

LED drivers, modules, controls, overvoltage protection

Trusted Outdoor Solutions

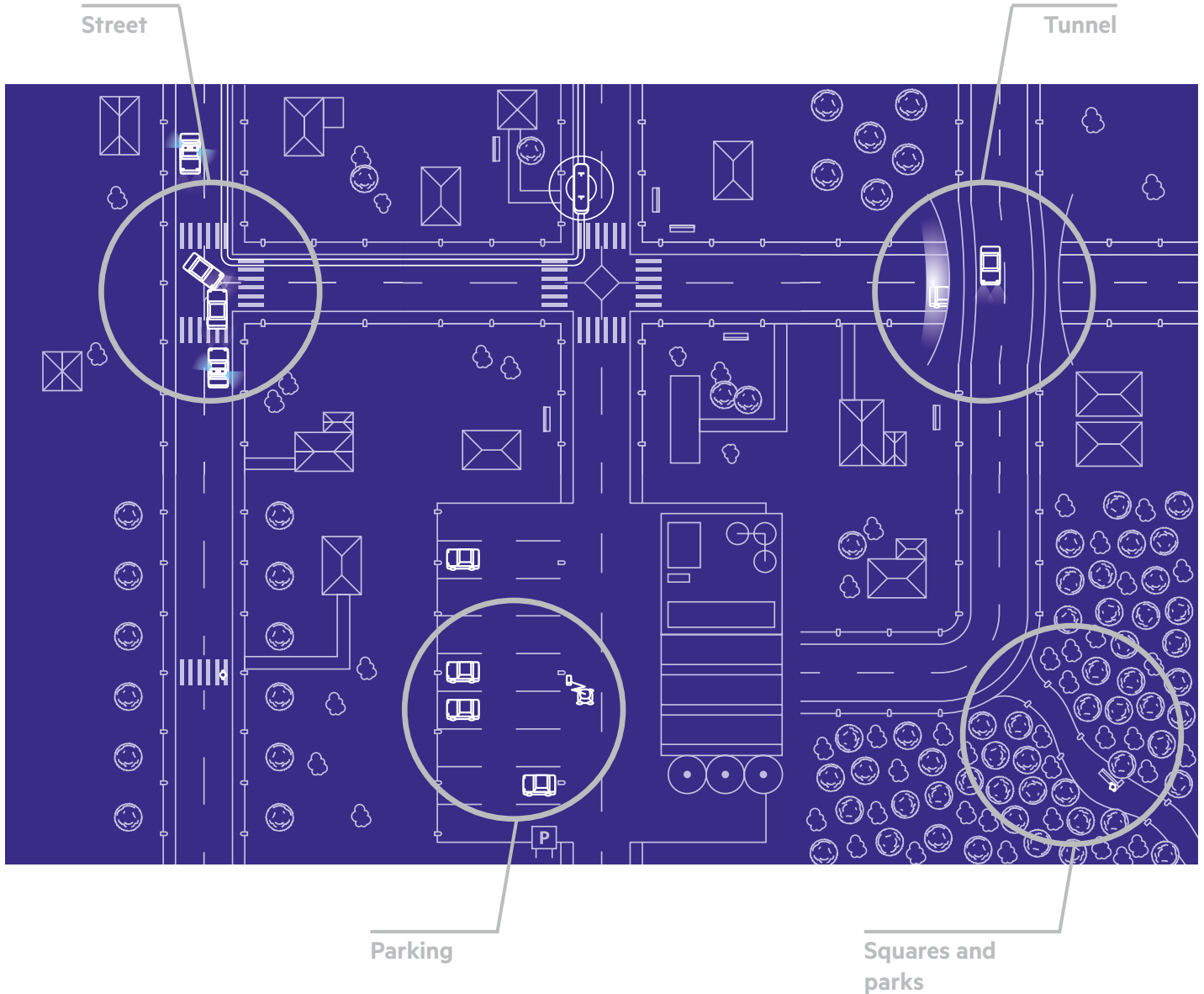
innovative, efficient, safe



TRIDONIC

Expertise in outdoor lighting

Create urban value with intelligent lighting



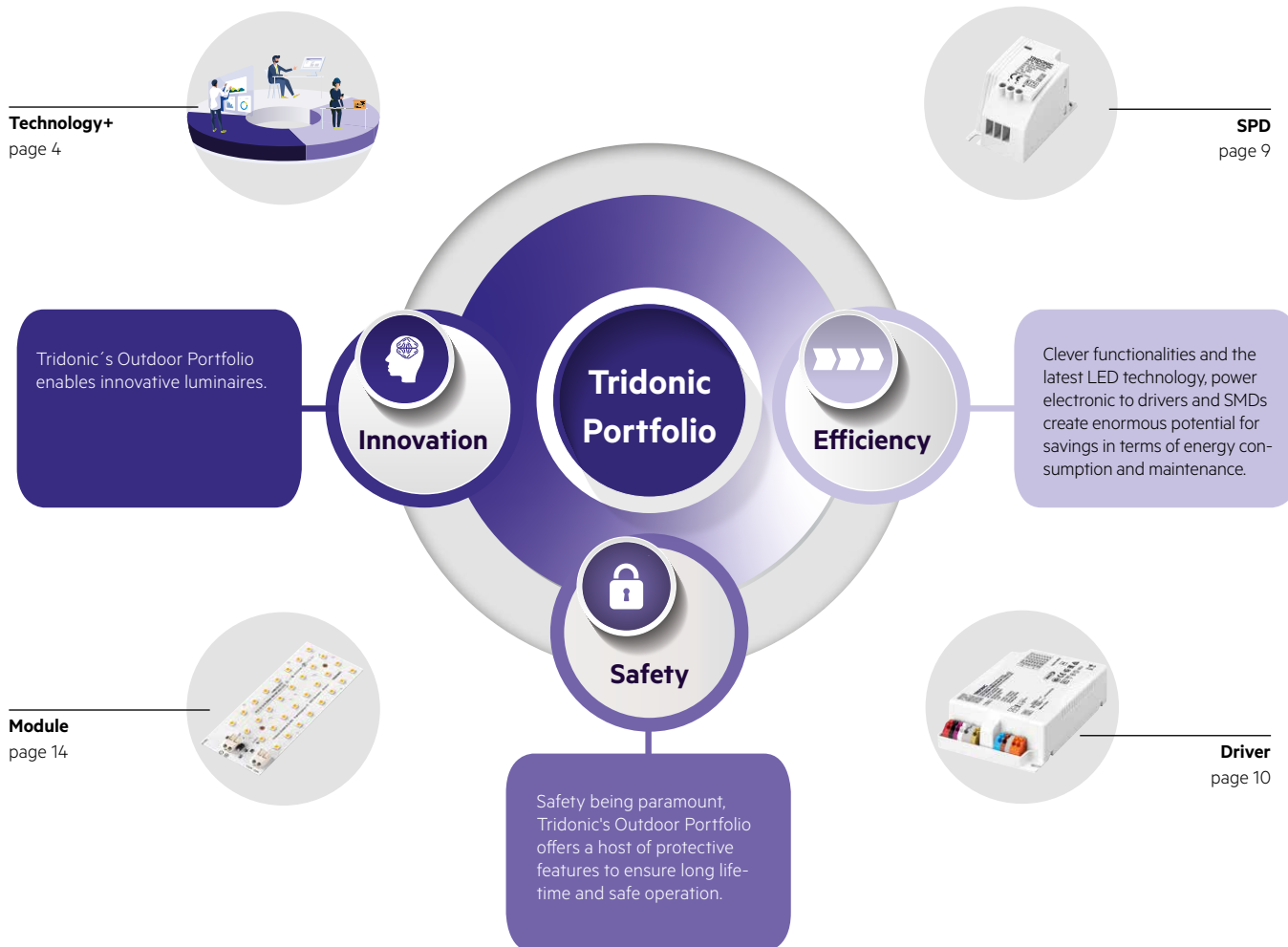
Tridonic – Expertise in outdoor lighting

