip	...	
						BW - Batwing		TMC - Adjustable mounting clip	2,892	
								PC - Pendant Ceiling	3,012	
								PG - Pendant Grid	3,017	
								PGA - Pendant Grid Apple		
								PGL - Pendant Grid Leather		
								PSA - Pendant Surface Apple		
								PSL - Pendant Surface Leather		
								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 accessories 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	Description
	**SURFACE MOUNTING WITH PLASTIC CLIP** Digits in order code: PCL	Plastic mounting clip. Matching the color of the luminaire profile. Suitable for vertical and horizontal mounting. Use according to the mounting instruction.
	**SURFACE MOUNTING WITH HIGH MOUNTING PROFILE** Digits in order code: HMP	Mounting profile with sufficient space behind luminaire to place connectors. Profile is powder-coated white or black (RAL 9003 and 9004) and covers entire flank of luminaire. Profile is cut to length of luminaire. The color of the mounting profile and the color of the anti-glare with endcap of the luminaire can be selected independently of one another. Endcaps are included and add 2.5 mm / 0.1 in per endcap (5 mm / 0.2 in total) to the complete luminaire length. Use according to the mounting instruction.
	**SURFACE MOUNTING, GRID CEILING** Digits in order code: GCC	Grid clips are twisted onto T24 (width 24 mm / 0,94) T-bars of suspended ceiling. Available in colors black/white and white/white. Plastic clip is matching the color of the luminaire profile. Use according to the mounting instruction.
	**SURFACE MOUNTING WITH TILTABLE CLIP** Digits in order code: TMC	Tiltable clips can be used to freely aim the luminaire from 0° to ~. 130° for easy adjustment of the luminaire angle. Available in colors black and white. Matching the color of the luminaire profile. Suitable for vertical and horizontal mounting. Use according to the mounting instruction.



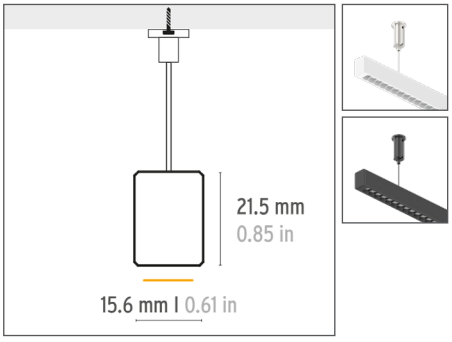
RECESSED WITH TRIM
Digits in order code: R

Recessed installation with trim of individual luminaires in plasterboard ceiling or other boards.

Profile is powder-coated white or black (RAL 9003 and 9004) and mounting springs are pre-mounted. The color of the mounting profile and the color of the anti-glare of the luminaire can be selected independently of one another.

The luminaire length refers to the length of the required ceiling cutout, excluding the flange.

Use according to the mounting instruction.

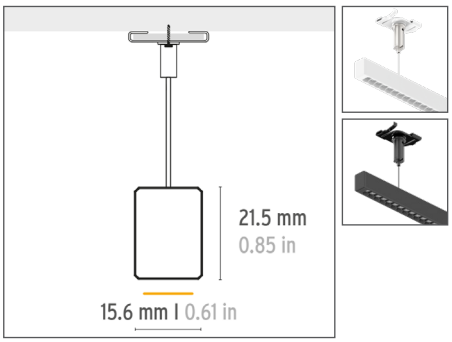


PENDANT, CONCRETE & OTHER CEILINGS
Digits in order code: PC

Pendant with wire ropes are pre-mounted. 3 m cable with open end matching the profile color. Ceiling fasteners for false ceiling or concrete ceilings.

Pendant mounting accessory matches color of luminaire profile. The color of the pendant profile and the color of the anti-glare with endcap of the luminaire can be selected independently of one another. Tunable White variant only available with black cable.

Use according to the mounting instruction.

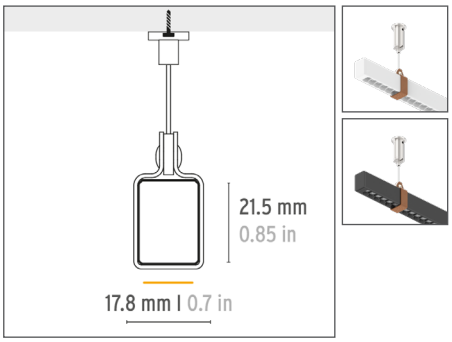


PENDANT, GRID CEILING
Digits in order code: PG

Pendant with wire ropes are pre-mounted. 3 m cable with open end matching the profile color. Grid clips are twisted onto T24 (width 24 mm / 0,94) T-bars of suspended ceiling.

