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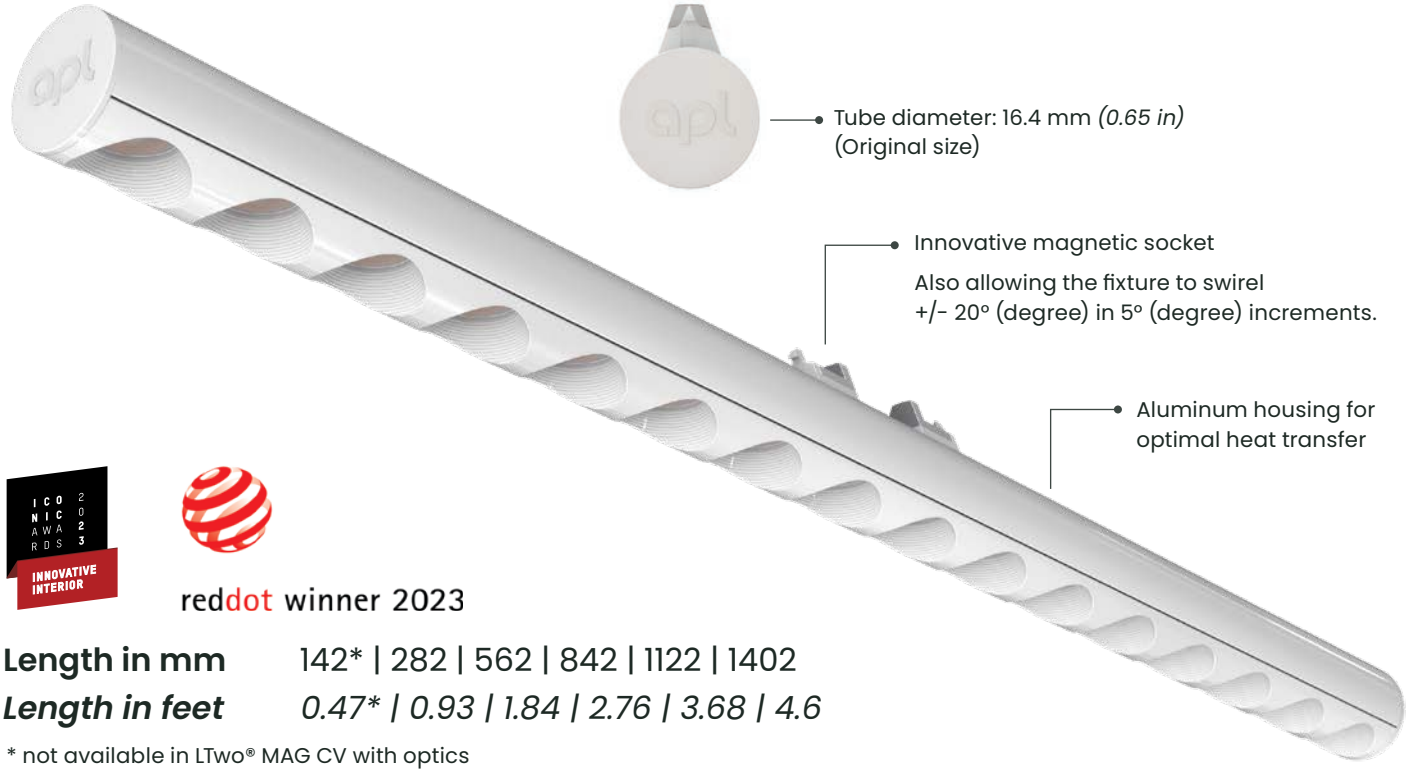
LTwo® MAG –
The magnetic modular light source

Your creative tool for architectural integration & optical precision



ICONIC AWARDS 2023 INNOVATIVE INTERIOR

reddot winner 2023

Length in mm	142* | 282 | 562 | 842 | 1122 | 1402
Length in feet	*0.47* | 0.93 | 1.84 | 2.76 | 3.68 | 4.6*

* not available in LTwo® MAG CV with optics

What is LTwo® MAGNETIC and what are the USPs?

LTwo® MAG is a high-performance, miniaturized LED system that empowers specifiers and users with total creative freedom. Inspired by the slim T5 tube (16.4 mm diameter) but packed with modern optical and modular innovations, LTwo® is your plug-and-play solution for seamlessly integrating light into architecture and materials.

Why LTwo® is designed for you:

- **Precision where it matters**
  With 12 refined light distributions – from ultra-narrow accents to wall washers and batwings – you can specify light exactly where it's needed, in CRI > 92 quality and outputs up to 5,600 lm.
- **Architectural integration, simplified**
  LTwo® mounts magnetically and blends effortlessly into ceilings, walls, millwork, or furniture. Use it surface-mounted, recessed, pendant, or track-mounted – even integrate it into stone, metal, or wood using our smart accessory system.
- **Familiar simplicity meets professional performance**
  The magnetic mounting socket combines the intuitive ease of an old E27 light bulb with state-of-the-art LED technology – giving you tool-free installation, long lifetime, and precise optical control in one elegant system.
- **Design without limits**
  Whether you're working on a gallery, retail space, museum, office, or auditorium, LTwo® adapts to your concept. Combine existing accessories or specify custom ones for project-specific solutions – no re-engineering needed.
- **Form follows function**
  The clean, minimalist design stays out of the way, allowing architecture and light to speak. True to Bauhaus principles, the accessories become the luminaire, keeping the focus on form and function.
- **Sustainable by design**
  Lightweight (as low as 181 g/m), recyclable, and easily replaceable – LTwo® supports long-term environmental goals without compromising performance.
- **Ready for anything**
  Integrates easily into HV or 48 V systems, standard track solutions, or our ready-made luminaire lines (Lumami® Desk, Pendant, Wall, Downlight, and more).

LTwo® MAGNETIC is not just a light – it's your building block for high-end lighting design. As easy to use as a light bulb. As powerful as professional-grade lighting should be.

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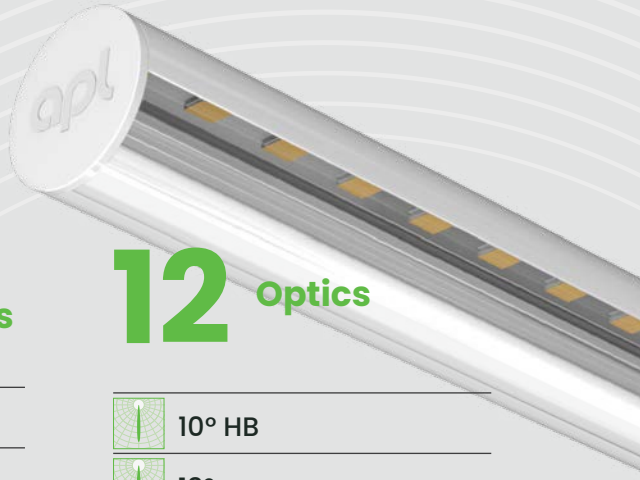
LTwo® MAGNETIC – Light tube with optic
The worlds first lamp-luminaire system

Architectural lighting plug & play for everyone – for holistic concepts



2 x 3 x 2 x 5 x 6 x 12 = 4320 different solutions

2 Operation modes

- CV – for longer fixture lengths
- CC – for max efficiency

3 Power levels

- 12 W/m (CV)
- 20 W/m (CV)
- 25 W/m (CC)

2 Colors

- Black
- White

LTwo® is available in two standard colors, high gloss white (RAL9016) and black (RAL9005) for the aluminum profile as well as the anti-glare.

Combinations of white profile and black anti-glare and vice versa are possible.

Custom colors are available on request based on the volume.

5 Color temperatures

- 2700 K
- 3000 K
- 3500 K
- 4000 K
- 5000 K

6 Lengths

- 142 mm* | *0.47 ft**
- 282 mm | *0.93 ft*
- 562 mm | *1.84 ft*
- 842 mm | *2.76 ft*
- 1122 mm | *3.68 ft*
- 1402 mm | *4.6 ft*

* not available in LTwo® MAG CV with optics

12 Optics

- 10° HB
- 13°
- 25°
- 40°
- 60°
- Oval
- BWN - Batwing narrow
- BWW - Batwing wide
- WW - Wall wash
- Opal
- Diffuse
- Clear

Maximum usability

- Up to 6,440 lm
- CRI >92
- Very low glare
- Easy to install
- IP40

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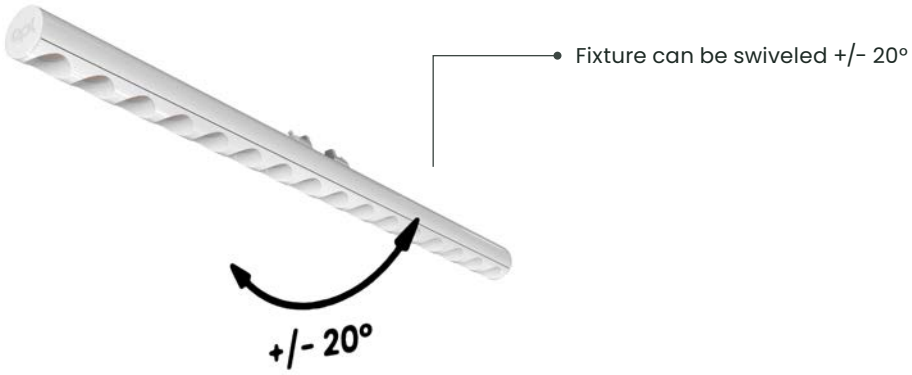
LTwo® MAGNETIC – Summary of main product features



Dimensions
Please refer to individual data sheet,
ø 16.4 mm *(ø 0.65 in)*

Lengths
Please refer to individual data sheet,
from 142 mm* to 1,402 mm (0.5 ft* in to 4.6 ft)
* not available in LTwo® MAG CV with optics

Weight
Please refer to individual data sheet,
from 30 gram to 500 gram

Housing color
White (WW, RAL 9016), Black (BB, RAL 9005)

Wattages
Please refer to individual data sheet, from 1.7 W to 34.5 W

Lumen @ 4,000 K
Please refer to individual data sheet, from 206 to 6,440 lumen

Efficiency
Please refer to individual data sheet. Depending on operating mode and selected optics.