In towns, cities and in the country the lighting for roads, bridges and public spaces makes an important contribution to safety and quality of life. Lighting solutions from Tridonic offer the highest quality components meeting the tough requirements of outdoor applications.

From users perspective, the function of light is to provide optimum illumination of pavements, paths and pedestrian areas therefore offering safety and security. Appropriate lighting levels encourage people to spend time outdoors. For the operator, however, the main focus is on energy efficiency and ease of maintenance, followed by maximum flexibility in configuring the street lighting. LED drivers from Tridonic provide the perfect basis for all these requirements.

Everything necessary for outdoor lighting

Portfolio Overview



Tridonic combines quality, safety and efficiency in intelligent LED lighting solutions that impress with low maintenance costs and a high level of reliability. Streets, tunnels, car parks and public places are therefore perfectly lit around the clock.

Demanding conditions and environmental influences can affect any outdoor lighting system. Thanks to their robustness and reliability, Tridonic's outdoor solutions can easily withstand extreme temperature fluctuations, vibration and humidity and offer comprehensive functionality at all times.

At a glance: The benefits of Tridonic products

- **Innovation**
Simple configuration via NFC interface with the Tridonic companion-SUITE, ready2mains programmer or U6Me2
- **Efficiency**
Low operating costs thanks to high energy efficiency and durability (special driver functions).
- **Safety**
Protection level thanks to increased dielectric strength (surge/burst) of 10 kV; conform with IEC 61000-4-5 and extended temperature range from -40 to +70°C

Innovation

Technology⁺ companionSUITE – Chat with your driver

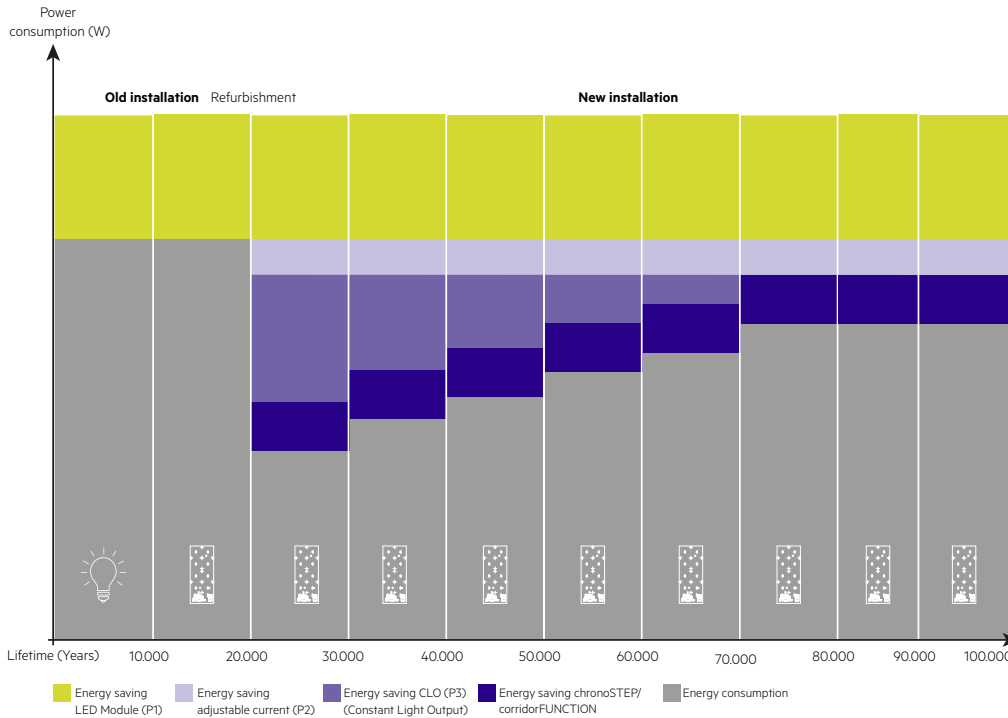
The Tridonic companionSUITE software collection supports luminaire manufacturers with the generation, transmission and control of driver settings. These include current, corridorFUNCTION, chronoSTEP, Constant Light Output and DC level for emergency lighting. companionSUITE is compatible with commonly used interfaces such as DALI-2 or NFC. Their objective is to optimise processes in the long-term and counteract production errors. During subsequent quality management, Tridonic companionSUITE also makes it easier to analyse and correct potential sources of error.



Configuration via the mains

The smart way to configure your luminaires

Tridonic's sophisticated lighting management functions create enormous potential for additional savings. For example, the output current can be adjusted or the light can be movement or time controlled. The enhanced constant light output function (eCLO) also ensures efficient luminaire operation. Whichever function is selected – the level of safety remains unchanged.