Pendant mounting accessory matches color of luminaire profile. The color of the pendant profile and the color of the anti-glare with endcap of the luminaire can be selected independently of one another. Tunable White variant only available with black cable.

Use according to the mounting instruction.



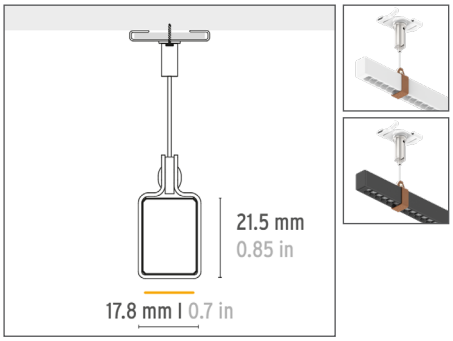
PENDANT WITH LEATHER OR APPLESKIN, CONCRETE & OTHER CEILINGS
Digits in order code: PSL | PSA

Pendant with a specially designed loop in leather or appleskin that can be slid over the luminaire profile. Pendant with wire ropes. 3 m cable with open end. Ceiling fasteners for false ceiling or concrete ceilings.

Select PSL for leather loop and PSA for appleskin loop.

The color of the pendant profile and the color of the anti-glare with endcap of the luminaire can be selected independently of one another. Pendant accessory always comes in silver. Tunable White variant only available with black cable.

Use according to the mounting instruction.



PENDANT WITH LEATHER OR APPLESKIN, GRID CEILING
Digits in order code: PGL | PGA

Pendant with a specially designed loop in leather or appleskin that can be slid over the luminaire profile. Pendant with wire ropes. 3 m cable with open end. Grid clips are twisted onto T24 (width 24 mm / 0,94) T-bars of suspended ceiling.

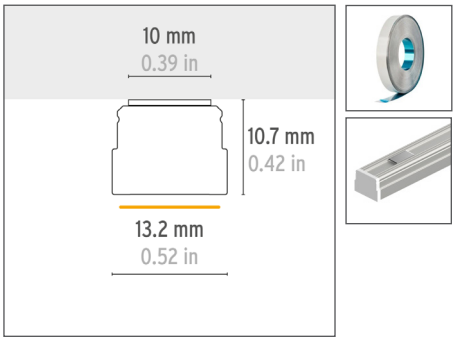
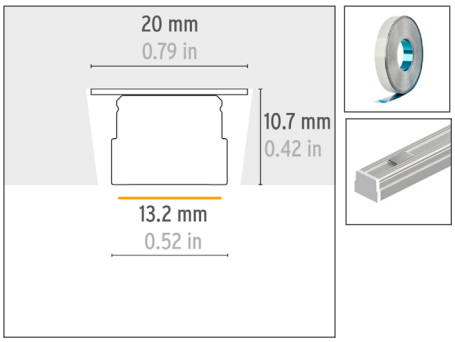
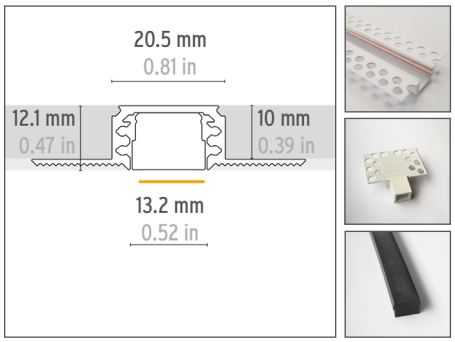
Select PGL for leather loop and PGA for appleskin loop.

The color of the pendant profile and the color of the anti-glare with endcap of the luminaire can be selected independently of one another. Pendant accessory always comes in silver. Tunable White variant only available with black cable.

Use according to the mounting instruction.

