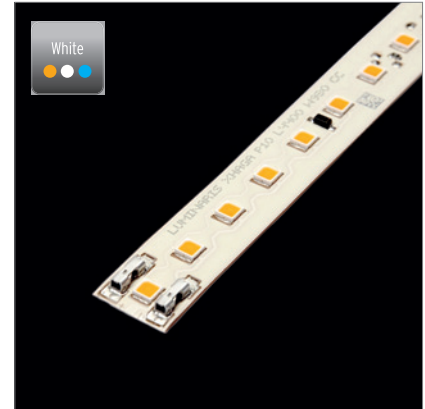


Flexible power LED strip

Product description

- Dimmable (PWM, CCR) linear light engine based on flexible circuit boards, produced in a reel-to-reel process
- Constant current operation, max. 150 mA per 140 mm / 5.51" step, approx. 42 V (SELV)
- Poke-in connectors every 280 mm / 11" for easy cable connection
- High performance adhesive tape for quick and reliable installation and commissioning
- Up to 6,400 lm/m / 1,951 lm/ft light output
- Efficacy typical 160 lm/W @ W840
- 3 color temperatures (2,700 K, 3,000 K, 4,000 K)
- CRI up to 95; TM30 R_f > 90, R_g = 100 ±2
- Protection diode against miswiring on each step (cut length 140 mm / 5.51")
- Outstanding lifetime L90/B10 > 60,000 h (based on 10,000 h LM80 reports, T_c = 85°C / 185°F)
- Excellent CCT consistency during lifetime < 3 SDCM
- Color over angle (COA) better than 30 K (full beam)



Features and benefits

- Flexible LED strip manufactured in unique Reel-to-reel production process for best-in-class thermal management: Tj Away®
- Slim form factor (width = 12 mm / 0.47"), bending radius > 30 mm / 1.18" for slim aluminum profiles, organic and curved designs
- Cost efficient:
 - No additional wiring, no tools, no screw, no rivets, no soldering needed for fixture integration
 - Simplified luminaire design due to SELV architecture
 - Only one electrical connection per 2 m / 2.56' run length needed
- Push-in connector for cables up to 0.5 mm² / 0,0008 sqin cross section can handle up to 6 Ampere forward current
- State-of-the-art 3030 LED packages from Japanese and Korean manufacturers
- Long-term supply chain guaranty due to One-Bin-Only (OBO) policy