Example

90 luminaires each with 125 W high intensity discharge lamps and pole spacings of 50, 45 and 40 metres (every 30 luminaires) consume 55 MWh per year and generate 179 tonnes of CO₂ emissions. To reduce energy consumption, conventional luminaires will initially be replaced by LED luminaires with a 52 W (P1) power input. Based on a maximum life time of 100,000 hours and a cleaning interval of three years, the maintenance factor is 0.8. The additional use of the functions described above results in the following savings per year:

Measure	CO ₂ saving	Energy saving
Refurbishment: LED luminaires	12 t	33 MWh
Adjustable current	4 t	11 MWh
CLO function	1.7 t	5 MWh
chronoSTEP	4 t	11 MWh
corridorFUNCTION	3.75 t	10 MWh

Since the savings take effect simultaneously the table values cannot be added. Nevertheless there is an overall reduction in CO₂ of 15.7 t.

Adjustable current (P2)

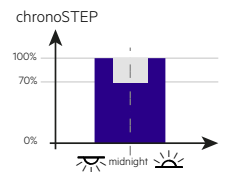
Tridonic LED drivers can be individually controlled and easily adjusted. This is particularly advantageous when the light cones of several luminaires overlap, for example at intersections and entrances. Individually adjustable output currents make it possible to reduce the lighting level of the luminaires without great effort.

Constant Light Output (CLO P3)

The Constant Light Output function (eCLO) supports efficient operation. It ensures a constant illumination level throughout the life of the luminaire. Initially the LED light sources will not be brighter than required because less current will be supplied to them and they will therefore consume less energy.

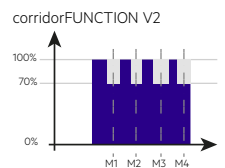
chronoSTEP (Virtual mignight)

Using the chronoSTEP function, the lighting level can be regulated for certain times of the night. Eight individual dimming levels and day segments can be defined. This allows individual outdoor LED luminaires or entire streets to be programmed as desired from the control cabinet.



corridorFUNCTION V2

The corridorFUNCTION ensures that high luminous flux is produced only when it is actually needed. As soon as the sensor detects movement the luminous intensity is increased. Once the sensor no longer detects movement the luminous flux can be automatically reduced after a predefined delay.



Driver for Outdoor lighting

Robust and reliable



Watch video on YouTube

Tridonic's innovative outdoor solutions meet the diverse and demanding requirements of outdoor lighting and offer optimum protection. Individual protection classes in the project fulfil all requirements with the protective earth.



Application Class I

Metal lamp head with protective earth

- All luminaire parts have a proper and defined connection to the protective earth (PE)
- The metal parts of the LED module create a parasitic capacitance to PE



Application Class II

Metal lamp head with equipotential connection

- Metal lamp head and metal core of the LED PCB are connected to the LED driver via equipotential connector



Application Class II

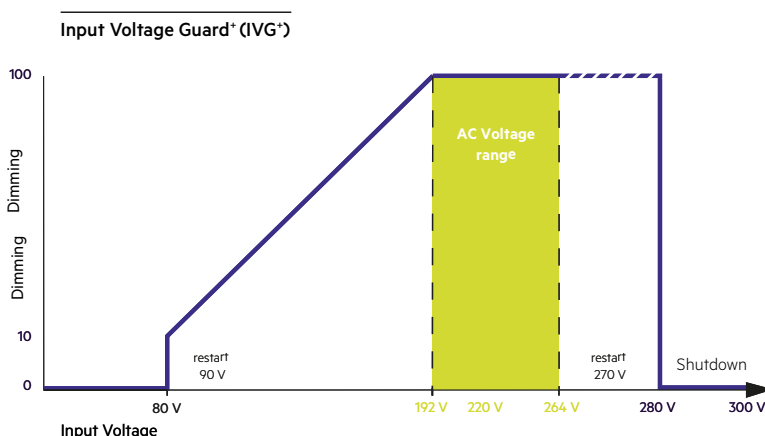
Lamp head with non-conductive materials or no equipotential connection

- All touchable parts of the system are either made of non-conductive materials or insulated according to safety class II



Input Voltage Guard* (IVG*)

If the mains voltage is unstable, voltage surges can occur above or below the rated voltage level. Ideally, the driver should be operated within the range from 192 to 264 Volts. Between 192 and 80 Volts, the LED driver falls into under-voltage and dims to 10 percent. Below 80 Volts, the driver shuts down. This prevents the LED from being overloaded. When the voltage increases to 90 volts again, the driver automatically restarts and dims again linearly. A voltage greater than 280 Volts also results in shut down. When the voltage falls below 270 Volts again, the driver restarts without a reset. If the inputDIM function is also in use, IVG* has priority.



External Temperature Monitoring (ETM + NTC)

External Temperature Monitoring (ETM) protects the connected LED against thermal damage. It has three temperature values with which five further reference points can be calculated automatically. These also ensure greater precision of the temperature curve in specific areas. Temperature values within these desired values are interpolated linearly. On the one hand, the temperature sensor (NTC) is defined via the resistance value at 25°C (R25) and, on the other hand, via the sensor constant (BETA).

Intelligent Temperature Guard (ITG)

The "Intelligent Temperature Guard (ITG)" function provides effective protection against thermal overload. If the predefined temperature is exceeded, the ITG reduces the output power in small two-minute steps. If the temperature falls, the output power is increased again successively in 10-minute cycles. All temperature thresholds of the ITG function fall by the value entered.

Programmer ready2mains & U6Me2

You can easily configure your LED luminaires with the programmer ready2mains & U6Me2. There is no need for an additional interface as the existing mains interface is used.

Thanks to ready2mains and the use of user-defined configuration scripts, the risk of configuration errors has been significantly reduced. Simple and flexible integration in the municipal infrastructure is also possible.



