



24V, constant voltage, linear surface-mounted LED luminaire with nano optics in miniaturized dimension (1.52" x 0.49"). Ideal light distribution for wall grazing thanks to beam angles of 15°, 25° and an oval light distribution of 15° x 40°. Homogenous light flux along the fixture and flawless thermal management thanks to constant voltage controlled flexible PCB LED tape, produced in a unique Reel-to-Reel process. Easy serial installation with quick connectors. Outstanding lifetime of >60,000 hrs L80/B10. Embeds high quality LEDs with 3 step MacAdams (SDCM3) binning centered on target CCT (One Bin Only) with extended photometric code of Wxxx/339 ensuring an exceptional color consistency over the rated lifetime. Premium color rendition with CRI of 95 (R9 = 85) and TM-30-15 up to R<sub>f</sub> = 95 / R<sub>g</sub> = 101. Consistent light intensity all along the luminaire length. Fully dimmable. Engineered and produced in Germany.

Project name \_\_\_\_\_

Fixture type \_\_\_\_\_ Phase \_\_\_\_\_

Specifier \_\_\_\_\_ Date \_\_\_\_\_

**24** TITLE Select Models Only

**ETL** Intertek ETL Listed

**Nano Ray** Precision Optics

**Integrated Circuit Driver** Up to 840 lm/ft 80 lm/W Constant Light Output

**Reel-to-Reel R2R Production** High Quality Solder Free Reels

**TjAway Thermal Management** Exceptional Thermal Dissipation

**One Bin Only** 3 MacAdam up to 95 CRI

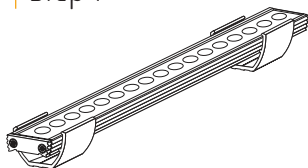
**L/B Lifetime** L80/B10 >60,000 hrs

**6 Digit Photometric Code** Wxxx/339

**IES LM79/LM80** LM79/LM80 Compliant

## Component Ordering Process – For Factory Assembled Fixtures, see page 6

### Step 1



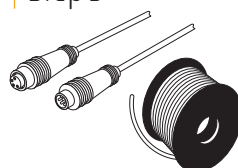
Luminaire (Page 1)

### Step 2



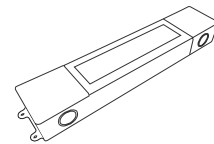
Accessories (Page 4)

### Step 3



Cables and Connectors (Page 4)

### Step 4



Drivers and Controllers (Page 5)

## Luminaire Order Code

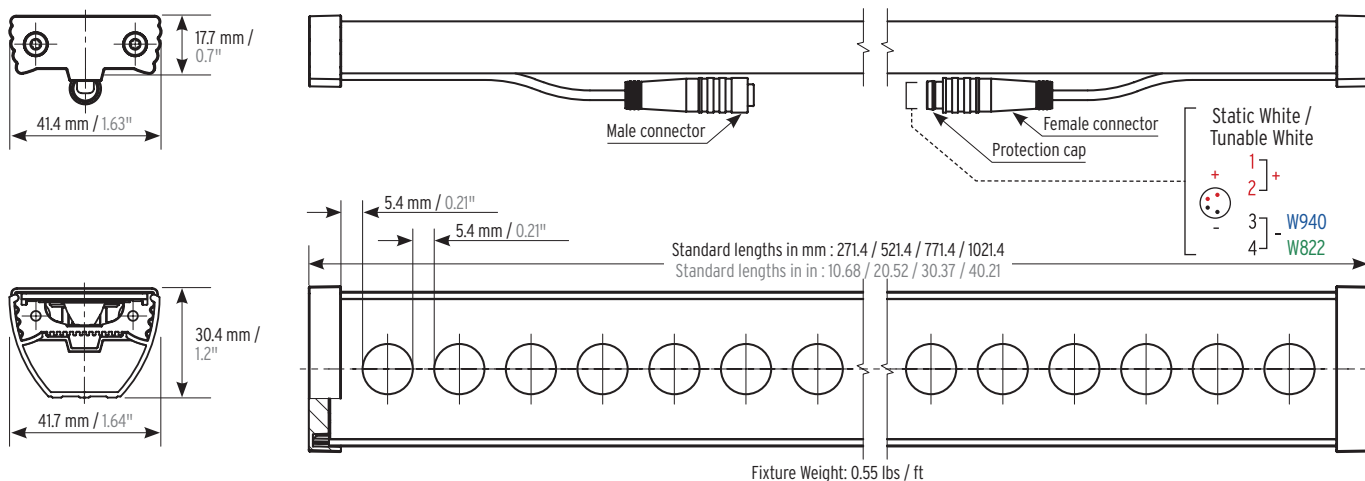
Family	Lumen package <sup>a</sup>	Color rendering	Color temperature	Standard length <sup>c</sup>	Optic	Ingress
XOOLUX NANO	----	W_	---	-----	---	IP67
	LD05-100 lm/ft	W8-85CRI <sup>b</sup>	22-2200K	271-10 in	15-15° Optic	
	LD10-190 lm/ft	W9-95CRI	27-2700K	521-20 in	25-25° Optic	
	LD15-300 lm/ft		30-3000K	771-30 in	OV-15° x 40° Oval Optic	
	LD25-490 lm/ft		35-3500K	1021-40 in		
	LD40-680 lm/ft		40-4000K			
			50-5000K			
	IQW LD40-Tunable White	-	-			