Light distributions
10°HB, 13°Arch, 25°, 40°, 60°, BWW, BWN, OVL, WW, Clear, Diffuse, Opal

LED quantity
16 per 140 mm (5.51 in) (Clear, Diffuse, Opal)
16 per 280 mm (11.02 in) (all other optics)

LED Pitch
8.75 mm (0.34 in) (Clear, Diffuse, Opal)
17.5 mm (0.69 in) (all other optics)

UGR
Please refer to individual data sheet, starting from below 10.

CCT / CRI
2,700 K, 3,000 K, 3,500 K, 4,000 K / CRI >90
5,000 K / CRI >80

Binning
3 SDCM

Lifetime
60,000 h L80B10

Protection class
IP40

Risk group
RG0 (2,700 K – 4,000 K), RG1 (5,000 K)

Operating modes and operating voltages
Please refer to individual data sheets, Constant Current (600 mA, voltage depends on product lengths) or 48 V DC (same voltage for all lengths)

Dimmable
Yes, with remote driver, all protocols possible, depending on operating mode and available power supply units. 1 – 10 V, DALI®, PWM, CASAMBI, Matter, … (see page 16)

Housing temperature (Tc)
min -20°C / max +80°C

Ambient temperature (Ta)
min -20°C / max +40°C

Storing temperature (Ts)
min -20°C / max +85°C

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APL LTwo® MAGNETIC order code

Configure your LTwo® lamp / luminaire

Product	OP	NP	Optic	L	PC	C	LH	IP
	Operating system	Nominal power per m	Optics	Length	Photometric code**	Housing color	Lamp holder	Protection class
APL-LTwoT5	CV	12 W/m | 3.7 W/ft	10D	142 mm* | 0.5 ft*	927	BB	**MAG**	**IP40**
	CV	20 W/m | 6.1 W/ft	13D	282 mm | 0.9 ft	930	WW		
	CC	25 W/m | 7.6 W/ft	25D	562 mm | 1.8 ft	935			
			40D	842 mm | 2.8 ft	940			
			60D	1,122 mm | 3.7 ft	950***			
			BWN	1,402 mm | 4.6 ft				
			BWW					
			OVL					
			WW					
			CL					
			DF					
			OP					

* not available in LTwo® MAG CV with optics
** Photometric code example: 927 (9 = CRI >90 | 27 = 2,700 K)
*** Optics CRI > 80 | Cover CRI > 90

Legend order code options

Operating system

CV Constant voltage (48 V)
CC Constant current (600 mA rated)

Optics

10D High beam
13D Spot
25D Narrow flood
40D Flood
60D Wide flood
BWN Batwing narrow
BWW Batwing wide
OVL Oval
WW Wall wash

Cover

OP Opal lens
DF Diffuse lens
CL Clear lens

Housing color

BB Black profile, black anti-glare
WW White profile, white anti-glare

Lamp holder

MAG Magnetic lamp holder

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The unique character of LTwo® MAGNETIC – defined by its order code

APL LTwo® T5		APL LTwo® is a fixture designed reminescent to a T5 lamp, refering to it's diameter (5/8 th of an inch, T5) and the respective lumen performance of appr. 2,000 lm/m *(600 lm/ft)*, but as delivered lumens after optical losses.
Operating System CV CC 600 mA	**OP**	LTwo® is available in constant current (CC) or constant voltage (CV). Constant voltage provides more flexibility if more lamps are used on a single driver. It's less efficient than CC and the drivers are more expensive. Constant current is more efficient than CV. The drivers are less expensive and available in more sizes and with more lighting control (smart) options. Maximum two lamps can be connected to one driver. CC requires more wiring during installation.
Nominal power per m (ft) 12W 20W 25W	**NP**	In constant voltage (CV) two power levels are available, either 12 W/m *(3.6 W/ft)* or 20 W/m *(6 W/ft)*. The product can be dimmed with PWM. In constant current (CC) the product has a rated power of 25 W/m *(7.6 W/ft)* @ 600 mA drive current. It can be driven at higher currents for more lumen output, as long as a proper heat management is assured.
Optics	**Optic**	LTwo® product range is offered with 12 different optics, in 10° HB, 13° Spot, 25° narrow flood, 40° flood, 60° wide flood, Batwing Narrow (BWN), Batwing Wide (BWW), Wall Wash (WW), a clear lens (max. efficiency) and a frosted and opal lens with lambertian characteristic. The optics deliver the highest architectural lighting standard.
Length	**L**	LTwo® MAGNETIC comes in lengths of 142 mm* *(1/2 ft*)*, 282 mm *(1 ft)*, 562 mm *(2 ft)*, 842 mm *(3 ft)*, 1,122 mm *(4 ft)* and 1,402 mm *(5 ft)* * not available in LTwo® MAG CV Optics
Photometric code CRI >80 CRI >90 2700 K 3000 K 3500 K 4000 K 5000 K	**PC**	As a standard LTwo® you can select from 4 color temperatures (and soon tunable white) in 2,700 K, 3,000 K, 3,500 K and 4,000 K in CRI >92 and in 5,000 K in CRI >80.
Housing color BLACK WHITE	**C**	The color of the housing and the anti-glare are available in White and Black. A white comes with a white anti-glare and a black housing with a black anti-glare. Other combinations might be delivered on request depending on the volume.
Lamp holder	**MAG**	The main and initial lamp holder of LTwo® is a magnetic holder (MAG). The product can easily be assembled, swivled +/-20° in the socket and be held in place with a security lock. A pure mechanical lamp holder (MCH) is currently in the design phase.
Protection class IP40	**IP**	The product comes in protection class IP40.

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Performance data

Constant current 25 W/m | 7.6 W/ft

CRI 90 / 4000K

Optic (10°): up to 2,950 lm/m (900 lm/ft),
Covers (clear, white housing): up to 4,600 lm/m (1,400 lm/ft)

Optic	Length	142 mm *1/2' (5.6")*	282 mm *1' (11.1")*	562 mm *2' (22.1")*	842 mm *2.8' (33.1")*	1122 mm *3.5' (44.2")*	1402 mm *4.5' (55.2")*	Efficiency lm/W
	Color / Watt	3.8 W	7.2 W	14.0 W	20.8 W	27.6 W	34.5 W	
	Voltage	5.5-6.5 V	10.6-12.6 V	20.8-24.8 V	31.0-37.0 V	41.2-49.2 V	41.3-49.4 V	
10° (HB)	white	414 lm	827 lm	1,655 lm	2,482 lm	3,309 lm	4,137 lm	119.8
	black	390 lm	781 lm	1,562 lm	2,342 lm	3,123 lm	3,904 lm	113.0
13°	white	401 lm	802 lm	1,603 lm	2,405 lm	3,207 lm	4,008 lm	116.0
	black	377 lm	754 lm	1,509 lm	2,263 lm	3,018 lm	3,772 lm	109.2
25°	white	397 lm	794 lm	1,587 lm	2,381 lm	3,175 lm	3,968 lm	114.9
	black	371 lm	741 lm	1,482 lm	2,223 lm	2,964 lm	3,705 lm	107.3
40°	white	395 lm	790 lm	1,580 lm	2,370 lm	3,161 lm	3,951 lm	114.4
	black	356 lm	713 lm	1,426 lm	2,138 lm	2,851 lm	3,564 lm	103.2
60°	white	406 lm	812 lm	1,625 lm	2,437 lm	3,249 lm	4,062 lm	117.6
	black	371 lm	742 lm	1,484 lm	2,226 lm	2,968 lm	3,710 lm	107.4
Batwing wide (BWW)	white	395 lm	791 lm	1,581 lm	2,372 lm	3,162 lm	3,953 lm	114.4
	black	344 lm	687 lm	1,374 lm	2,062 lm	2,749 lm	3,436 lm	99.5
Batwing narrow (BWN)	white	384 lm	768 lm	1,536 lm	2,304 lm	3,072 lm	3,840 lm	111.2
	black	297 lm	594 lm	1,188 lm	1,781 lm	2,375 lm	2,969 lm	86.0
Wall wash (WW)	white	406 lm	813 lm	1,626 lm	2,439 lm	3,251 lm	4,064 lm	117.7
	black	369 lm	737 lm	1,475 lm	2,212 lm	2,950 lm	3,687 lm	106.7
Oval (15°x40°)	white	368 lm	735 lm	1,470 lm	2,205 lm	2,940 lm	3,675 lm	106.4
	black	352 lm	704 lm	1,408 lm	2,112 lm	2,815 lm	3,519 lm	101.9
Cover		**3.6 W**	**6.9 W**	**13.5 W**	**20.1 W**	**26.6 W**	**33.3 W**	
Clear	white	644 lm	1,287 lm	2,574 lm	3,862 lm	5,149 lm	6,436 lm	193.3
	black	573 lm	1,146 lm	2,293 lm	3,439 lm	4,585 lm	5,732 lm	172.1
Diffuse	white	631 lm	1,262 lm	2,525 lm	3,787 lm	5,050 lm	6,312 lm	189.5
	black	557 lm	1,114 lm	2,228 lm	3,343 lm	4,457 lm	5,571 lm	167.3
Opal	white	595 lm	1,190 lm	2,379 lm	3,569 lm	4,759 lm	5,949 lm	178.6
	black	462 lm	924 lm	1,848 lm	2,772 lm	3,695 lm	4,619 lm	138.7

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Performance data

Constant voltage 20 W/m | 6 W/ft

CRI 90 / 4000K

Optic (10°): up to 2,300 lm/m (700 lm/ft),
Covers (clear, white housing): up to 3,300 lm/m (1,000 lm/ft)