Programmer ready2mains & U6Me2

At a glance: Programmer ready2mains & U6Me2

- Programming in luminaire production or test environments
- Suitable for the use in streets and switching cabinets
- Up to 500 scripts can be stored (ready2mains, U6Me2 and DALI scripts)
- Supporting software for fast programming
- Integrated USB interface for programming via DALI, ready2mains and U6me2
- Current can be set in 1mA steps (ready2mains and DALI)

Designation	Size	Order No.
Programmer ready2mains U6Me2	173 x 87 x 47 mm	28001206

Parameters

Feature	ready2mains	U6Me2
Distance	Short (~400 m)	Long (~1.5 km)
No. of devices programmable in parallel	5 LED drivers (max 400 VA)	No limit
Programming options	Current, CLO, chronoSTEP*, corridorFUNCTION	chronoSTEP*
Programming speed	Fast	Slow
Dimming	Yes	No
Best application	Flexible on-site and at the factory	Outdoors at the cabinet

*Autonomous midnight-settings

Did you know

Centralised Telecontrol-system via U6Me2 Technology

Remote control system that brings smart and connected lighting functionality based on U6Me2

- Remote configuration of chronoSTEP 2 and enhanced constant light output (eCLO)
- Cost efficient and quick programming of a whole street or a single pole via a connected cabinet and U6Me2
- Utilizes existing network/infrastructure

Script Generator



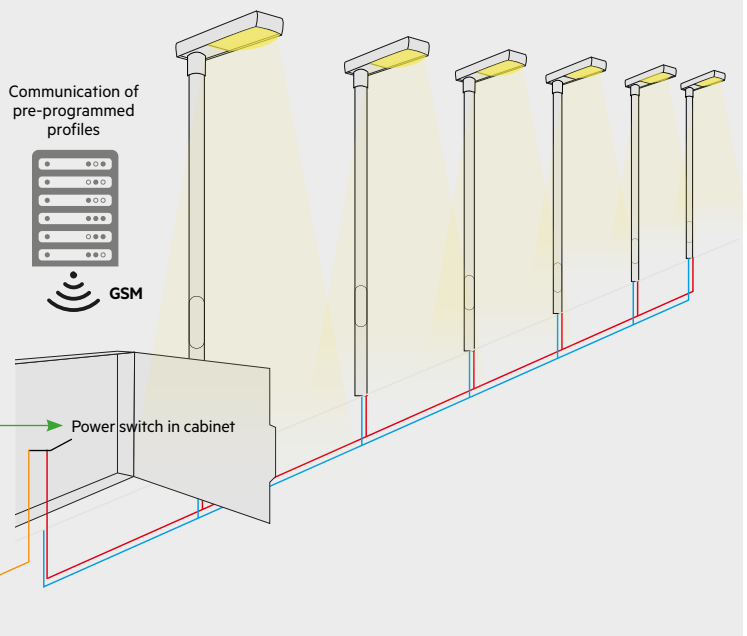
ready2mains und U6Me2 Programmer

Communication of pre-programmed profiles



Power switch in cabinet

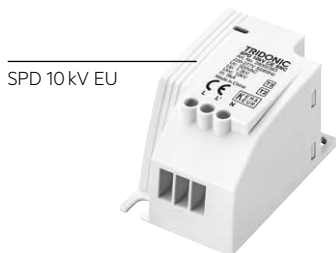
network



For more information on the implementation of a reference project, see page 19/20.

Surge protection device (SPD)

Protection against overvoltage



SPD 10kV EU

At a glance: Surge protection device (SPD) SNC EU

- IP20 For luminaires with protection class II
- Protection up to 10 kV L-N (IEC 61643-11)
- Universal use for street, tunnel or object lighting
- Flexible installation, fixed via integrated elongated holes
- Compact design
- Optical status indicator
- Double or reinforced insulation
- 5-year guarantee
- Type of protection IP20

Fitted to the luminaire head or pole, the surge protection device prevents a luminaire being damaged at an overvoltage up to 10 kV. In the event of a lightning strike, for example, the surge protection device (SPD) may be damaged itself, but the lighting remains functional.

Designation	Size	Order No.
SPD 10kV CE SNC	56 x 36,5 x 34 mm	28002383

Did you know

LED luminaires are becoming increasingly energy-efficient. At the same time however, their sensitivity to overvoltage is also increasing. An overvoltage protection device is advisable for several reasons:

Why use a Surge Protection Device:

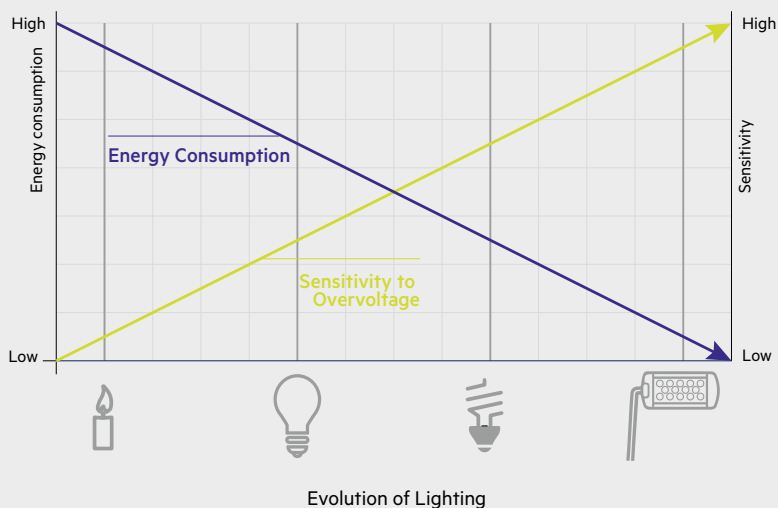
1. Extend the life time of LED luminaires

Compared with conventional lighting solutions, the electronic components of LED luminaires react more sensitively to transients.

2. Avoid unexpected costs

Identifying a damaged component on site involves a great deal of effort. Therefore, in most cases the entire luminaire head is replaced. Errors of this kind are costly and should be avoided from the outset.