ADDITIONAL ACCESSORY (OPTIONAL - ORDERED SEPARATELY)

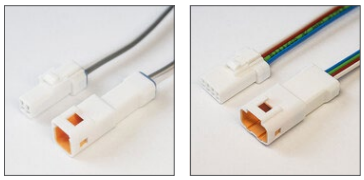
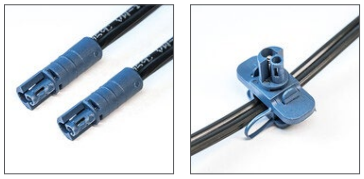
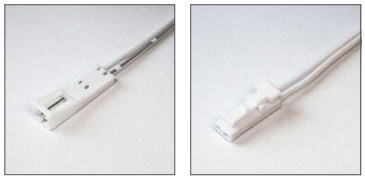
Please note: Mounting accessories are not automatically included with the luminaire. Please order the right amount of accessories with the article numbers listed below. For any questions, please contact our customer service.

	Mounting accessories	Description
	**STEEL STRIP, SMALL, 10 MM (W) X 30 M** Art.-#: 18100048	Metal strip with adhesive tape on the backside for easy installation on smooth surfaces such as glass. **Please note:** The magnets are automatically pre-mounted on the luminaire when chosen as part of the order code (MAG). If you want to dim an ULTIMA with magnets that is mounted in low ambience noise surroundings, we recommend using a controller from the IN.finite™ range optimised for ULTIMA (article codes ending on -ULT). Use according to the mounting instructions.
	**STEEL STRIP, LARGE, 20 MM (W) X 30 M** Art.-#: 18100049	Metal strip with adhesive tape on the backside for easy installation inside in grooves, such as those in a wooden board. **Please note:** The magnets are automatically pre-mounted on the luminaire when chosen as part of the order code (MAG). If you want to dim an ULTIMA with magnets that is mounted in low ambience noise surroundings, we recommend using a controller from the IN.finite™ range optimised for ULTIMA (article codes ending on -ULT). Use according to the mounting instructions.
	**TRIMLESS RECESSED MOUNTING PROFILE, WHITE, 2 M** Art.-#: 10000625-W-2m **TRIMLESS END CAPS WHITE (SET OF 2)** Art.-#: 13000389-W **TRIMLESS PLASTER-IN DUMMY, 5 M** Art.-#: 10000601	Recessed installation of individual luminaires in plasterboard ceiling, subsequently plastered in. **Please note:** The magnets are automatically pre-mounted on the luminaire when chosen as part of the order code (MAG). We recommend cable configuration „M0". Maximum allowed wattage per meter for recessed installations is 20 W/m. If you want to dim an ULTIMA with magnets that is mounted in low ambience noise surroundings, we recommend using a controller from the IN.finite™ range optimised for ULTIMA (article codes ending on -ULT). 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:

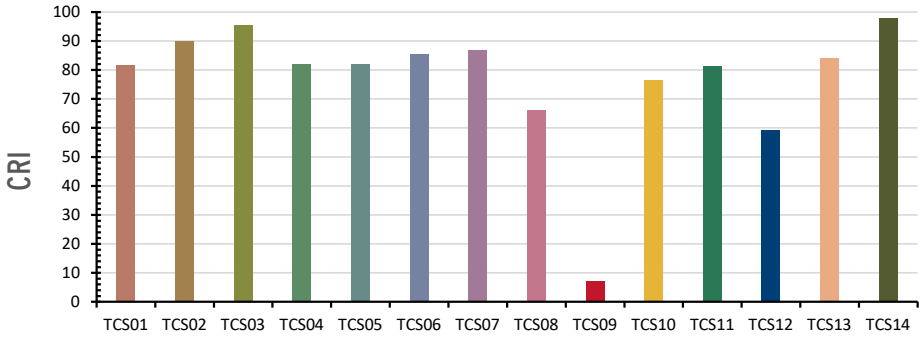
GLOBAL https://www.led-linear.com/products/smart-lighting
USA https://www.ledlinearusa.com/products/drivers-controllers

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

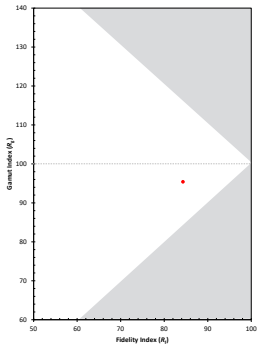
Example for „IQW NEXUS HD, LD and HDR“ at 2200 K and 5000 K

