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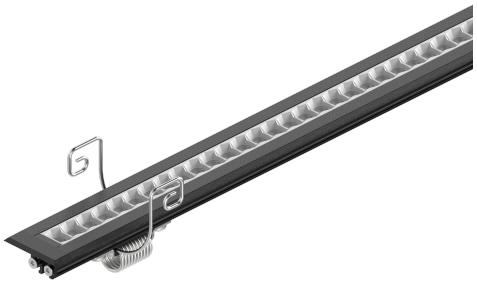
View this configuration in the online product finder

LED LINEAR™
A Fagerhult Group Company

ULTIMA Recessed IP40

ULTIMA TW HC20 2250 ___ _ _R _ IP40

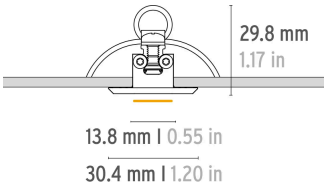


Project name

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: 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

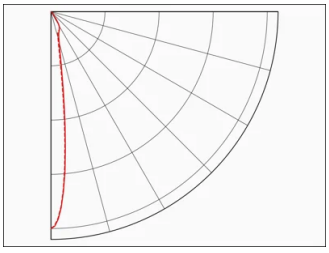
(1): Light engine family: VarioLED Flex IQ White NEXUS HDR HC ; Light distribution: 25° x 25° - nano optics ; Light color / light source: Tunable White (TW) ; Profile color: B - Black ; Color of integrated glare control: W - Integrated anti-glare white ; Optional glare control accessory: No Accessories

PRODUCT INFORMATION

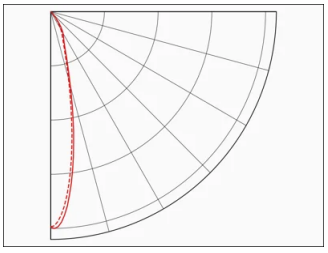
Product family	ULTIMA Recessed IP40
Luminaire type (rigid / flexible)	Rigid luminaire
Mounting type and accessory	R - Recessed with trim
Color rendering and efficiency	HC - CRI > 90, standard efficacy
Measured color temperature (CCT)	2200K / 5110K
Height of fixture incl. mounting accessory [mm]	70
Color 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
LED step length [mm]	125.00

Protection class	IP40
Luminaire profile size	Standard
Light color / light source	Tunable White (TW)
Color temperature (ANSI CCT)	2200K - 5000K
Width of fixture incl. mounting accessory [mm]	90
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°
fixed luminaire section [mm]	17.00

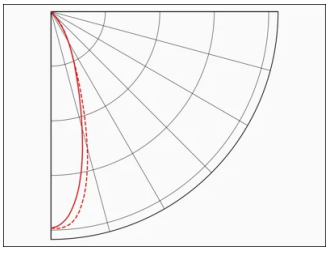
AVAILABLE OPTICS



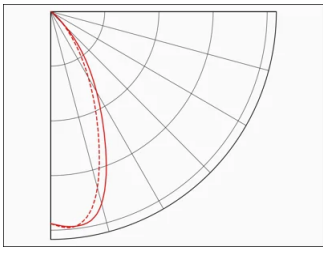
15° x 15° - nano optics



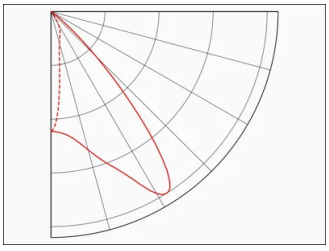
25° x 25° - nano optics



40° x 40° - nano optics



60° x 60° - nano optics



BW - Batwing

AVAILABLE PROFILE COLORS

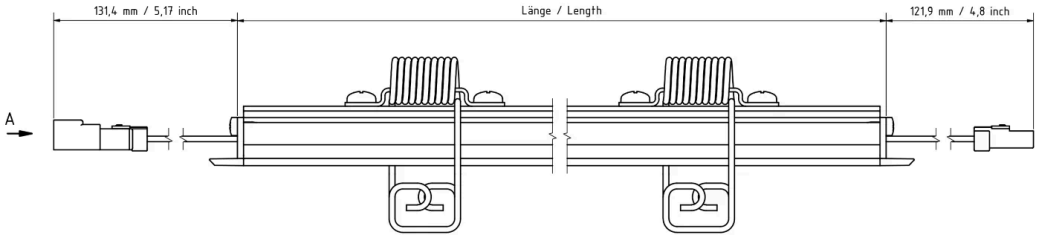
B - Black

W - White (RAL9003)