Tj Away®
LED LINEAR™ TECHNOLOGY



**ONE
BIN
ONLY**



Lifetime
L90/B10
> 60,000 h



Wx27/
339



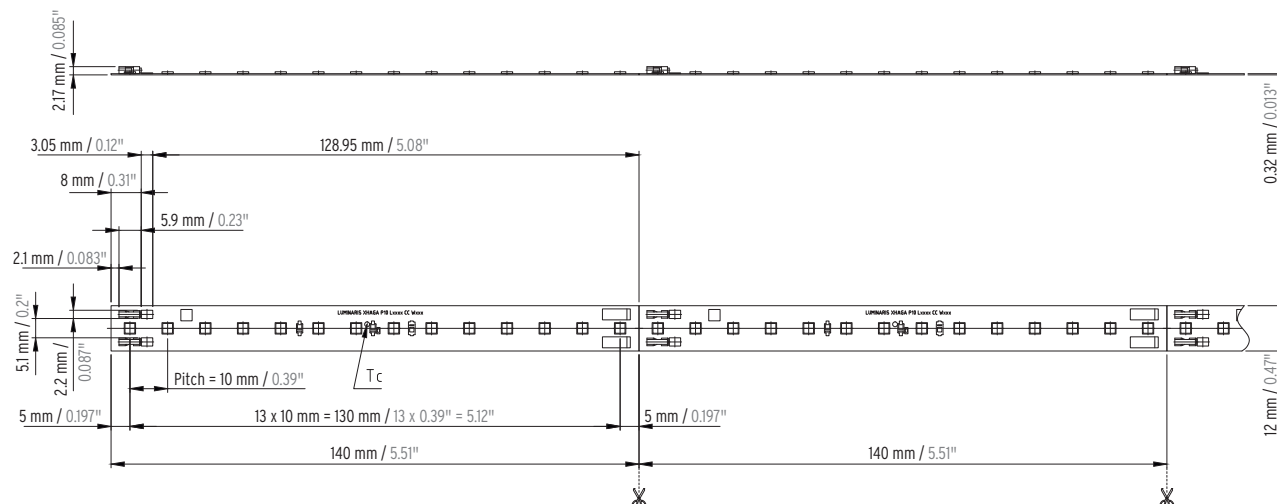
LM 79
LM 79 compliant



LM 80
LM 80 compliant

Technical specifications

Mechanical dimensions



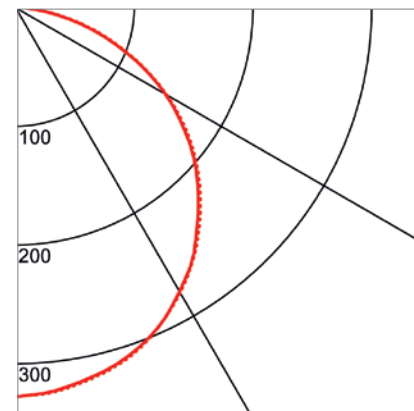
Technical data

LEDs (3 mm x 3 mm / 0.12" x 0.12")	14 LEDs per 140 mm / 5.51"
Beam characteristics	120° (Lambertian)
CCT binning	< 3SDCM (OBO)
Binning tolerances	$\Delta CIE (x,y) < \pm 0.003$
Ambient temperature range (T_a)	-40°C ... 50°C / -40°F ... 122°F
Max. case temperature (T_c) ¹	85°C / 185°F
Lifetime ($T_c < 85^\circ\text{C} / 185^\circ\text{F}$) ²	> 60,000 hrs L90/B10
Thermal resistance (Heat-sink-case)	< 2 K/W
Typ. forward voltage (V_f)	40 V... 43 VDC
Insulation test voltage	2 kV
ESD classification	Severity Level 1
Risk group (EN 62471:2008)	0
Type of protection	IP00
Supply line cross section	0.25 - 0.5 mm ² (AWG 23 - 20)

¹ Case temperature is measured at the T_c mark on the tape in thermal equilibrium.

² Lifetime data based on LM80 reports over 10,000 hrs.

Light distribution



Important note

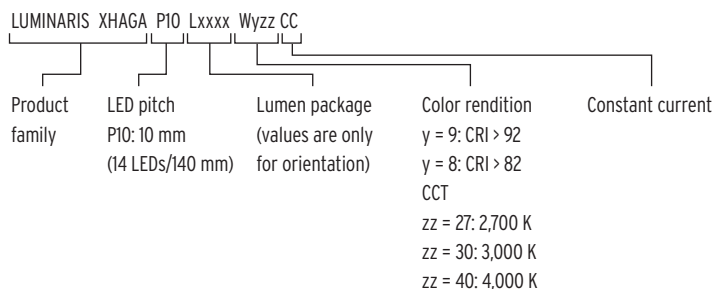


The Tj Away® technology allows for sufficient cooling for power levels up to 15 W/m / 4.6 W/ft (50 mA per 140 mm / 5.51").

Free convection leads away the heat and ensures a junction temperature below 85°C / 185°F for ambient temperatures below 40°C / 104°F.

Order information

Explanation of the order code:



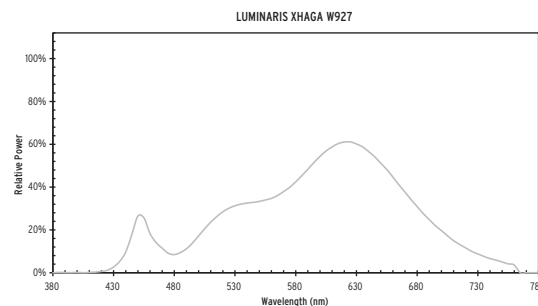
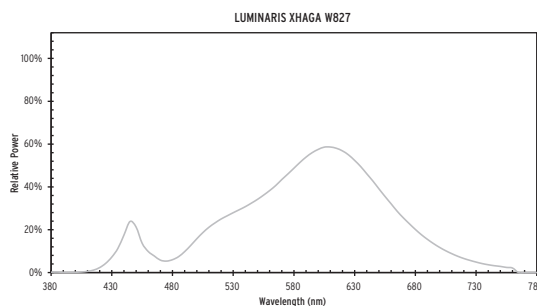
Product code	Art. No.	CCT	CRI	Lumen/m / Lumen/ft @ I _{max} ²	Efficacy	max. current per 140 mm / 5.51" step ¹	Watt per meter ² / Watt per feet ²
LUMINARIS XHAGA P10 L2200 W827 CC	10602	2,700 K	85	2,130 lm/m / 649 lm/ft	147 lm/W	50 mA	2.03 W (14.5 W/m / 4.4 W/ft)
LUMINARIS XHAGA P10 L2200 W830 CC	10603	3,000 K	85	2,200 lm/m / 670 lm/ft	151 lm/W	50 mA	2.03 W (14.5 W/m / 4.4 W/ft)
LUMINARIS XHAGA P10 L2200 W840 CC	10605	4,000 K	85	2,300 lm/m / 701 lm/ft	159 lm/W	50 mA	2.03 W (14.5 W/m / 4.4 W/ft)
LUMINARIS XHAGA P10 L4400 W827 CC	10612	2,700 K	85	4,050 lm/m / 1,235 lm/ft	140 lm/W	100 mA	4.06 W (29.0 W/m / 8.8 W/ft)
LUMINARIS XHAGA P10 L4400 W830 CC	10613	3,000 K	85	4,200 lm/m / 1,280 lm/ft	145 lm/W	100 mA	4.06 W (29.0 W/m / 8.8 W/ft)
LUMINARIS XHAGA P10 L4400 W840 CC	10614	4,000 K	85	4,350 lm/m / 1,326 lm/ft	150 lm/W	100 mA	4.06 W (29.0 W/m / 8.8 W/ft)
LUMINARIS XHAGA P10 L4400 W927 CC	10740	2,700 K	95	3,750 lm/m / 1,143 lm/ft	129 lm/W	100 mA	4.06 W (29.0 W/m / 8.8 W/ft)
LUMINARIS XHAGA P10 L4400 W930 CC	10741	3,000 K	95	3,800 lm/m / 1,159 lm/ft	131 lm/W	100 mA	4.06 W (29.0 W/m / 8.8 W/ft)
LUMINARIS XHAGA P10 L4400 W940 CC	10743	4,000 K	95	4,000 lm/m / 1,220 lm/ft	138 lm/W	100 mA	4.06 W (29.0 W/m / 8.8 W/ft)
LUMINARIS XHAGA P10 L6400 W827 CC	10622	2,700 K	85	5,850 lm/m / 1,784 lm/ft	133 lm/W	150 mA	6.09 W (43.5 W/m / 13.3 W/ft)
LUMINARIS XHAGA P10 L6400 W830 CC	10623	3,000 K	85	6,200 lm/m / 1,890 lm/ft	142 lm/W	150 mA	6.09 W (43.5 W/m / 13.3 W/ft)
LUMINARIS XHAGA P10 L6400 W840 CC	10625	4,000 K	85	6,400 lm/m / 1,951 lm/ft	147 lm/W	150 mA	6.09 W (43.5 W/m / 13.3 W/ft)