<sup>a</sup> Lumen Values represent 3000K (W930) and with 25° optic. <sup>b</sup> Only available with 2200K and 5000K (W822 and W850). <sup>c</sup> Values represent nominal lengths. For exact lengths see page 3.

		Color temperature	LD5		LD10		LD15		LD25		LD40		
			Lumen/ft <sup>a</sup>	W/ft	Lumen/ft <sup>a</sup>	W/ft	Lumen/ft <sup>a</sup>	W/ft	Lumen/ft	W/ft <sup>a</sup>	Lumen/ft	W/ft <sup>a</sup>	
Static White	●	W822	2,200 K	90	1.5	170	3.0	270	4.6	450	7.6	620	12.2
	●	W927	2,700 K	95	1.5	185	3.0	290	4.6	475	7.6	660	12.2
	●	W930	3,000 K	100	1.5	190	3.0	300	4.6	490	7.6	680	12.2
	●	W935	3,500 K	100	1.5	190	3.0	300	4.6	500	7.6	690	12.2
	●	W940	4,000 K	105	1.5	200	3.0	315	4.6	515	7.6	715	12.2
Tunable White	●	W850	5,000 K	115	1.8	220	3.0	365	4.6	605	7.6	840	12.2
	●	W822	2,200 K	-	-	-	-	-	-	-	-	420	12.2
	●	W850	5,000 K	-	-	-	-	-	-	-	-	570	12.2
	●	Total	2,200 K - 5,000 K	-	-	-	-	-	-	-	-	-	12.2

<sup>a</sup> The given data are typical values measured with 25° optics. Due to tolerances of the production process and the electrical components, values for light output and electrical power can vary up to 10%.

## Mechanical Details



## Technical Details

	Static White	Tunable White
Voltage	24 Volt (23 V <sub>min</sub> , 25 V <sub>max</sub> )	24 Volt (23 V <sub>min</sub> , 25 V <sub>max</sub> )
Case temperature <sup>A</sup>	T <sub>Cmin</sub> = -13°F / -25°C, T <sub>Cmax</sub> = specific, see Table below	T <sub>Cmin</sub> = -13°F / -25°C, T <sub>Cmax</sub> = 167°F / 75°C
Storage temperature	T <sub>Smin</sub> = -22°F / -30°C, T <sub>Smax</sub> = 185°F / 85°C	T <sub>Smin</sub> = -22°F / -30°C, T <sub>Smax</sub> = 176°F / 80°C
Ambient temperature	T <sub>Amin</sub> = -13°F / -25°C, T <sub>Amax</sub> = specific, see Table below	T <sub>Amin</sub> = -13°F / -25°C, T <sub>Amax</sub> = 104°F / 40°C