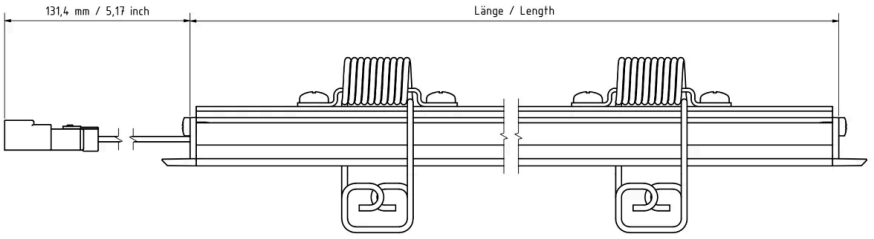
TECHNICAL SPECIFICATIONS

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

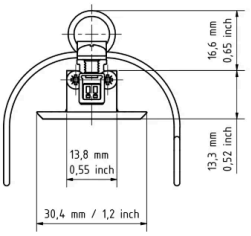
Standard ULTIMA IP40
Einbau mit Rahmen / Recessed with Trim (R)
mit zwei Steckverbindern / with two connectors (DC)

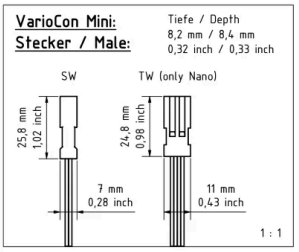


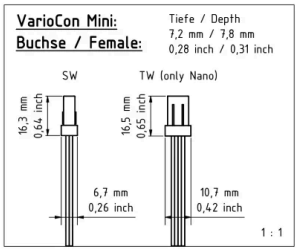
Standard ULTIMA IP40
Einbau mit Rahmen / Recessed with Trim (R)
mit einem Steckverbinder / with one connector (MO)



A (1,5 : 1)







1 ULTIMA RECESSED 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

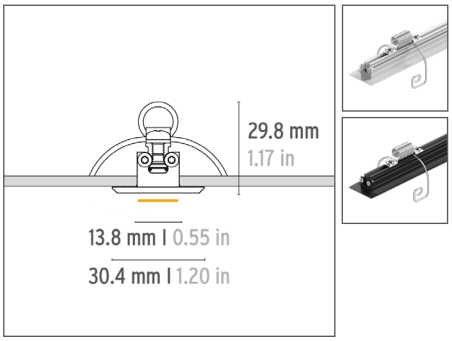
ULTIMA TW HC20 2250 _____R ___ IP40

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	R - Recessed with trim	142	IP40
				W - White (RAL9003)	W - Integrated anti-glare white	25° x 25° - nano optics	DC - Daisy chain		267	
						40° x 40° - nano optics	OO - Open cable one side only		392	
						60° x 60° - nano optics			...	
						BW - Batwing			2,767	
									2,892	
									3,017	

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

RECESSED WITH TRIM
Digits in order code: R

Description

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.

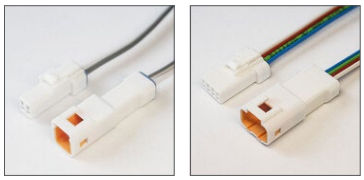
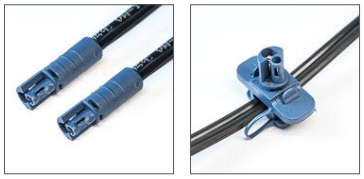
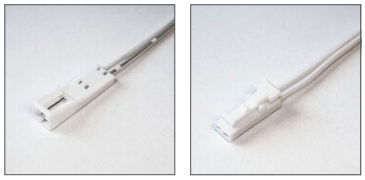
The luminaire length refers to the length of the required ceiling cutout, excluding the flange.

Use according to the mounting instruction.

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:

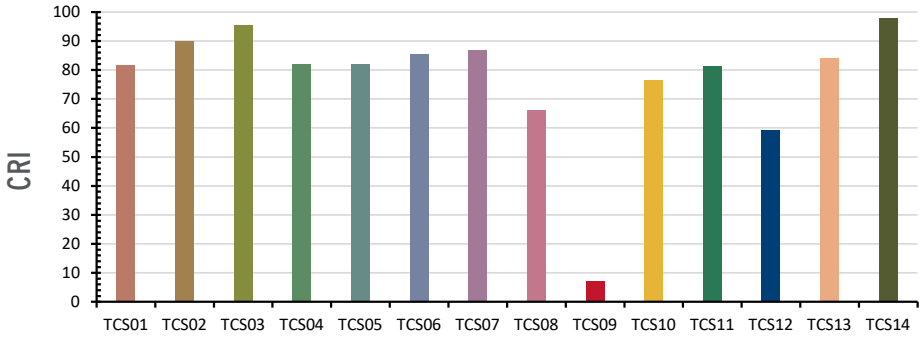
GLOBAL https://www.led-linear.com/products/smart-lighting
USA https://www.ledlinearusa.com/products/drivers-controllers