Optic	Length	142 mm *1/2' (5.6")*	282 mm *1' (11.1")*	562 mm *2' (22.1")*	842 mm *2.8' (33.1")*	1122 mm *3.5' (44.2")*	1402 mm *4.5' (55.2")*	Efficiency lm/W
	Color / Watt	–	5.8 W	11.7 W	17.5 W	23.3 W	29.2 W	
	Voltage	48 V ± 3 V	48 V ± 3 V	48 V ± 3 V	48 V ± 3 V	48 V ± 3 V	48 V ± 3 V	
10° (HB)	white	-	642 lm	1,284 lm	1,927 lm	2,569 lm	3,211 lm	110.1
	black	-	606 lm	1,212 lm	1,818 lm	2,424 lm	3,031 lm	103.9
13°	white	-	622 lm	1,245 lm	1,867 lm	2,489 lm	3,112 lm	106.7
	black	-	586 lm	1,171 lm	1,757 lm	2,342 lm	2,928 lm	100.4
25°	white	-	616 lm	1,232 lm	1,848 lm	2,464 lm	3,080 lm	105.6
	black	-	575 lm	1,150 lm	1,726 lm	2,301 lm	2,876 lm	98.6
40°	white	-	613 lm	1,227 lm	1,840 lm	2,453 lm	3,067 lm	105.2
	black	-	553 lm	1,107 lm	1,660 lm	2,213 lm	2,766 lm	94.9
60°	white	-	631 lm	1,261 lm	1,892 lm	2,522 lm	3,153 lm	108.1
	black	-	576 lm	1,152 lm	1,728 lm	2,304 lm	2,880 lm	98.8
Batwing wide (BWW)	white	-	614 lm	1,227 lm	1,841 lm	2,455 lm	3,068 lm	105.2
	black	-	533 lm	1,067 lm	1,600 lm	2,134 lm	2,667 lm	91.5
Batwing narrow (BWN)	white	-	596 lm	1,192 lm	1,788 lm	2,384 lm	2,980 lm	102.2
	black	-	461 lm	922 lm	1,383 lm	1,844 lm	2,305 lm	79.0
Wall wash (WW)	white	-	631 lm	1,262 lm	1,893 lm	2,524 lm	3,155 lm	108.2
	black	-	572 lm	1,145 lm	1,717 lm	2,290 lm	2,862 lm	98.2
Oval (15°x40°)	white	-	571 lm	1,141 lm	1,712 lm	2,282 lm	2,853 lm	97.8
	black	-	546 lm	1,093 lm	1,639 lm	2,185 lm	2,732 lm	93.7
Cover		**3.0 W**	**6.0 W**	**11.9 W**	**17.9 W**	**23.8 W**	**29.8 W**	
Clear	white	464 lm	928 lm	1,855 lm	2,783 lm	3,711 lm	4,639 lm	155.9
	black	413 lm	826 lm	1,652 lm	2,479 lm	3,305 lm	4,131 lm	138.8
Diffuse	white	455 lm	910 lm	1,820 lm	2,730 lm	3,639 lm	4,549 lm	152.9
	black	402 lm	803 lm	1,606 lm	2,409 lm	3,212 lm	4,015 lm	134.9
Opal	white	429 lm	857 lm	1,715 lm	2,572 lm	3,430 lm	4,287 lm	144.1
	black	333 lm	666 lm	1,332 lm	1,998 lm	2,663 lm	3,329 lm	111.9

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Performance data

Constant voltage 12 W/m | 3.6 W/ft

CRI 90 / 4000K

Optic (10°): up to 1,500 lm/m (450 lm/ft),
Covers (clear, white housing): up to 2,050 lm/m (620 lm/ft)

Optic	Length	142 mm *1/2' (5.6")*	282 mm *1' (11.1")*	562 mm *2' (22.1")*	842 mm *2.8' (33.1")*	1122 mm *3.5' (44.2")*	1402 mm *4.5' (55.2")*	Efficiency lm/W
	Color / Watt	–	3.5 W	6.9 W	10.4 W	13.8 W	17.3 W	
	Voltage	48 V ± 4 V	48 V ± 4 V	48 V ± 4 V	48 V ± 4 V	48 V ± 4 V	48 V ± 4 V	
10° (HB)	white	-	405 lm	809 lm	1,214 lm	1,618 lm	2,023 lm	117.0
	black	-	382 lm	764 lm	1,145 lm	1,527 lm	1,909 lm	110.5
13°	white	-	392 lm	784 lm	1,176 lm	1,568 lm	1,960 lm	113.4
	black	-	369 lm	738 lm	1,107 lm	1,475 lm	1,844 lm	106.7
25°	white	-	388 lm	776 lm	1,164 lm	1,552 lm	1,940 lm	112.3
	black	-	362 lm	725 lm	1,087 lm	1,449 lm	1,812 lm	104.8
40°	white	-	386 lm	773 lm	1,159 lm	1,545 lm	1,932 lm	111.8
	black	-	349 lm	697 lm	1,046 lm	1,394 lm	1,743 lm	100.8
60°	white	-	397 lm	794 lm	1,192 lm	1,589 lm	1,986 lm	114.9
	black	-	363 lm	726 lm	1,088 lm	1,451 lm	1,814 lm	105.0
Batwing wide (BWW)	white	-	387 lm	773 lm	1,160 lm	1,546 lm	1,933 lm	111.8
	black	-	336 lm	672 lm	1,008 lm	1,344 lm	1,680 lm	97.2
Batwing narrow (BWN)	white	-	375 lm	751 lm	1,126 lm	1,502 lm	1,877 lm	108.6
	black	-	290 lm	581 lm	871 lm	1,161 lm	1,452 lm	84.0
Wall wash (WW)	white	-	397 lm	795 lm	1,192 lm	1,590 lm	1,987 lm	115.0
	black	-	361 lm	721 lm	1,082 lm	1,442 lm	1,803 lm	104.3
Oval (15°x40°)	white	-	359 lm	719 lm	1,078 lm	1,438 lm	1,797 lm	104.0
	black	-	344 lm	688 lm	1,032 lm	1,377 lm	1,721 lm	99.6
Cover		**1.7 W**	**3.5 W**	**6.9 W**	**10.4 W**	**13.8 W**	**17.3 W**	
Clear	white	287 lm	574 lm	1,147 lm	1,721 lm	2,294 lm	2,868 lm	166.0
	black	255 lm	511 lm	1,022 lm	1,532 lm	2,043 lm	2,554 lm	147.8
Diffuse	white	281 lm	563 lm	1,125 lm	1,688 lm	2,250 lm	2,813 lm	162.8
	black	248 lm	496 lm	993 lm	1,489 lm	1,986 lm	2,482 lm	143.7
Opal	white	265 lm	530 lm	1,060 lm	1,590 lm	2,120 lm	2,651 lm	153.4
	black	206 lm	412 lm	823 lm	1,235 lm	1,647 lm	2,058 lm	119.1

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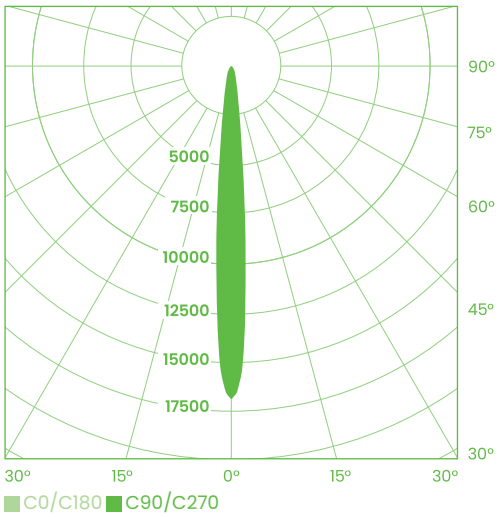
LTwo® optical technology

LTwo® optics are based on highly innovative nano optical technology providing perfect illumination, exceptional homogeneity, with utmost precision, high visual comfort, optimal glare control to boost people's wellbeing, productivity and space perception.

Our optics are designed for humans in the center of space. Optics for high end architectural lighting.

Find below an approximate guideline when to use which optic.

Light distribution 10D – High Beam

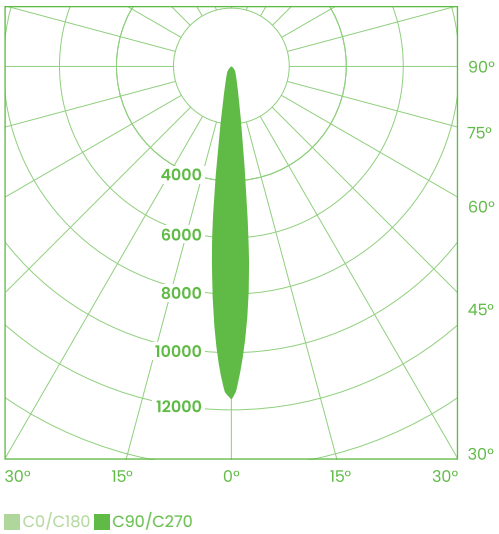


LTwo® black - 10° high beam, 560 mm *(22.05 in)*

When to use the 10° LDC/optics

In general, 10° optics can also be used for wall grazing effects. Our apl 10° optic is a high bay version. Ideal for lighting from a great height.

Light distribution 13D – Spot



LTwo® black - 13° spot, 560 mm *(22.05 in)*

When to use the 13° LDC/optics

The 13° optic is a narrow beam optic with excellent glare control. Ideal for emphasizing individual objects and accentuating structures in architecture.

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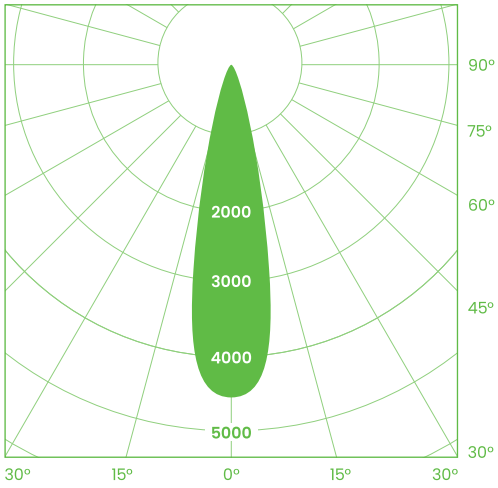
Light distribution 25D – Narrow flood

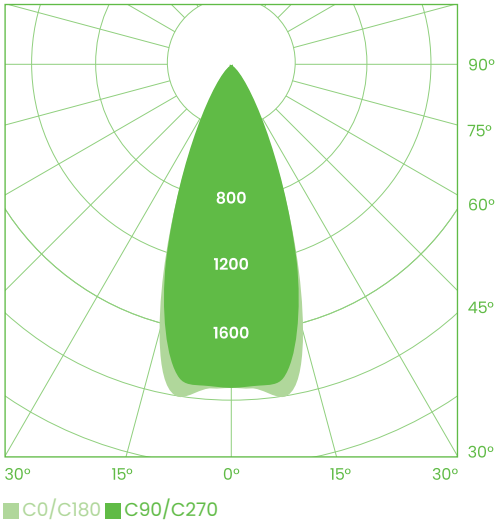


LTwo® black - 25° narrow flood, 560 mm *(22.05 in)*

When to use the 25° LDC/optics

The 25° optic is used when focused, pinpoint lighting is required, e. g. for accent lighting to highlight objects or in exhibition rooms. It is also suitable for areas where precise light control and low diffusion are required as well as for general lighting with higher ceilings.