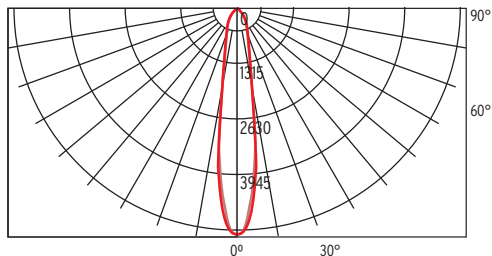
<sup>A</sup> The position of the T<sub>C</sub>-point is marked on each step of the LED strip. The T<sub>C</sub>-point should be measured in thermal equilibrium according to IEC EN 60598-1.

	Static White					Tunable White
	LD5	LD10	LD15	LD25	LD40	LD40
Power (W/ft) <sup>B</sup>	1.5	3.0	4.6	7.6	12.2	12.2
Efficacy (lm / W) <sup>B</sup> @ W850	76	72	80	80	69	73
Max serial run length (ft / m)	24.6 / 7.5	16.4 / 5	16.4 / 5	9.8 / 3	6.6 / 2	6.6 / 2
CRI / R9 @ 3000 K	95 / 86	95 / 86	95 / 86	95 / 86	95 / 86	up to 85 / up to 65
Max temperature T <sub>C</sub> -point (T <sub>Cmax</sub> ) <sup>B</sup>	140°F / 60°C	140°F / 60°C	140°F / 60°C	140°F / 60°C	167°F / 75°C	167°F / 75°C
Max ambient temperature (T <sub>Amax</sub> ) <sup>B</sup>	122°F / 50°C	122°F / 50°C	122°F / 50°C	113°F / 45°C	95°F / 35°C	104°F / 40°C

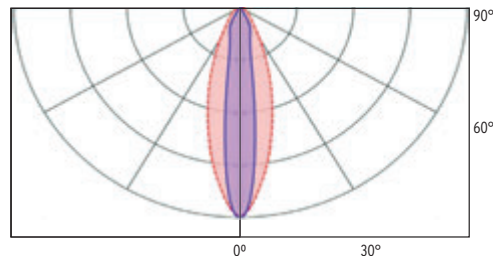
<sup>B</sup> The given data are typical values. Due to tolerances of the production process and the electrical components, values for light output and electrical power can vary up to 10%.

## Light Distribution

15° Optic  
CBCP: 11750cd\*

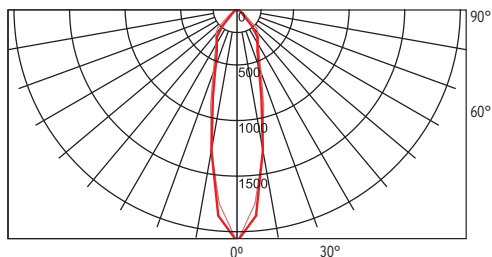


Oval Optic  
15° x 40°  
CBCP: 6700cd\*



cd/1000 lumen  
— C0/C180  
••••• C90/C270

25° Optic  
CBCP: 7100cd\*

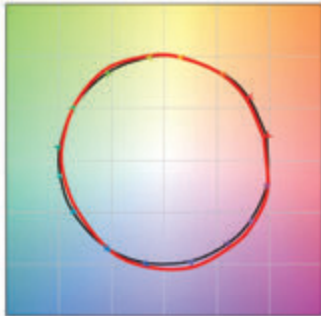


\* Values represent LD40 at 3000K with 1m fixture

## Colorimetric Details

Photometric Code	CCT	CRI	R9	R <sub>f</sub>	R <sub>g</sub>
W940/339	4000 K	91	77	91	101