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

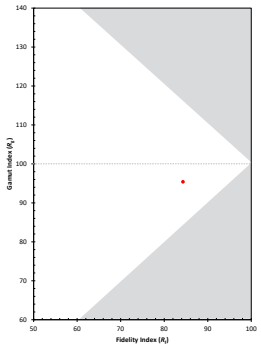
Example for „IQW NEXUS HD, LD and HDR“ at 2200 K and 5000 K

CRI



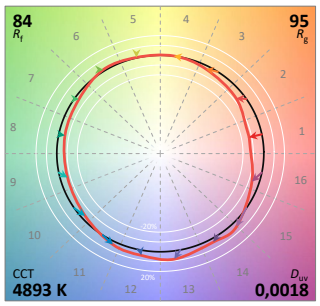
W822 - Test color

Gamut Index vs. Fidelity Index



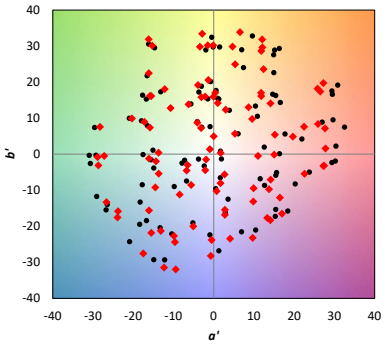
TM-30-18

Color Vector Graphig



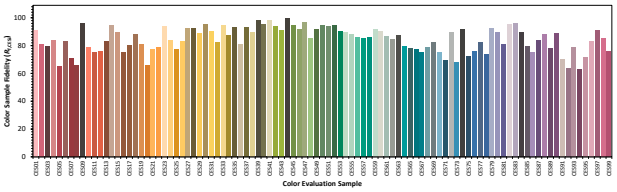
Reference Illuminant
Test Source

Shift in Hue-Chroma Plane



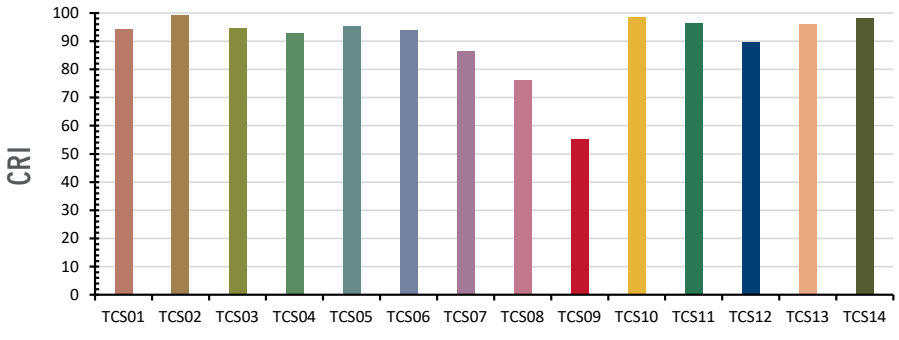
Reference Illuminant
Test Source

W822



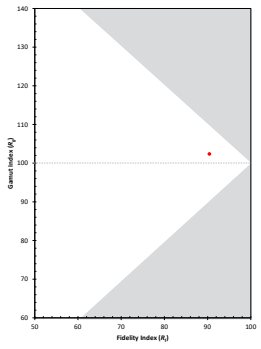
The Fidelity Index chart shows the color fidelity index for each of the 99 reference colors. The reference colors are arranged under the 5000 K reference source, which was also used to determine the color of each bar. The colors are approximate and depend on the correct monitor calibration. Some colors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

CRI



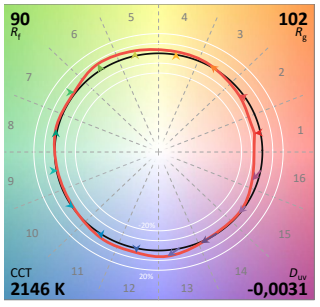
W850 - Test color

Gamut Index vs. Fidelity Index



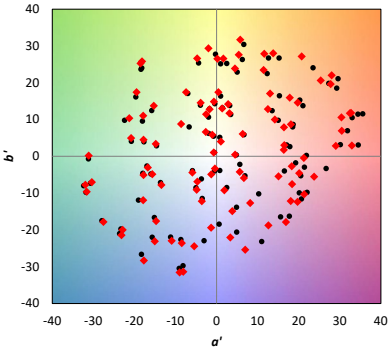
TM-30-18

Color Vector Graphig



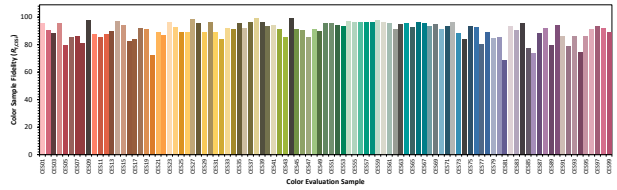
Reference Illuminant
Test Source

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.