¹ Max. feed-in current of 6 A must not be exceeded.

² Given data are typical values. Due to tolerances of the production process and the electrical components, values can vary up to 10%.

Optical data

2,700 K



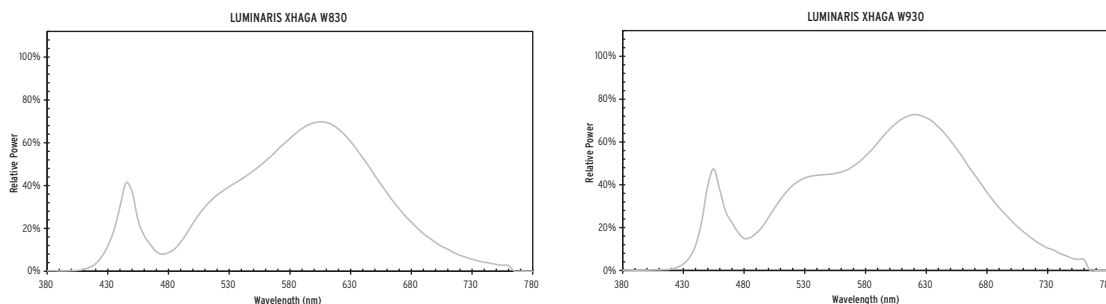
Photometrical code	W827 / 339	W927 / 339
CIE _x ; CIE _y ¹	0.4583; 0.4136	0.4545; 0.4057
CRI; R ₉	83; 13	95; 65
Fidelity factor R _f	82	91
Gamut factor R _g	99	102
Skin fidelity R _{t, skin}	83	96
Color consistency	< 3 SDCM	
Δu'v' at 10,000 hours	< 0.003	
Lifetime @ T _c < 85°C ²	> 60,000 hours L90/B10 (based on 10,000 h LM80 report)	
Photobiological safety	RG0	

¹ Measurement tolerances ± 0.005

² Case temperature measured in thermal equilibrium at the T_c mark according to IEC EN 60598-1