Light distribution 40D – Flood



LTwo® black - 40° flood, 560 mm *(22.05 in)*

When to use the 40° LDC/optics

The 40° light distribution is ideal for illuminating specific areas without scattering the light too much. It is used to create accent lighting and to illuminate specific zones without illuminating the entire room.

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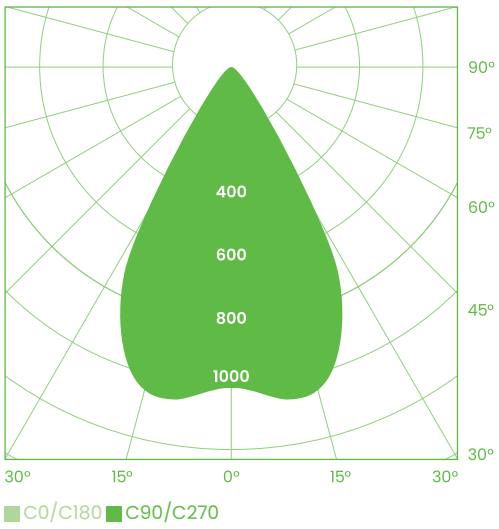
Light distribution 60D – Wide flood

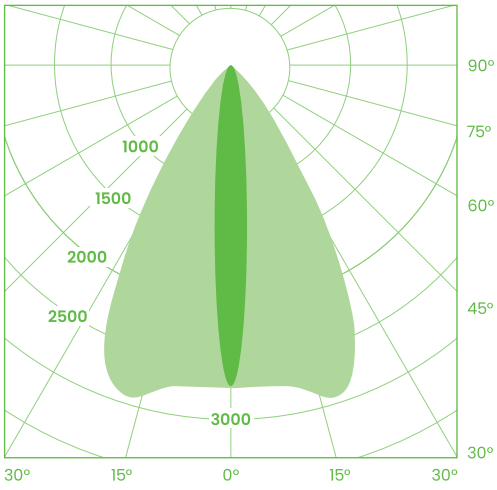


LTwo® black - 60° wide flood, 560 mm *(22.05 in)*

When to use the 60° LDC/optics

The 60° optic provides uniform general lighting in medium sized areas, offices, conference rooms and retail spaces to illuminate the entire room evenly. Our 60° optic fulfils the requirements of DIN standard 12464-1.

Light distribution BWN – Batwing narrow



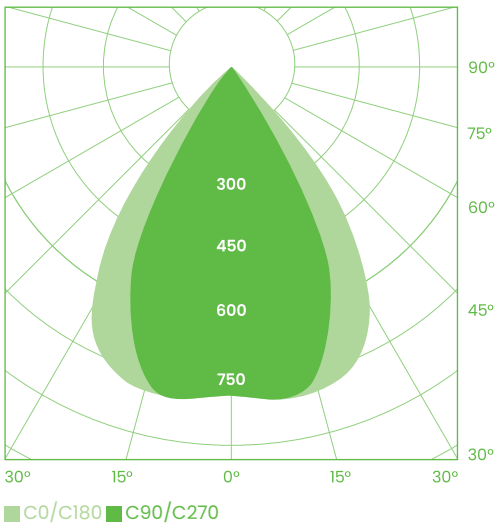
LTwo® black - BWN batwing narrow, 560 mm *(22.05 in)*

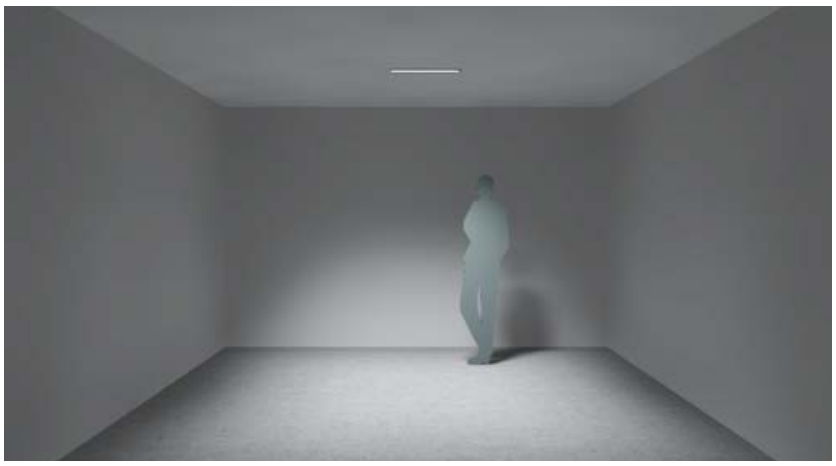
When to use the BWN LDC/optics

The BWN, i.e. a narrow or linear batwing optic, is used to illuminate narrow, elongated areas evenly, especially when it is important to minimize light losses and achieve precise illumination, such as in narrow aisles, in order to illuminate them evenly without wasting light to the sides. It is also suitable for illuminating rows of shelves.

LTwo® optical technology

Light distribution BWW – Batwing wide



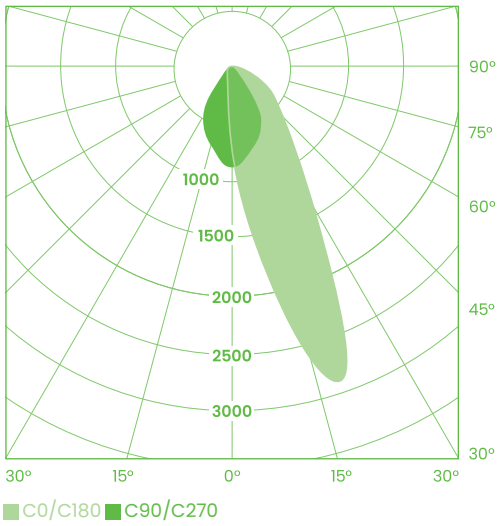


LTwo® black - BWW batwing wide, 560 mm *(22.05 in)*

When to use the BWW LDC/optics

The apl BWW optic was specially developed for use with the LTwo® in the apl Lumami® DESK desk luminaire to ensure uniform illumination of the work-place. In general, and therefore also in other applications, the wide batwing optic ensures that the light is distributed at a wide angle, but the intensity is reduced in the center and increased towards the sides. This creates uniform brightness across the entire surface without any annoying glare. Our BWW optics fulfil the requirements of DIN standard 12464-1.

Light distribution WW – Wall wash



LTwo® black - WW wall wash, 560 mm *(22.05 in)*

When to use the WW LDC/optics

The wall wash optic is used to illuminate walls evenly and over a wide area. It is particularly suitable for applications where uniform brightness is to be achieved across the entire height and width of the wall: no shadows or uneven areas of light, to visually enlarge rooms and to make rooms appear brighter and more inviting. A wall washer distributes the light in such a way that a wall is evenly illuminated from the top to the bottom edge.

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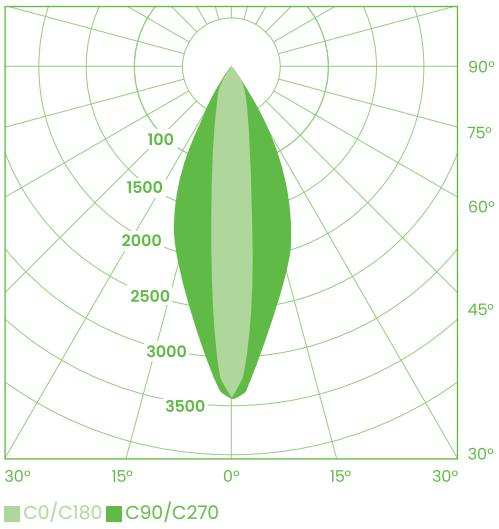
Light distribution OVL – Oval (15D x 40D)

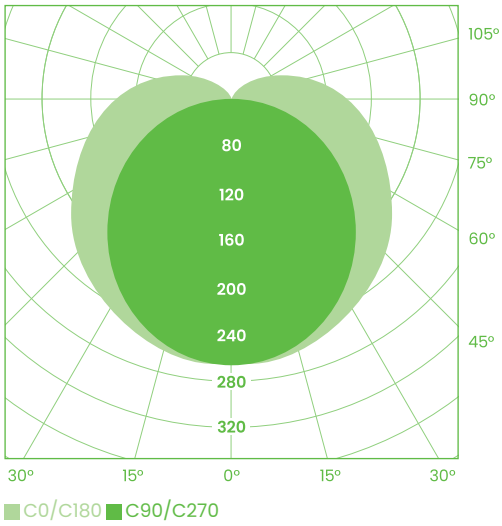


LTwo® black 15° x 40° oval, 560 mm *(22.05 in)*

When to use the 15° x 40° LDC/optics

The oval optic is ideal for grazing light applications to emphasize surface structures, for example on walls or facades. The elongated shape of the oval light distribution makes it possible to illuminate a wide area evenly, while the light beams are aligned to emphasize the desired structures.

Light distribution OP – Opal lens



LTwo® black - OP opal lens, 560 mm *(22.05 in)*

When to use the OP LDC/optics

An opal diffuser is used to diffuse the light softly and evenly and reduce glare. It is ideal for areas where pleasant and decorative lighting is required.