3. Improve light availability in safety-relevant areas



Safety and efficiency

Heroic drivers – driver functions

At a glance: NFC interface

- **Safe**
Currentless and contactless programming
- **Flexible & fast**
Multi-programming: Simultaneous programming of up to 20 packaging units

Large temperature range

From -40°C to +70°C

-40°C
+70°C

2V-out

Large operating window
Optimised **stock management** with efficiency

Functional Earth

Functional Earth
with equipotential
connector

Secondary Side

LED1+(HV): positive
High Voltage terminal
for serially wired LED-
Modules with higher voltage
demand

Negative Terminal to LED Module

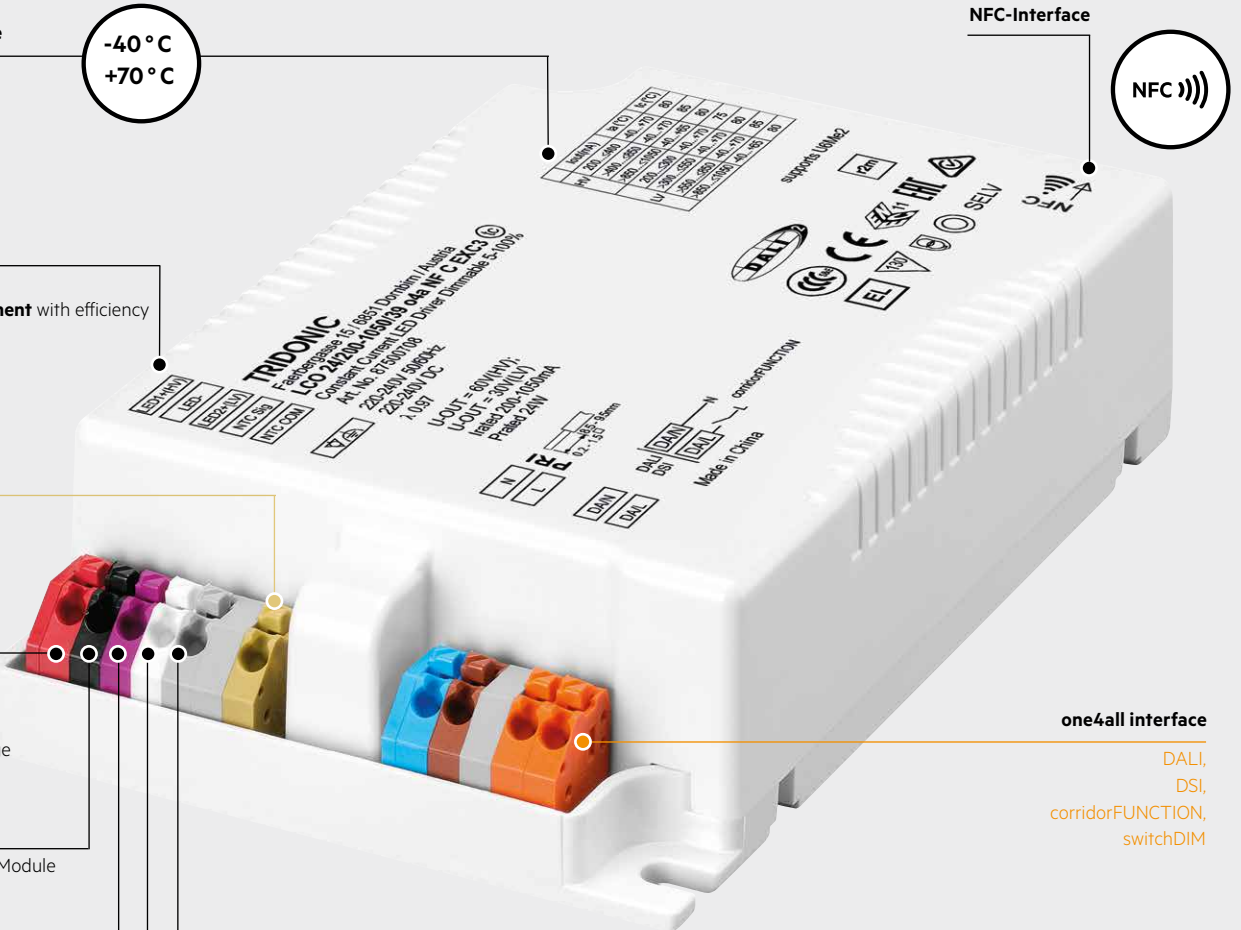
LED2+(LV): positive Low Voltage
terminal for parallel/in-series wired LED-
Modules with lower voltage demand

NTC Signal to LED Module

NTC Communication from LED Module

NFC-Interface

NFC



one4all interface

DALI,
DSI,
corridorFUNCTION,
switchDIM


NEW	Designation	Size (mm)	Order No.
	LCO 24/200-1050/39 o4a NF C EXC 3	123 x 77 x 31	87500708

Further details can be found in datasheet.

Driver

Product overview

Product Portfolio – Overview

Benefit	Function	essence (SNC)	advanced (ADV)	excite (EXC)	premium (PRE)
		Cost-effective Fixed Output, IP67	Simplicity itself NFC programming, IP20	Flexible DALI connectivity, NFC programming, IP20	Convenient powered DALI, Sensor-ready, Data- logging, aux, IP20
	Power	75, 100, 150, 200 W		14, 24, 40, 60, 90, 135, 200 W	
	Lifetime/ Guarantee	50.000 h/5 yrs		100.000 h/8 yrs	
Innovative 	AUX LVPS 24 V				✓
	pDALI (DT49)				✓
	DALI-2/one4all			✓	✓
	NFC		✓	✓	✓
	ready2mains / U6Me2		✓	✓	✓
Efficient 	corridorFUNCTION V2			✓	
	chronoSTEP 2 (Virtual Midnight)		✓	✓	✓
	inputDIM		✓	✓	✓
	eCLO**		✓	✓	✓
Safe 	ETM*, NTC			✓	✓
	ITM***	✓	✓	✓	✓
	IVG+ (Intelligent Voltage Guard Plus)		✓	✓	✓
	Transient protection	6 kV	10kV	10kV	10kV
	ta range	-30 °C to +60 °C	-40 °C to +70 °C	-40 °C to +70 °C	-40 °C to +70 °C

*External temperature management; **Anticipated constant light output; ***Internal temperature management

3rd generation excite driver series (EXC)

DALI-dimmable, flexible



Driver 14/24/40/60 W EXC3



Driver 90/135/200 W EXC3

At a glance: Driver EXC

- Dimmable built-in constant current LED Driver
- Output current adjustable between 200–1,050 mA via NFC, DALI or ready2mains programmer
- Lifetime of up to 100,000 hours and 8-year guarantee

Innovative:

- Flexible configuration via DALI, ready2mains, U6Me2
- In-field programming possible after installation with NFC interface or ready2mains

Safe:

- High overvoltage protection: 10 kV asymmetric (protection class I and II)
- Protective functions (overtemperature, short circuit, overload, idling, input voltage range, reduced surge current amplification)
- For luminaires of protection class I and II