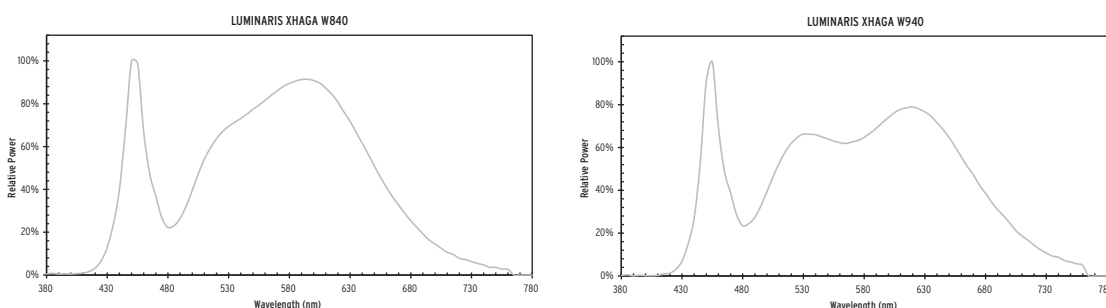
Optical data

3,000 K



Photometrical code	W830 / 339	W930 / 339
CIE _x ; CIE _y ¹	0.4340; 0.4057	0.4306; 0.4334
CRI; R9	82; 13	96; 72
Fidelity factor R _f	81	91
Gamut factor R _g	99	101
Skin fidelity R _{f, skin}	83	96
Color consistency	< 3 SDCM	
Δu'v' at 10,000 hours	< 0.003	
Lifetime @ T _c < 85°C ²	> 60,000 hours L90/B10 (based on 10,000 h LM80 report)	
Photobiological safety	RG0	

4,000 K



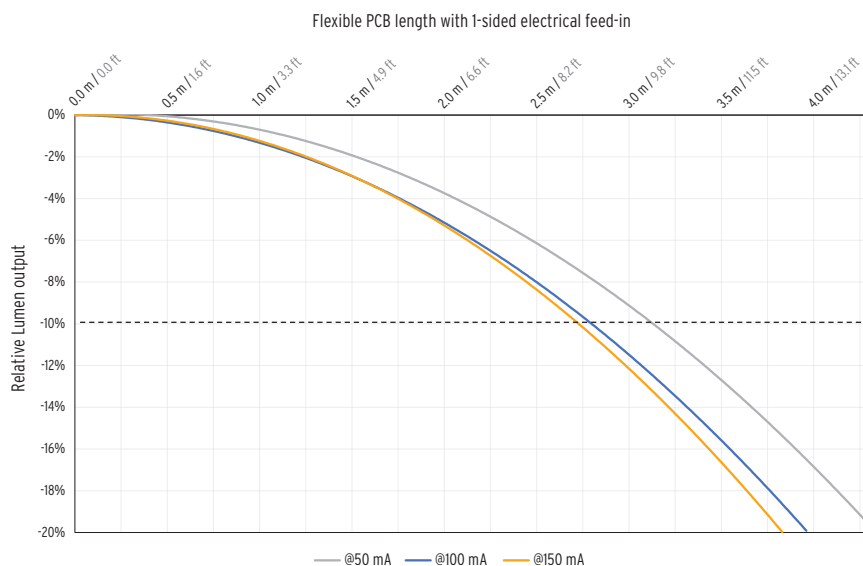
Photometrical code	W840 / 339	W940 / 339
CIE _x ; CIE _y ¹	0.3826; 0.3822	0.3799; 0.3808
CRI; R9	82; 12	96; 83
Fidelity factor R _f	82	90
Gamut factor R _g	99	101
Skin fidelity R _{f, skin}	83	95
Color consistency	< 3 SDCM	
Δu'v' at 10,000 hours	< 0.003	
Lifetime @ T _c < 85°C ²	> 60,000 hours L90/B10 (based on 10,000 h LM80 report)	
Photobiological safety	RG0	

¹ Measurement tolerances ± 0.005

² Case temperature measured in thermal equilibrium at the T_c mark according to IEC EN 60598-1

Electrical data

Using the poke-in connectors at the beginning of the PCB tape, the lumen-output decreases due to the voltage drop along the line. The relative decrease in percent can be read from the graph for different current values. For asymmetrical feed-in, i. e. plus and minus are connected from the opposite sites, the lumen output drop is reduced by factor 2. For feed-in from the middle of the run the lumen reduction is symmetrical into both directions. The maximum input current rating of 6 Ampere must not be exceeded.



Wiring

Specification item	Value
Input wire cross section solid wire or tin-dipped for stranded wires	0.2 ... 0.5 mm ² / AWG 24 ... AWG 20
Max. current rating	6 A
Input wire strip length	3.5 mm ... 5.5 mm / 38.3" ... 41.9"

Absolute ratings

Parameter	Minimum value	Maximum value
Case temperature T _c	-20°C / -4°F	85°C / 185°F
Storage temperature	-30°C / -22°F	85°C / 185°F
Ambient temperature	-25°C / -13°F	max T _c not reached
Max. current per 140 mm step		rated I _{max} +10 %
DC supply voltage (SELV)	36 V at < 20 % of rated current	44 V at max. rated current
Max. current without additional cooling	50 mA per step	

Certification and standards compliance

Relevant clauses of EN 62471:2008

EN 62031:2008 (First Edition) + A1:2013 + A2:2015

IEC 62471:2006; IEC/TR 62471-2:2009; IEC/TR 62778:2014

IEC 62031:2008 + A1:2013 + A2:2015

CE

SELV

Electrical class I, II and III luminaires