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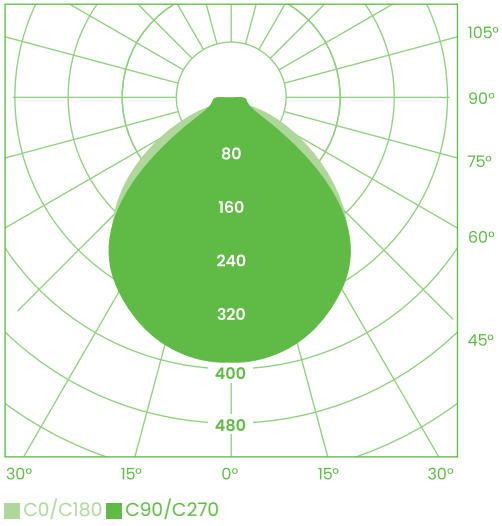
Light distribution DF – Diffuse lens

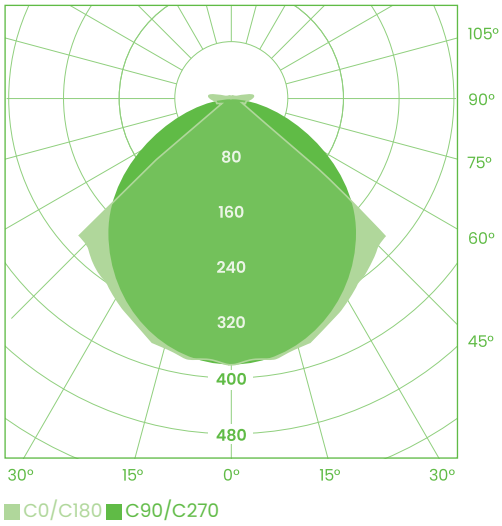


LTwo® black - DF diffuse lens, 560 mm *(22.05 in)*

When to use the DF LDC/optics

A diffuse cover is used when uniform light distribution without harsh shadows or glare is desired and high light transmission and light output are required.

Light distribution CL – Clear lens



LTwo® black - CL clear lens, 560 mm *(22.05 in)*

When to use the CL LDC/optics

Clear optics are used when direct and uniform light distribution is required. It ensures high light transmission and high luminous efficacy as well as direct, unobstructed light distribution. The clear cover minimizes light losses.

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4 different optical form factors

Round, symmetrical anti-glare
10°HB, 13°, 25°, 40°, oval, batwing narrow (BWN)

From narrow spot to extra wide flood. High precision nano optics with outstanding glare control. Ideal for precise spot lighting, accent lighting, highlighting individual objects, accentuating structures in architecture, room lighting, individual and uniform illumination, asymmetrical lighting tasks, and within holistic architectural lighting concepts.

Square anti-glare
60° office, batwing wide (BWW)

High-precision nano optics with rectangular glare control for maximum uniformity and ideal UGR values. Ideal optics for ambient and task lighting in the area of office and workplace lighting, in accordance with the DIN EN 12464-1 standard.

Wall wash anti-glare

High-precision wall wash optics from the smallest form factor for outstanding vertical illumination. Ideal for vertical wall illumination within holistic architectural lighting concepts.

LTwo® with cover
Clear, diffuse, opal

High-quality PMMA covers for absolutely homogenous light lines, particularly uniform illumination or especially high luminous efficacy. Ideal for optimal and soft general and decorative lighting, efficient general lighting with high uniformity or high luminous efficacy.

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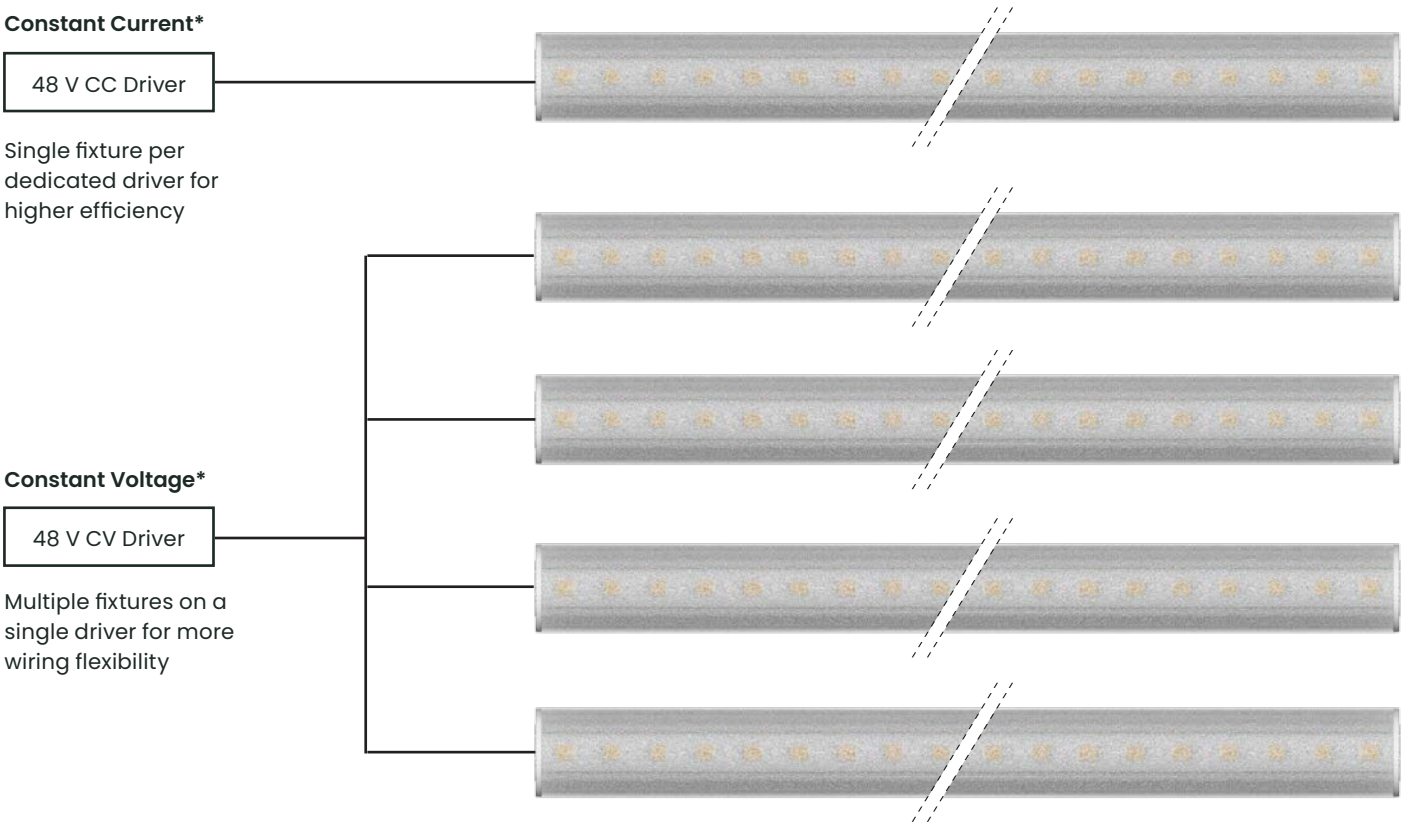
LTwo® operating modes

LTwo® is available in Constant Voltage **CV** or Constant Current **CC**. Constant Voltage allows for multiple fixtures on a single driver. Constant Current always matches a single driver with a single fixture at a higher system efficiency and a lower driver cost.

LTwo® is available in two power levels for Constant Voltage, **12 W/m** *(3.6 W/ft)* and **20 W/m** *(6 W/ft)*.
As well **25 W/m** *(7.6 W/ft)* @600 mA in Constant Current.

Operating system	CC – Constant Current	CV – Constant Voltage
Pro	• Higher efficiency • Higher lumen output • Cheaper drivers	• Multiple fixtures per driver in parallel possible • Less driver installation
Cons	• Only one fixture per driver	• CV drivers more expensive than CC drivers
What to use when	• CC used when there is only a single fixture in an area to be paired with a single driver.	• CV used when multiple fixtures in an area that can all be powered from a single driver.



* LTwo® is a UL2108 (an voltage fixture and does not require a junction box).

Compatible dimming protocols

Constant current systems (600 / 750 mA DC; output with amplitude dimming or combined with PWM [up to the driver]):

Dimming method:	0 – 10 / 1 – 10 V	ELV / Triac	PWM	DMX	Dali®	Lutron	CASAMBI / BLE

Dimming min. level [%], depends on driver & PWM-freq.
Output voltage depends on the LTwo® length from actually 5 V up to 48 V @ max. current.

Constant voltage systems (48 V DC output with PWM dimming):

Dimming method:	0 – 10 / 1 – 10 V	ELV / Triac	PWM	DMX	Dali®	Lutron	CASAMBI / BLE

Dimming min. level [%], depends on driver & PWM-freq.

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LTwo® constant current

Technical characteristics

Voltage consumption depending on operating current for LTwo® with optic

LTwo® MAGNETIC LTwo® PENDANT LTwo® OUTDOOR	142 mm - 170 mm	282 mm - 310 mm	562 mm 580 mm 590 mm	842 mm 860 mm 870 mm	1122 mm 1140 mm 1150 mm	1402 mm 1420 mm 1430 mm
100 mA	5.0 - 5.9 V	9.9 - 11.7 V	19.6 - 23.2 V	29.4 - 34.8 V	39.1 - 46.3 V	38.7 - 45.5 V
200 mA	5.1 - 6.0 V	10.0 - 11.8 V	19.9 - 23.5 V	29.7 - 35.1 V	39.6 - 46.8 V	39.2 - 46.0 V
300 mA	5.2 - 6.1 V	10.2 - 12.0 V	20.2 - 23.8 V	30.2 - 35.6 V	40.2 - 47.4 V	39.8 - 46.5 V
400 mA	5.3 - 6.2 V	10.3 - 12.1 V	20.4 - 24.0 V	30.4 - 35.8 V	40.5 - 47.7 V	40.2 - 47.4 V
500 mA	5.4 - 6.4 V	10.5 - 12.4 V	20.6 - 24.4 V	30.8 - 36.5 V	40.9 - 48.5 V	40.5 - 47.7 V
600 mA	5.5 - 6.5 V	10.6 - 12.6 V	20.8 - 24.8 V	31.0 - 37.0 V	41.2 - 49.2 V	40.9 - 48.3 V
700 mA	5.6 - 6.7 V	10.8 - 12.9 V	21.2 - 25.4 V	31.6 - 37.9 V	42.0 - 50.4 V	41.1 - 48.9 V
750 mA	5.7 - 6.8 V	10.9 - 13.2 V	21.4 - 26.0 V	31.9 - 38.8 V	42.4 - 51.6 V	41.3 - 49.4 V
800 mA	5.7 - 7.0 V	11.0 - 13.5 V	21.6 - 26.6 V	32.2 - 39.7 V	42.8 - 52.8 V	41.8 - 50.5 V
900 mA	5.8 - 7.1 V	11.2 - 13.8 V	22.1 - 27.2 V	32.9 - 40.6 V	43.8 - 54.0 V	42.2 - 51.6 V
1000 mA	-	-	-	-	-	42.6 - 52.8 V