Efficiency:

- Dimming range 5–100% (min. 5 mA)
- Dimming through mains voltage (inputDIM)

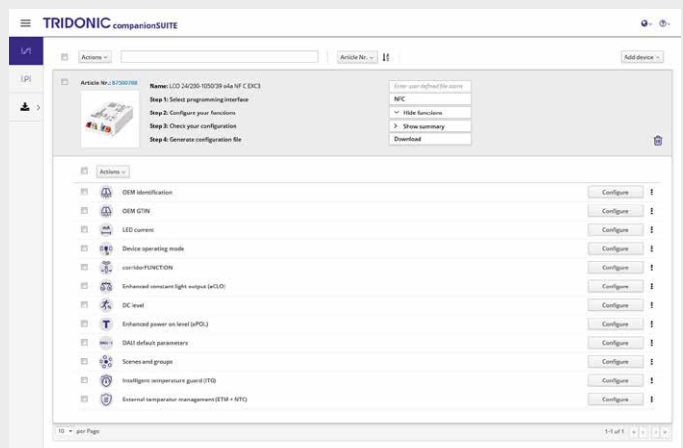
NEW	Designation	Output current (mA)	Output power ¹⁾ (W)	Output voltage range ¹⁾ (V)	Input voltage (V)	Size (mm)	Order No.
	LCO 14/100-500/38 o4a NF C EXC3	100-500	14	28-38	220-240	105 x 70 x 31	87500707
	LCO 24/200-1050/38 o4a NF C EXC3	200-1,050	24	28-38	220-240	123 x 77 x 31	87500708
	LCO 40/200-1050/64 o4a NF C EXC3	200-1,050	40	38.1-64	220-240	123 x 77 x 31	87500709
	LCO 60/200-1050/100 o4a NF C EXC3	200-1,050	60	57.1-100	220-240	133 x 77 x 31	87500710
	LCO 90/200-1050/165 o4a NF C EXC3	200-1,050	90	85.7-165	220-240	133 x 77 x 34	87500717
	LCO 135/200-1050/220 o4a NF C EXC3	200-1,050	135	128.6-220	220-240	150 x 90 x 37.5	87500716
	LCO 200/200-1050/355 o4a NF C EXC3	200-1,050	200	190.5-355	220-240	170 x 100 x 40	87500711

¹⁾Depending on the selected output current. Further details can be found in datasheet.

Did you know

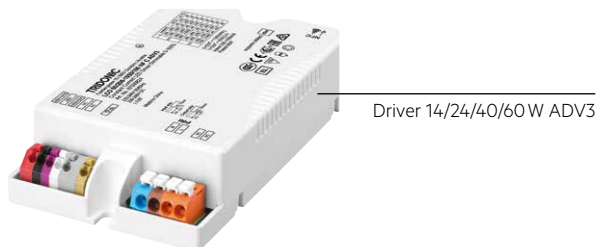
...that the new **NFC interface** results in significant time savings when programming the drivers during luminaire production. The deviceGENERATOR makes it easier to program the driver

features during the design process. And, with the NFC antenna (www.tridonic.com/com/de/download/technical/NFC_readers_companionSUITE.pdf), entire packaging units of up to 20 drivers can be programmed at once. Integrated verification mechanisms prevent human error.



Driver advanced series (ADV) generation 3

Dimmable, configurable



Driver 14/24/40/60W ADV3



Driver 90/135/200W ADV3

At a glance: Driver ADV3

- Dimmable built-in constant current LED Driver
- Output current adjustable between 200–1,050 mA via NFC and ready2mains programmer
- Lifetime of up to 100,000 hours and 8-year guarantee

Innovative:

- Flexible configuration via ready2mains, U6Me2 and NFC
- In-field programming possible after installation with ready2mains and NFC interface
- High overvoltage protection: 10 kV

Efficient:

- Dimming range 5–100 %
- Dimming through mains voltage (inputDIM)

Safe:

- For luminaires of protection class I and II
- High overvoltage protection: up to 10 kV asymmetric (protection class I and II)
- Protective functions (overtemperature, short circuit, overload, idling, input voltage range, reduced surge current amplification)

NEW	Designation	Output current (mA)	Output power ¹⁾ (W)	Output voltage range ¹⁾ (V)	Input voltage (V)	Size (mm)	Order No.
	LCO 14/100-500/38 NF C ADV3	100–500	14	28–38	220–240	105 x 70 x 31	87500821
	LCO 24/200-1050/39 NF C ADV3	200–1.050	24	28–38	220–240	123 x 77 x 31	87500822
	LCO 40/200-1050/64 NF C ADV3	200–1.050	40	38.1–64	220–240	123 x 77 x 31	87500823
	LCO 60/200-1050/100 NF C ADV3	200–1.050	60	57.1–100	220–240	133 x 77 x 31	87500824
	LCO 90/200-1050/165 o4a NF C ADV3	200–1.050	90	85.7–165	220–240	133 x 77 x 34	87500825
	LCO 135/200-1050/220 o4a NF C ADV3	200–1.050	135	128.6–220	220–240	150 x 90 x 37	87500826
	LCO 200/200-1050/355 o4a NF C ADV3	200–1.050	200	190.5–355	220–240	170 x 100 x 40	87500827

¹⁾Depending on the selected output current. Further details can be found in datasheet.

Did you know

Tridonic drivers have overvoltage protection up to 10 kV and meet protection classes I and II in accordance with standard IEC 61000-4-5.

When protecting against overvoltage, the place at which it occurs is crucial. For example, lightning results in overvoltage between the current-carrying mains lines and the ground. In this case, LED drivers from Tridonic offer protection up to 10 kV – including for the LED module. If the distance between the lightning strike

and the pole is 150 metres or more, the LED module remains undamaged. PRE outdoor drivers protect 5 out of 10 luminaires. By comparison: Protection up to 6 kV only protects one out of 10 luminaires against damage. Thus, with the PRE outdoor driver series, maintenance costs can be saved, as significantly fewer luminaires have to be repaired or completely replaced.