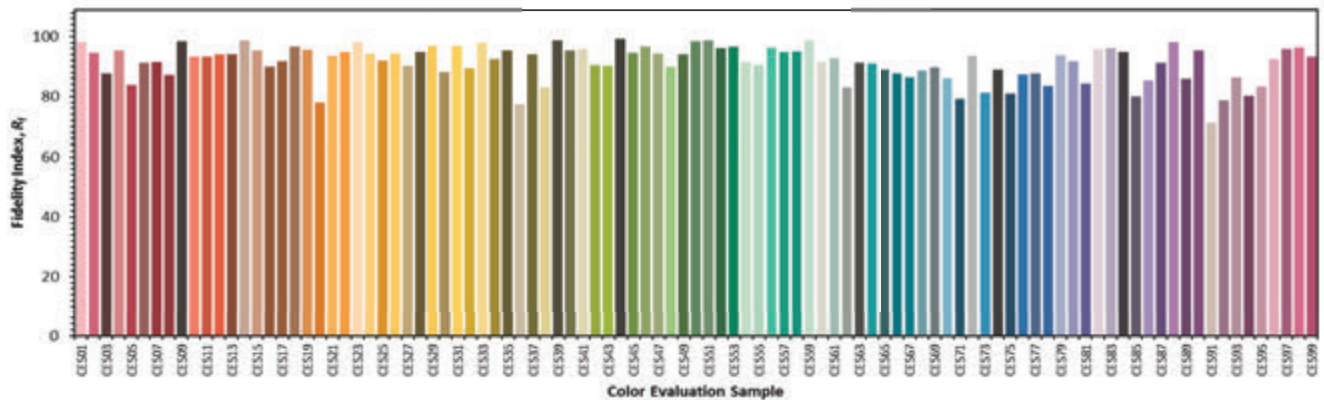
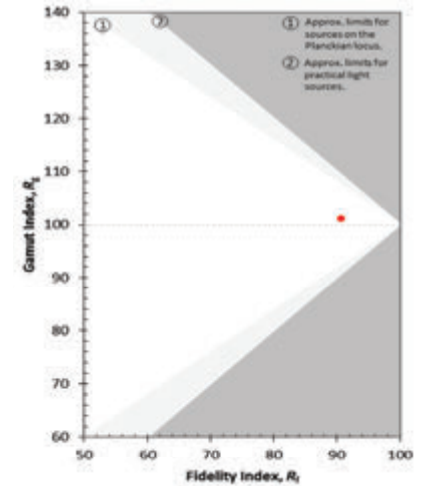
Color Vector Graphic



Color Distortion Graphic







Reference Illuminant  
Test Source





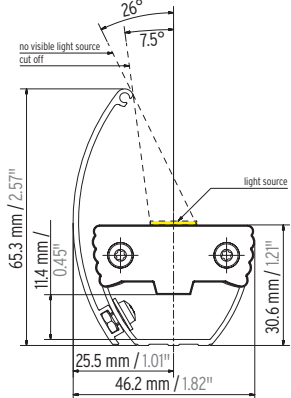
## LENGTH CHART - Xoolux Nano

Fixture length		Static White										Tunable White LD40	
		LD5 1.8 Watts/Ft		LD10 3.0 Watts/Ft		LD15 4.6 Watts/Ft		LD25 7.6 Watts/Ft		LD40 12.2 Watts/Ft		12.2 Watts/Ft	
inches	mm	Watts/fixture	Lumens/fixture @3000K	Watts/fixture	Lumens/fixture @3000K	Watts/fixture	Lumens/fixture @3000K	Watts/fixture	Lumens/fixture @3000K	Watts/fixture	Lumens/fixture @3000K	Watts/fixture	Lumens/fixture
10.6	271	2	84	3	177	4	278	6	447	10	641	10	480
20.5	521	3	167	5	350	8	550	13	883	20	1266	20	950
30.3	771	4	249	7	522	11	820	19	1318	30	1890	30	1417
40.1	1021	6	331	10	694	15	1091	25	1752	40	2513	40	1885