Voltage consumption depending on operating current for LTwo® with cover

LTwo® MAGNETIC LTwo® PENDANT LTwo® OUTDOOR	142 mm - 170 mm	282 mm - 310 mm	562 mm 580 mm 590 mm	842 mm 860 mm 870 mm	1122 mm 1140 mm 1150 mm	1402 mm 1420 mm 1430 mm
100 mA	4.9 - 5.4 V	9.7 - 10.7 V	19.2 - 21.2 V	28.8 - 31.8 V	38.3 - 42.3 V	38.1 - 42.0 V
200 mA	5.0 - 5.6 V	9.8 - 11.0 V	19.5 - 21.9 V	29.1 - 32.7 V	38.8 - 43.6 V	38.5 - 43.4 V
300 mA	5.1 - 5.8 V	10.0 - 11.4 V	19.8 - 22.6 V	29.6 - 33.8 V	39.4 - 45.0 V	38.9 - 44.2 V
400 mA	5.2 - 5.9 V	10.1 - 11.5 V	20.0 - 22.8 V	29.8 - 34.0 V	39.7 - 45.3 V	39.4 - 44.8 V
500 mA	5.3 - 6.1 V	10.3 - 11.9 V	20.2 - 23.4 V	30.2 - 35.0 V	40.1 - 46.5 V	39.6 - 45.3 V
600 mA	5.4 - 6.3 V	10.4 - 12.1 V	20.4 - 23.8 V	30.4 - 35.5 V	40.4 - 47.2 V	40.0 - 46.3 V
700 mA	5.5 - 6.5 V	10.6 - 12.5 V	20.7 - 24.6 V	30.9 - 36.6 V	41.0 - 48.7 V	40.2 - 46.9 V
750 mA	5.6 - 6.6 V	10.8 - 12.7 V	21.0 - 25.0 V	31.2 - 37.2 V	41.5 - 49.4 V	40.4 - 47.3 V
800 mA	5.7 - 6.8 V	10.8 - 13.0 V	21.0 - 25.4 V	31.3 - 37.8 V	41.5 - 50.2 V	40.8 - 48.8 V
900 mA	5.8 - 6.9 V	11.0 - 13.3 V	21.4 - 26.0 V	31.8 - 38.7 V	42.2 - 51.4 V	41.3 - 49.6 V
1000 mA	-	-	-	-	-	41.5 - 50.4 V

All values for the LTwo® with optic apply to Tc = 55 °C, all values for the LTwo® with cover apply to Tc = 45 °C (corresponds to regular operation at an ambient temperature of Ta = 20 °C and 600 mA or 750 mA). Specifications are approximate values. Deviations due to environmental influences and individual operating conditions are possible.

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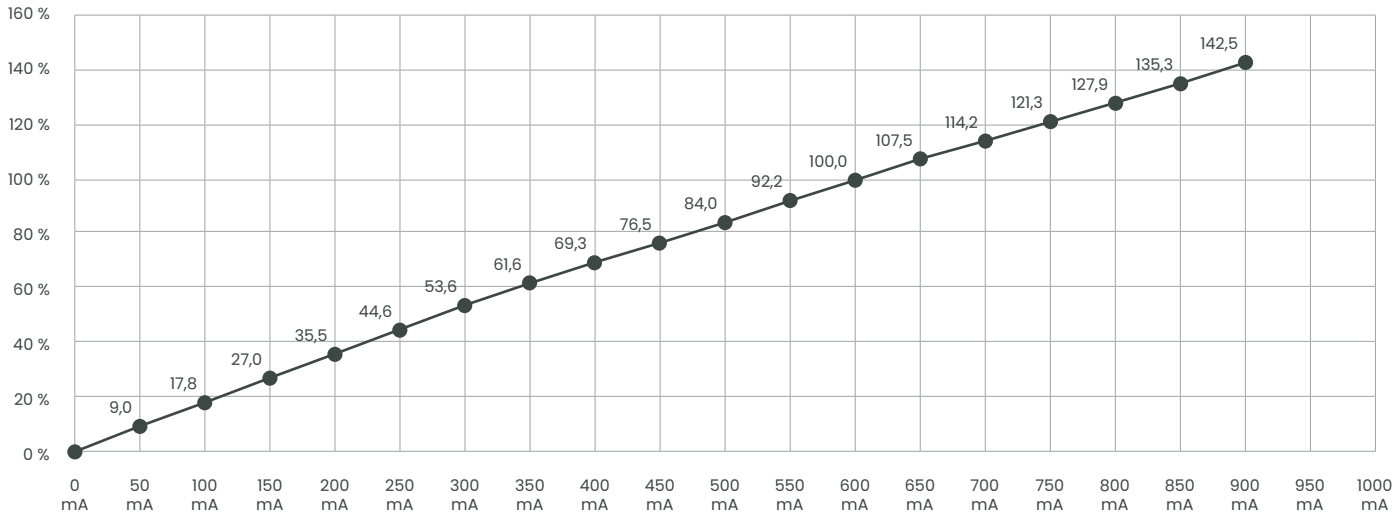
LTwo® constant current

Technical characteristics

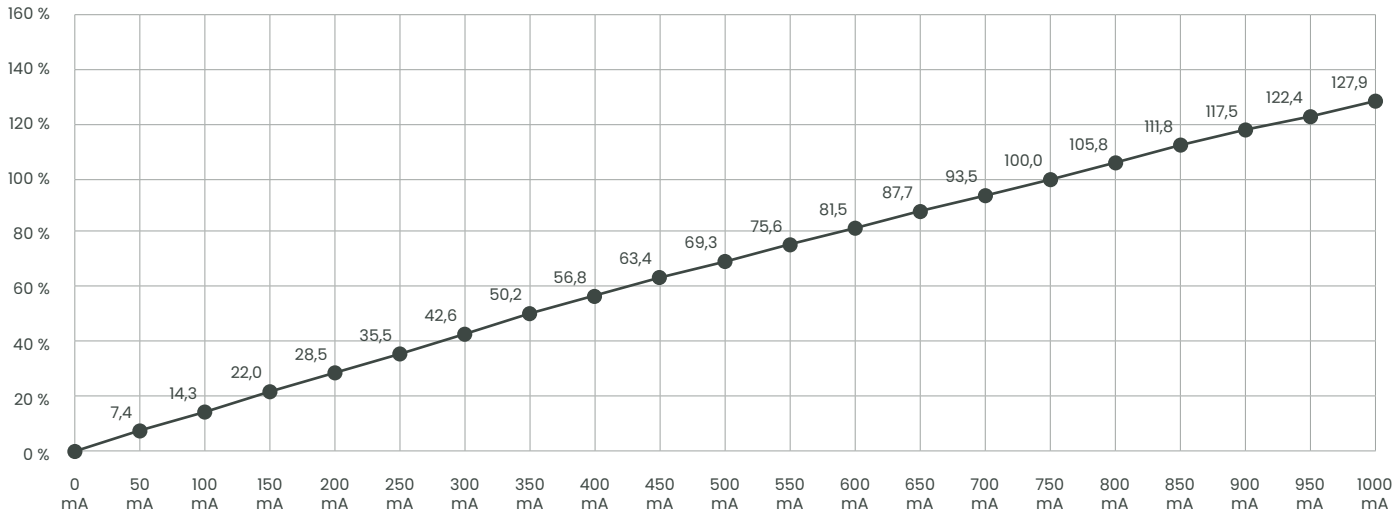
Relative light intensity of the LTwo® with optic, depending on operating current

LTwo MAG 142-1122 mm | LTwo PD 580-1140 mm | LTwo OD 170-1150 mm



Relative light intensity of the LTwo® with optic, depending on operating current

LTwo MAG 1402 mm | LTwo PD 1420 mm | LTwo OD 1430 mm



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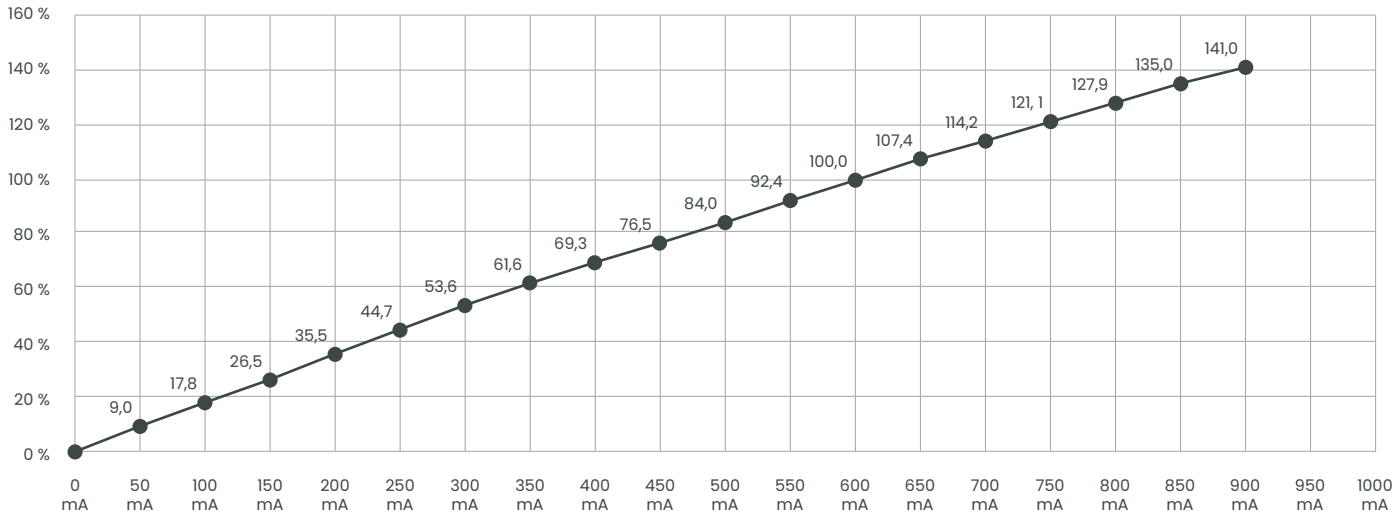
LTwo® constant current