Driver essence series (SNC) generation 2

Fixed-Output



At a glance: Driver SNC2

- Separate fixed output LED Driver
- Lifetime of 50,000 hours and 5-year guarantee

Safe:

- For luminaires of protection classes I
- Type of protection IP67
- Protective functions (overtemperature, short circuit, overload, idling)
- High overvoltage protection: up to 6 kV asymmetric (protection class I and II)

Efficient:

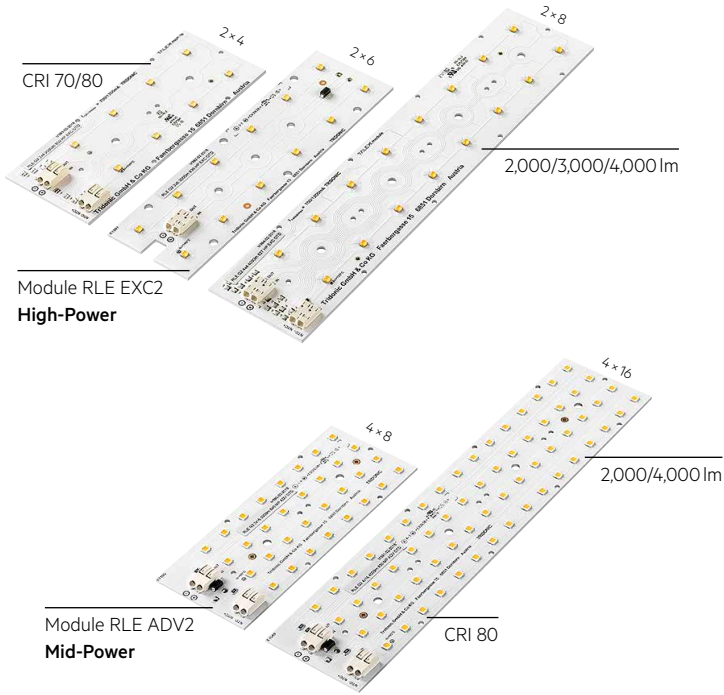
- Efficiency up to 94 %

NEW	Designation	Output current (mA)	Output power (W)	Output voltage range ¹⁾ (V)	Input voltage (V)	Size (mm)	Order No.
	LCO 75/500/150 fixC L SNC2	500	75	45–150	220–240	158 x 61 x 37.8	28002297
	LCO 75/700/108 fixC L SNC2	700	75	32–108	220–240	158 x 61 x 37.8	28002298
	LCO 75/1050/72 fixC L SNC2	1.050	75	22–72	220–240	158 x 61 x 37.8	28002299
	LCO 75/1400/53 fixC L SNC2	1.400	75	16–53	220–240	158 x 61 x 37.8	28002300
	LCO 100/500/200 fixC L SNC2	500	100	60–200	220–240	181 x 61 x 37.8	28002301
	LCO 100/700/143 fixC L SNC2	700	100	43–143	220–240	181 x 61 x 37.8	28002302
	LCO 100/1050/95 fixC L SNC2	1.050	100	29–95	220–240	181 x 61 x 37.8	28002303
	LCO 100/1400/71 fixC L SNC2	1.400	100	21–71	220–240	181 x 61 x 37.8	28002304
	LCO 150/500/300 fixC L SNC2	500	150	90–300	220–240	200 x 61 x 37.5	28002305
	LCO 150/700/214 fixC L SNC2	700	150	64–214	220–240	200 x 61 x 37.8	28002306
	LCO 150/1050/142 fixC L SNC2	1.050	150	43–142	220–240	200 x 61 x 37.8	28002307
	LCO 150/1400/107 fixC L SNC2	1.400	150	32–107	220–240	200 x 61 x 37.8	28002308
	LCO 200/500/400 fixC L SNC2	500	200	133–400	220–240	246 x 61 x 37.8	28002309
	LCO 200/700/285 fixC L SNC2	700	200	95–285	220–240	246 x 61 x 37.8	28002310
	LCO 200/1050/190 fixC L SNC2	1.050	200	63–190	220–240	246 x 61 x 37.8	28002311
	LCO 200/1400/142 fixC L SNC2	1.400	200	47–142	220–240	246 x 61 x 37.8	28002312

¹⁾Depending on the selected output current. Further details can be found in datasheet.

RLE 2nd generation modules

Efficient, innovative, versatile



At a glance: Module RLE ADV/EXC 2nd generation

- High efficiency outdoor modules
- Small luminous flux tolerances
- Suitable for harsh and humid outdoor conditions tested acc. to salt spray test (IEC 60068-2-52) and harmful gas test (GR-1217-CORE)
- Surge tested 6 kV with Tridonic LED Driver
- Push-in terminals for simple and quick wiring

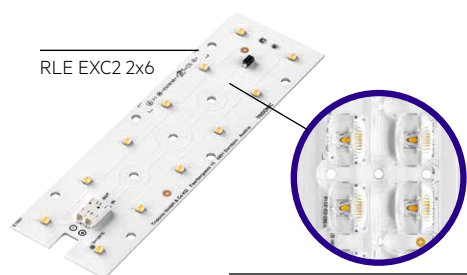
The new RLE module generation is designed for modular and versatile luminaire designs. It provides an ideal basis for exceptional lighting solutions in outdoor areas and industrial applications.

Versatility, efficiency and safety – the second generation of RLE modules combines three of the Tridonic outdoor portfolio’s fundamental values in a completely new way. The long life time of 100,000 hours (High-Power LineUp modules) and 80,000 hours (Mid-Power modules) has been established under harsh conditions and in numerous tests

such as salt spray or pollutant tests. The extended temperature range from -40°C to +105°C ensures perfect operation even under the harshest climatic conditions. Combined with Tridonic outdoor drivers, the RLE modules can easily withstand voltages of up to 6 kV. The Mid-Power modules boast industry-leading efficiency of up to 190 lumens per watt, thanks to the latest LED technology. Designed according to Zhaga standards, the entire module generation is compatible with numerous lenses such as LEDiL Strada 2x2, IP-2x6 and Stradella 16.