CRI



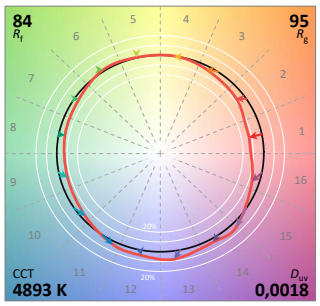
W822 - Test color

Gamut Index vs. Fidelity Index



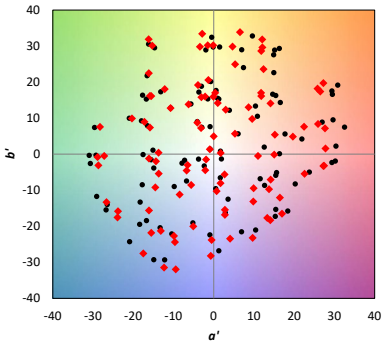
TM-30-18

Color Vector Graphig



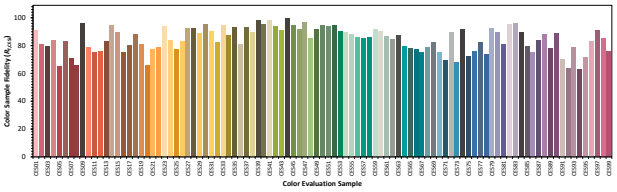
Reference Illuminant
Test Source

Shift in Hue-Chroma Plane



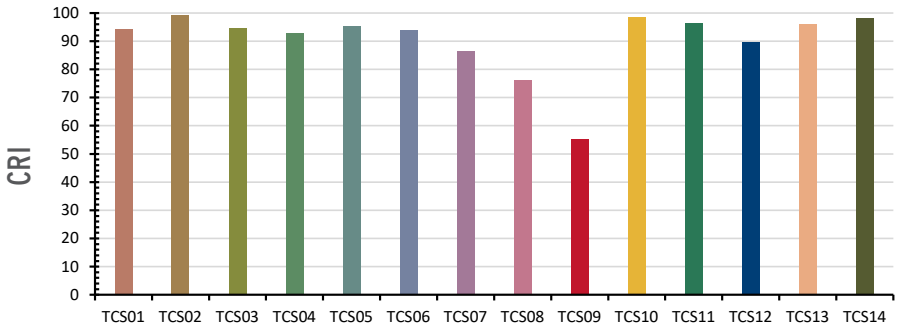
Reference Illuminant
Test Source

W822



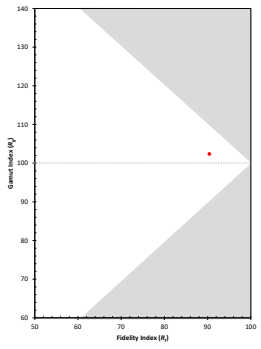
The Fidelity Index chart shows the color fidelity index for each of the 99 reference colors. The reference colors are arranged under the 5000 K reference source, which was also used to determine the color of each bar. The colors are approximate and depend on the correct monitor calibration. Some colors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

CRI



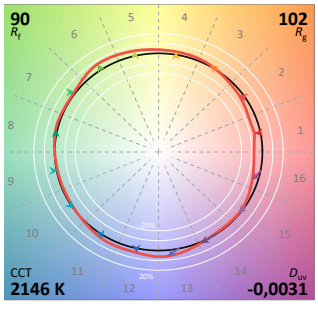
W850 - Test color

Gamut Index vs. Fidelity Index



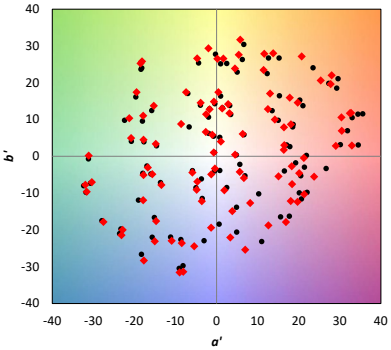
TM-30-18

Color Vector Graphig



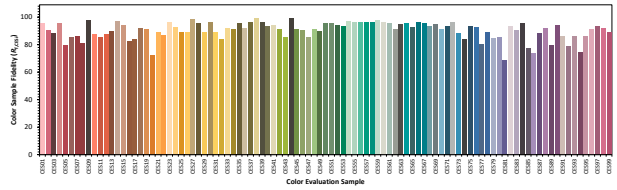
Reference Illuminant
Test Source

Shift in Hue-Chroma Plane



Reference Illuminant
Test Source

W850



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.