Technical characteristics

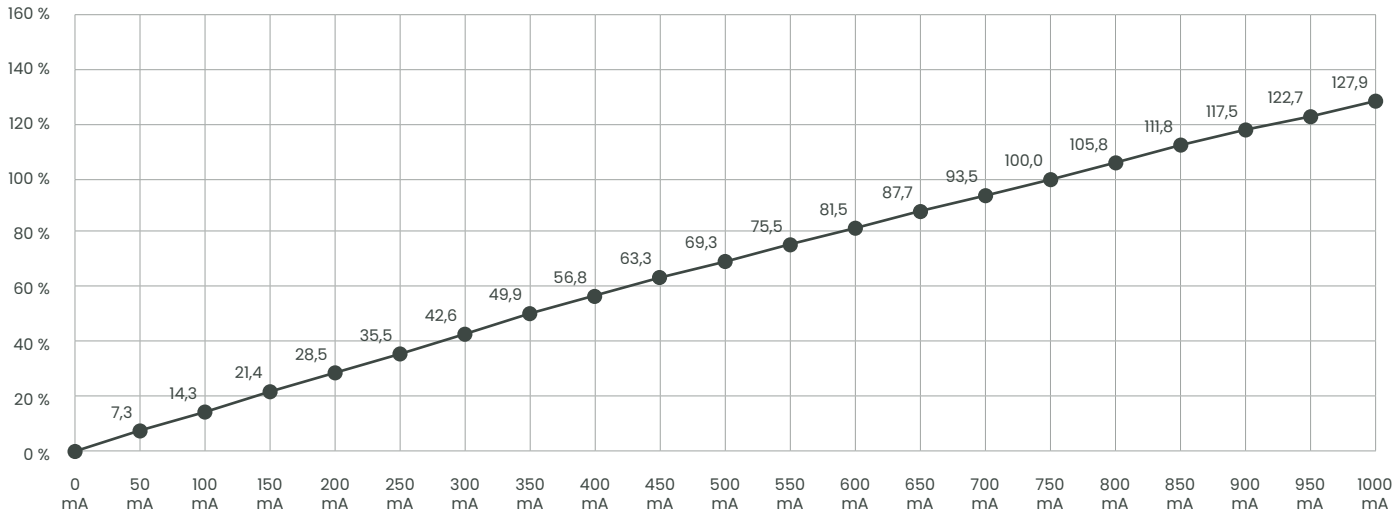
Relative light intensity of the LTwo® with cover, depending on operating current

LTwo MAG 142-1122 mm | LTwo PD 580-1140 mm | LTwo OD 170-1150 mm



Relative light intensity of the LTwo® with cover, depending on operating current

LTwo MAG 1402 mm | LTwo PD 1420 mm | LTwo OD 1430 mm



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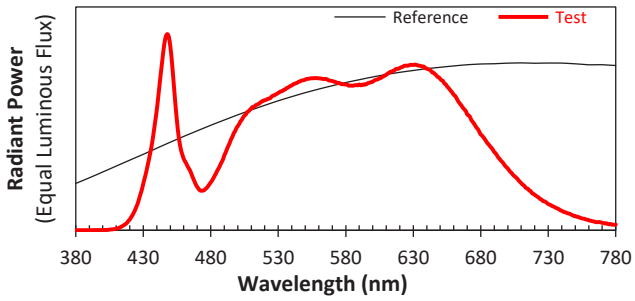
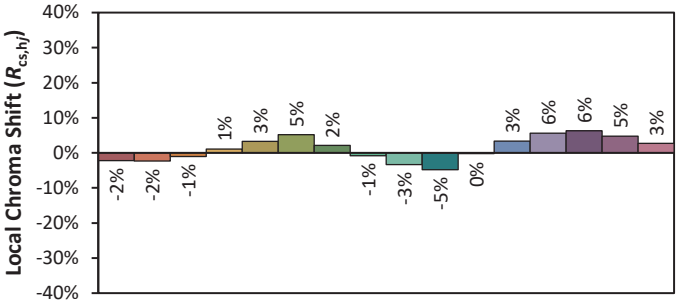
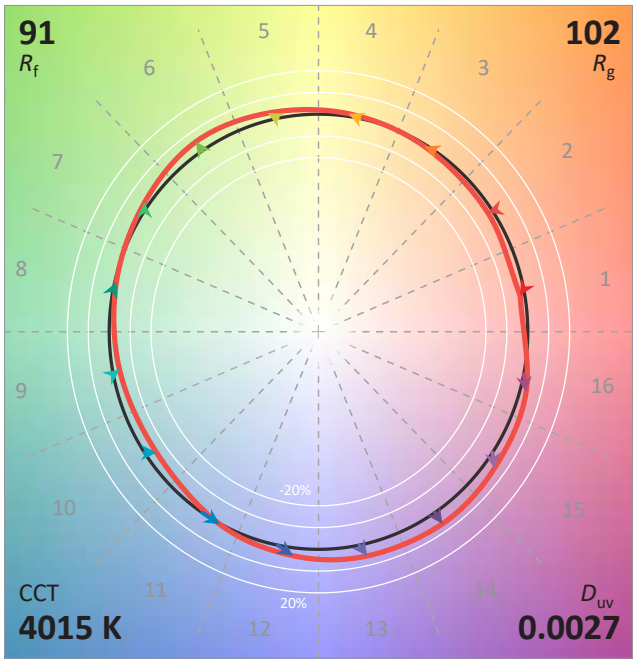
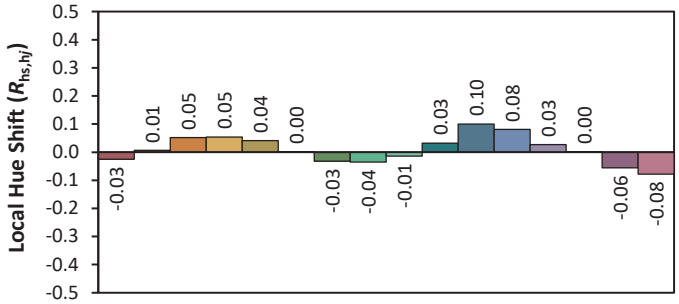
LTwo® photometric qualities

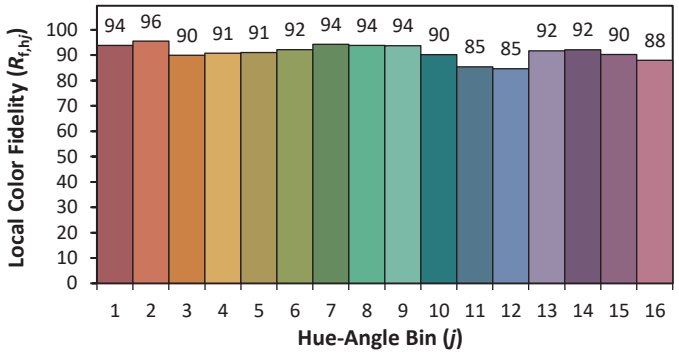
TM-30 data LTwo® cover at 4,000 K

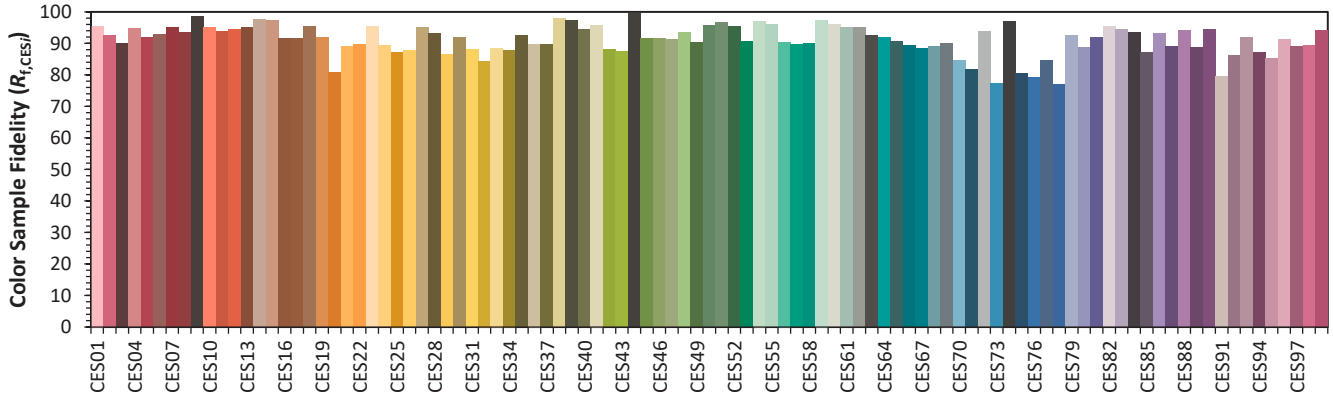












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	**0.3816**
y	**0.3832**
u'	**0.2233**
v'	**0.5046**

CIE 13.3-1995
(CRI)