## Cables and Connectors

Item	Description	Model	Dimensions	Order Code
 Female Connector IP67	Use to run cable from the driver to the first fixture of the run or to the next fixture. Female connector on one side and open end cable on the other side.  Available with staright or 90° L-shaped connector.	Static White	2 x 22 Awg, 4 in	15000071
		Static White	2 x 22 Awg, 3.2 ft	15000090
		Static White	2 x 22 Awg, 6.5 ft	15000091
		Static White	2 x 22 Awg, 16.5 ft	15000092
		Static White / 90°	2 x 22 Awg, 6.5 ft	15000089
		RGB / Tunable White	4 x 23 Awg, 4 in	15000094
		RGB / Tunable White	4 x 23 Awg, 3.2 ft	15000095
		RGB / Tunable White	4 x 23 Awg, 6.5 ft	15000096
 Male Connector IP67	Use to run cable from the fixture to the driver or to the previous fixture. Male connector on one side and open end cable on the other side.	Static White	2 x 22 Awg, 4 in	15000070
		Static White	2 x 22 Awg, 3.2 ft	15000093
		RGB / Tunable White	2 x 23 Awg, 4 in	15000099
		RGB / Tunable White	2 x 23 Awg, 3.2 ft	15000100
 Extension IP67	Use to extend the distance between connection points. Female connector on one side and male connector on the other side.	Static White / RGB / Tunable White	4 x 23 Awg, 3 in	15000101
		Static White / RGB / Tunable White	4 x 23 Awg, 6.5 ft	15000102
		Static White / RGB / Tunable White	4 x 23 Awg, 16.5 ft	15000103
 Female Protection Cap IP67	Use to seal unused connectors and maintain IP67 ingress protection.	Static White / RGB / Tunable White	—	15000115


## Accessories

Item	Description	Model	Order Code
 Anti-Glare Cover	Heat resistant plastic cover for glare control. Snaps onto the fixture from the top and does not change the beam distribution. <b>Black Finish, 75% light transmittance.</b>	250mm x 7mm (24mm high with fixture)	10000608-0250-SCH
 Xoolux Nano Mounting Clip	2 inch long, 1.5 inch wide surface mounting clips. Installs to surface with screws. The product can be tilted every 5 degrees inside the clip. Recommended to use every 12 inches.	0° Black Plastic (1-1/8") 0° Black Aluminum (1-1/8") 15° Black Aluminum (1-1/2") 30° Black Aluminum (2")	13000291-SCH 13000292-SCH 13000293-SCH 13000294-SCH
	Aluminum extruded glare shield with 7.5 degree cut-off angle. The set includes one sided glare shield that is screwed on mounting clips. The fixture snaps into the assembly and can be rotated inside the clips in 5 degree increments. <b>Black Finish, 82% light transmittance.</b>	300mm (2 clips) 550mm (2 clips) 800mm (3 clips) 1050mm (3 clips) 2042mm (6 clips)	13000377-0300-SCH 13000377-0550-SCH 13000377-0800-SCH 13000377-1050-SCH 13000377-2042-SCH