R_a	92
R_9	80

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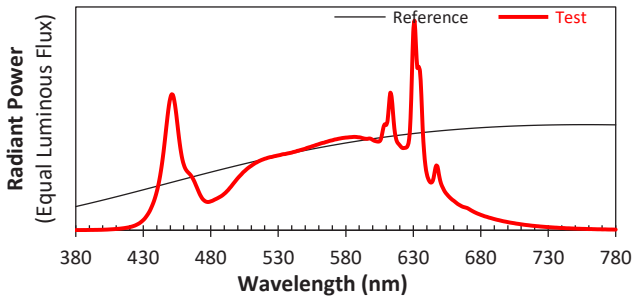
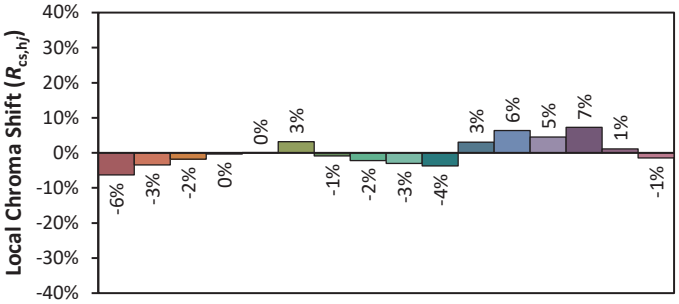
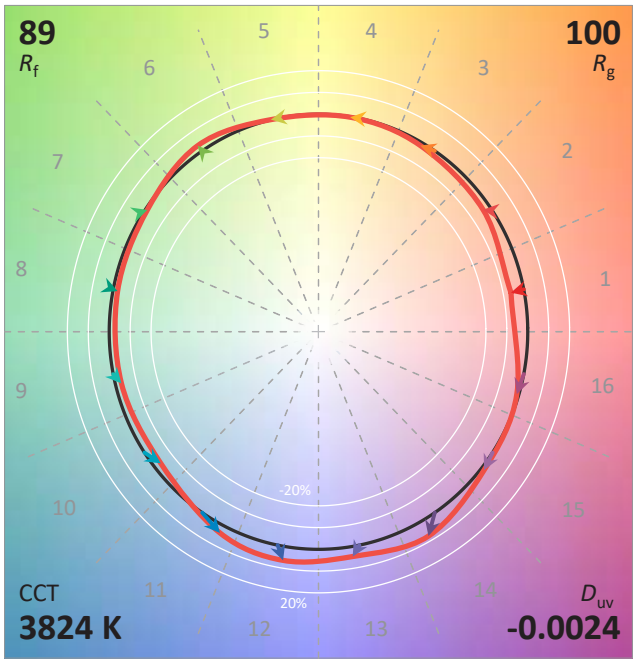
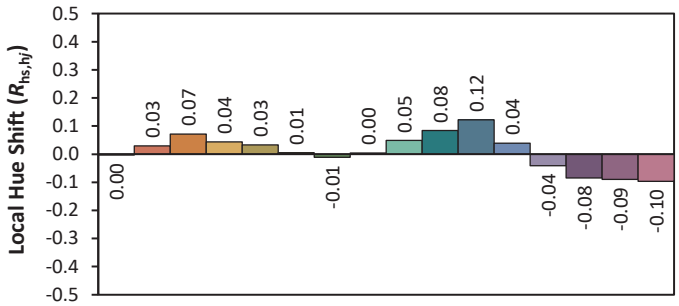
LTwo® photometric qualities

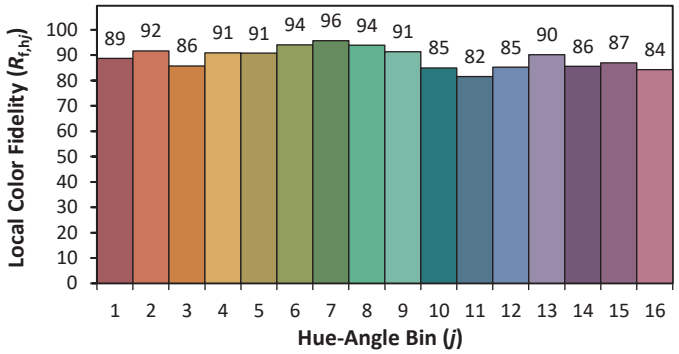
TM-30 data LTwo® cover at 4,000 K

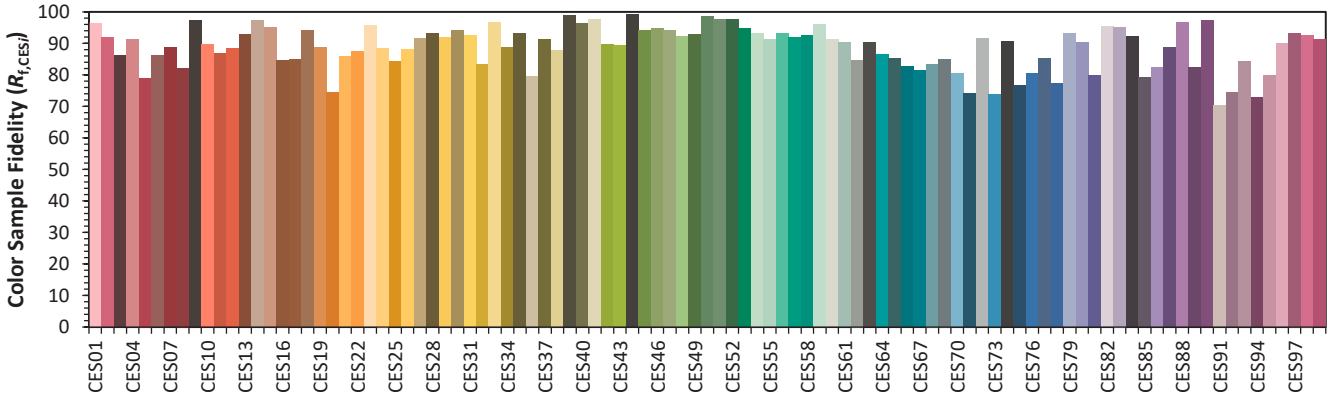












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	**0.3867**
y	**0.3755**
u'	**0.2297**
v'	**0.5019**

CIE 13.3-1995
(CRI)

R_a	92
R_9	57

apl ag
All Purpose Lighting
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45478 Mülheim a. d. Ruhr

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info@apl.ag
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LTwo® MAGNETIC – Accessories

JST
CV

MS5 - Magnetic socket for 48V constant voltage with JST plug

Art. No.
White: 10451
Black: 10452

PIT
CV

MS5 - Magnetic socket for 48V constant voltage with PIT block

Art. No.
White: 10449
Black: 10450

JST
CC

MS5 - Magnetic socket for constant current with JST plug

Art. No.
White: 10455
Black: 10456

PIT
CC

MS5 - Magnetic socket for constant current with PIT block

Art. No.
White: 10453
Black: 10454

Rear mounting bracket for screwing

Art. No.: 10463

Rear mounting bracket for snap-on

Art. No.: 10493

Rectangular mounting bracket

Art. No.
White: 10460
Black: 10459

Round mounting bracket

Art. No.
White: 10462
Black: 10461

Flush-box mounting bracket

Art. No.
White: 10466
Black: 10465

Housing with internal thread

Art. No.
White: 10468
Black: 10467

30° angle adapter

Art. No.
White: 10472
Black: 10470

90° angle adapter

Art. No.
White: 10471
Black: 10469

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LTwo® MAGNETIC – Accessories

Canopy small for MS5 socket

Art. No.
White: 15135
Black: 15136

Canopy large for MS5 socket and power supply unit

Art. No.
White: 15137
Black: 15138

Canopy round for extensions

Art. No.
White: 13127
Black: 13128

Canopy slim for power supply unit

Art. No.
White: 15139
Black: 15140

Gooseneck 10 cm

Art. No.
White: 13131
Black: 13132

Rod 10 cm

Art. No.
White: 13126
Black: 13139

Gooseneck 30 cm

Art. No.
White: 13134
Black: 13135

Rod 30 cm

Art. No.
White: 13133
Black: 13140

Gooseneck 60 cm

Art. No.
White: 13137
Black: 13138

Rod 90 cm

Art. No.
White: 13136
Black: 13141

Swivel-tilt joint

Art. No.
White: 13142
Black: 13145

Safety bracket for magnetic socket MS5 - Set of 2

Art. No. 15360

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How to use LTwo® MAGNETIC

LTwo® is a magic lamp-luminaire system, which can either be used on its own, being applied on any kind of material for furniture, machine or building integration, or it can be used as a classic luminaire with pre-configured accessories (Lumami®) with integrated drivers.

Create your own material or building integrated fixture and/or lighting design. Use

LTwo® MAG

with the DIY accessories.

LTwo® MAG integrated in decorative acoustic ceiling with rectangular mounting bracket and MS5 magnetic socket

Decorative architectural lighting chandelier for shopping mall with ectangular mounting bracket and MS5 magnetic socket

Auditorium lighting realized with custom made Al-extrusion, rear mounting bracket and MS5 magnetic socket

Design luminaire lounge area based on standard luminaire components rear mounting bracket and MS5 magnetic socks

Lighting for lamella ceiling with project made adapter, rear mounting bracket and MS 5 magnetic socket

LTwo® MAG + DIY

Your own idea for a material and buildng integrated, easy to realize, custom architectural lighting solution.

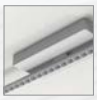
Build your lighting design on the "classic" luminaire series. Use

Lumami®

in many pre-configured settings. More to follow.

Lumami® DOWNLIGHT
Downlight Retrofit
Officies
Meeting Rooms
High end residential

Lumami® CEILING
Closed Ceilings
Officies
High end residential
Warehouse



Lumami® LV TRACK
Suspended Grid Ceiling
Commercial
Officies
Warehouse
Datacenter

Lumami® HV TRACK
Track Lighting
Retail
Museums
Galeries

Lumami® PANEL
Suspended Grid Ceiling
Commercial
Officies
Warehouse
Datacenter

LTwo® MAG + Lumami®

Your own idea for a standardized, pre-configured plug and play accessorie for fast moving projects.

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LTwo® MAGNETIC – Accessories

1 m Cable with JST-connector for MS5 constant voltage

Art. No. 0457

1m Cable with JST-connector for MS5 constant current

Art. No. 10458

Cable with textile cover

Art. No.
White: 13129
Black: 13130

Strain relief with M10x1

Art. No.
White: 14242
Black: 13634

Screw 2.5 x 10 mm for MS5

Art. No.
Set of 10: 13092
Set of 20: 13095
Set of 50: 13098

Screwdriver Torx 7

Art. No. 13102

Screw 2.5 x 12 mm for MS5

Art. No.
Set of 10: 13093
Set of 20: 13096
Set of 50: 13099

Mounting stencil for MS5 mounting bracket

Art. No. 15134

Screw 2.5 x 16 mm for MS5

Art. No.
Set of 10: 13094
Set of 20: 13097
Set of 50: 13100

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