## Drivers

Item	Specifications	Downloads
<b>LED LINEAR™</b> Non-Dimmable Drivers 	<ul style="list-style-type: none"> <li>• UL 8750 Listed Enclosure - With Built-In Junction Boxes</li> <li>• Universal Input Voltage 120V - 277V</li> <li>• IP65 - For Both Indoor and Outdoor Use</li> <li>• No Minimum Load Requirement</li> <li>• 24V Constant Voltage Output, Class 2</li> <li>• Available in three wattages 30W, 60W and 96W</li> <li>• Max. Dimensions: 12-1/8" x 2-3/8" x 1-3/8"</li> </ul>	<a href="#">30 W SPEC SHEET</a> <a href="#">60 W SPEC SHEET</a> <a href="#">96 W SPEC SHEET</a> <a href="#">INSTALLATION INSTRUCTIONS</a>
<b>LED LINEAR™</b> 0-10V Dimmable Drivers 	<ul style="list-style-type: none"> <li>• UL 8750 Listed Enclosure - With Built-In Junction Boxes</li> <li>• 0-10V Dimmable - Flicker Free Down to 1%</li> <li>• Universal Input Voltage 120V - 277V</li> <li>• IP65 - For Both Indoor and Outdoor Use</li> <li>• 24V Constant Voltage Output, Class 2, Class P</li> <li>• Available in three wattages 30W, 60W and 96W</li> <li>• Max. Dimensions: 12-1/8" x 2-3/8" x 1-3/8"</li> </ul>	<a href="#">30 W SPEC SHEET</a> <a href="#">60 W SPEC SHEET</a> <a href="#">96 W SPEC SHEET</a> <a href="#">INSTALLATION INSTRUCTIONS</a>
<b>LED LINEAR™</b> ELV/Triac Dimmable Drivers 	<ul style="list-style-type: none"> <li>• UL 8750 Listed Class 2 Enclosure</li> <li>• 24V constant voltage output</li> <li>• Compact size yet high efficiency and performance in dry and damp environments (IP67)</li> <li>• Multiple Inputs: 120V or 277V</li> <li>• Fully dimmable: ELV Dimmers - Reverse or Adaptive Phase Control, Trailing Edge</li> <li>• Available in two wattages 48W and 96W</li> <li>• Multiple Circuits are available up to 4 units (up to 384W)</li> </ul>	<a href="#">48 W SPEC SHEET</a> <a href="#">96 W SPEC SHEET</a> <a href="#">INSTALLATION INSTRUCTIONS</a>
 PWM Dimmable Drivers 	<ul style="list-style-type: none"> <li>• Universal AC input / Full range (up to 305VAC)</li> <li>• Constant voltage PWM style output</li> <li>• Built-in 3 in 1 dimming function (0-10Vdc or PWM signal or resistance)</li> <li>• Dimming range : 0-100%</li> <li>• Class 2 power unit</li> <li>• Suitable for dry / damp / wet locations</li> <li>• UL Recognized component, 5 years warranty</li> </ul>	<a href="#">40 W SPEC SHEET</a> <a href="#">60 W SPEC SHEET</a> <a href="#">90 W SPEC SHEET</a> <a href="#">INSTALLATION INSTRUCTIONS</a>
<b>OLUTRON</b> Dimmable Drivers 	<ul style="list-style-type: none"> <li>• UL Listed Enclosure</li> <li>• Dimming Range: 100% to 1% and 0.1% (Premiere)</li> <li>• LED lighting turns on to any dimmed level without flashing to full brightness</li> <li>• Operating Voltage: 120V~ to 277V~ at 50/60 Hz</li> <li>• Rated lifetime of 50,000 hours at 40°C (104°F) ambient temperature and maximum loading</li> <li>• For rated warranty, ambient temperature not to exceed 40°C (104°F)</li> <li>• Open-circuit protected output</li> </ul>	<a href="#">HI-LUME SPEC SHEET</a> <a href="#">HI-LUME PREMIERE SPEC SHEET</a> <a href="#">INSTALLATION INSTRUCTIONS</a>
<b>eldoLED</b> DALI/DMX Dimmable Drivers 	<ul style="list-style-type: none"> <li>• Available in linear or rectangular format</li> <li>• 100W, DMX/DALI interface for Static White, Tunable White and RGB/W Applications</li> <li>• 4 control channels</li> <li>• 24V constant voltage, 4 x 24V outputs</li> <li>• Metal or plastic case options</li> </ul>	<a href="#">100 W SPEC SHEET</a> <a href="#">INSTALLATION INSTRUCTIONS</a>

## Controllers

Item	Specifications	Downloads
<b>eldoLED</b> Controllers 	<b>180/D</b> DMX Controller for RGB/W and Tunable White Applications	<a href="#">180/D SPEC SHEET</a>
	<b>210/D</b> Dali Controller for Static White Applications	<a href="#">210/D SPEC SHEET</a>
	<b>211/D-LG</b> 0-10V Logarithmic Dimming Controller	<a href="#">211/D-LG SPEC SHEET</a>
	<b>211/D-LN</b> 0-10V Linear Dimming Controller	<a href="#">211/D-LN SPEC SHEET</a>
	<b>212/D</b> DMX Controller for Static White and Static Color Applications	<a href="#">212/D SPEC SHEET</a>
	<b>DimWheel</b> DMX Wall Controller for RGB/W and Tunable White Applications	<a href="#">DIM WHEEL SPEC SHEET</a>

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PRODUCT BROCHURE

INSTALLATION

IES FILES

DRIVERS & CONTROLS

VOLTAGE DROP CALCULATOR