Module RLE excite series (EXC)

High Power



Made to be used with IP6x - lenses
(e.g. LEDIL Strada IP-2X6)

At a glance: Module RLE EXC2 High Power

- Life time of 100,000 hours and 8-year guarantee
- Broad temperature range from -40 to +105°C
- CRI 70 for high efficiency and CRI 80 for perfect colour rendering
- Luminous flux: 2,000 lm, 3,000 lm, 4,000 lm

RLE EXC2 2x4 and RLE EXC2 2x8

Efficient:

- Efficacy of up to 175 lm/W

Safe:

- Integrated NTC for overtemperature protection

Versatile:

- Zhaga Book 15 compliant (2x4, 2x8) and Zhaga Book 19 (2x6)
- For use with standard 2x2 lenses

RLE EXC2 2x6

Efficient:

- Efficacy of up to 140 lm/W

Versatile:

- For use with IP6x lenses (e.g. LEDIL Strada IP-2X6)

Module RLE EXC2 OTD High Power

NEW	Designation	Colour temperature (K)	Mac Adam	Typ. luminous flux ¹⁾ (lm)	CRI	Typ. power consumption ¹⁾ (W)	Module efficacy ¹⁾ tp = 75°C (lm/W)	Size (mm)	Order No.		
	RLE 2x4 2000lm 827 HP EXC2 OTD	2.700	SDCM 5	1.810	80	14,6	up to 124	121,4 x 49,5	89603156		
	RLE 2x4 2000lm 830 HP EXC2 OTD	3.000		1.940			up to 133		89603157		
	RLE 2x4 2000lm 840 HP EXC2 OTD	4.000		2.060			up to 141		89603158		
	RLE 2x4 2000lm 840 PL1** EXC2 OTD			2.060			up to 141		89603159		
	RLE 2x4 2000lm 850 HP EXC2 OTD	5.000		2.060			up to 141		89603160		
	RLE 2x4 2000lm 730 HP EXC2 OTD	3.000		1.950			70		12,3	up to 159	89603432
	RLE 2x4 2000lm 740 HP EXC2 OTD	4.000	2.090	up to 170	89603433						
	RLE 2x6 3000lm 830 HP EXC2 OTD	3.000	SDCM 5	3.100	80	23,6	up to 131	146 x 45	89603167		
	RLE 2x6 3000lm 840 HP EXC2 OTD	4.000		3.300			up to 140		89603168		
	RLE 2x6 3000lm 850 HP EXC2 OTD	5.000		3.300			up to 140		89603169		
	RLE 2x8 4000lm 827 HP EXC2 OTD	2.700	SDCM 5	3.620	80	29,1	up to 124	223 x 49,5	89603161		
	RLE 2x8 4000lm 830 HP EXC2 OTD	3.000		3.880			up to 133		89603162		
	RLE 2x8 4000lm 840 HP EXC2 OTD	4.000		4.120			up to 141		89603163		
	RLE 2x8 4000lm 850 HP EXC2 OTD	5.000		4.120			up to 141		89603164		
	RLE 2x8 4000lm 730 HP EXC2 OTD	3.000		3.890			70		24,5	up to 159	89603434
	RLE 2x8 4000lm 740 HP EXC2 OTD	4.000		4.170			70			up to 170	89603165
	RLE 2x8 4000lm 757 HP EXC2 OTD	5.700	4.290	70	up to 175	89603435					
	RLE 2x8 4000lm 765 HP EXC2 OTD	6.500	4.100	70		up to 168	89603166				

¹⁾Tolerance range for electrical and optical data: ±10 %

Module RLE advanced series (ADV)

Mid Power



At a glance: Module RLE ADV2 Mid Power

- Lifetime of 80,000 hours and 5-year guarantee
- Increased temperature range from -40 to +95 °C
- CRI: 80
- Luminous flux: 2,000/4,000 lm

Efficient:

- Efficacy of up to 190 lm/W

Versatile:

- For use with x16 lenses (e.g. LEDIL Stradella 16)

Safe:

- Integrated NTC for overtemperature protection

Module RLE ADV2 OTD Mid Power

NEW	Designation	Colour temperature (K)	Mac Adam	Typ. luminous flux ¹⁾ (lm)	CRI	Typ. power consumption ¹⁾ (W)	Module efficacy ¹⁾ $\tau_p = 75^\circ\text{C}$ (lm/W)	Size (mm)	Order No.
	RLE 4x8 2000lm 830 MP ADV2 OTD	3.000	SDCM 3	2.020	80	11.1	up to 182	121,4 x 49,5	89603170
	RLE 4x8 2000lm 840 MP ADV2 OTD	4.000		2.080			up to 187		89603171
	RLE 4x8 2000lm 850 MP ADV2 OTD	5.000		2.110			up to 190		89603172
	RLE 4x8 2000lm 865 MP ADV2 OTD	6.500		2.050			up to 185		89603173
	RLE 4x16 4000lm 830 MP ADV2 OTD	3.000	SDCM 3	4.040	80	22.2	up to 182	223 x 45	89603174
	RLE 4x16 4000lm 840 MP ADV2 OTD	4.000		4.160			up to 187		89603175
	RLE 4x16 4000lm 850 MP ADV2 OTD	5.000		4.220			up to 190		89603176
	RLE 4x16 4000lm 865 MP ADV2 OTD	6.500		4.100			up to 185		89603177

¹⁾Tolerance range for electrical and optical data: ±10 %, Operation mode of 500 mA

Module RLE excite (EXC) / advanced (ADV)

Matching Driver

Driver			RLE 2x4 2000lm	RLE 2x8 4000lm	RLE 2x6 3000lm	RLE 4x8 2000lm	RLE 4x16 4000lm
Designation	Output current (mA)	Order No.	HP EXC2 OTD	HP EXC2 OTD	HP EXC2 OTD	MP ADV2 OTD	MP ADV2 OTD
Driver excite3 (EXC3)/advanced 3 (ADV3)							
LCO 14/100-500/38 o4a NF C EXC3	200	87500707	1	0	1	1	0
LCO 14/100-500/38 NF C ADV3	350	87500821	1	0	1	1	0
	500		1	0	0	1	0
LCO 24/200-1050/39 o4a NF C EXC3	200 HV	87500708	1	0	1	1	0
LCO 24/200-1050/39 NF C ADV3	350 HV	87500822	1	0	1	1	0
	500 HV		1	0	1	1	0
	550 HV		1	0	1	1	0
	650 HV		1	0	1	1	0
	700 HV		1	0	0	1	0
LCO 40/200-1050/64 o4a NF C EXC3	200 HV	87500709	2	1	0	2	1
LCO 40/200-1050/64 NF C ADV3	350 LV	87500823	1	0	1	1	0
	350 HV		2	1	1	2	1
	500 LV		1	0	1	1	0
	500 HV		2	1	1	2	1
	550 LV		1	0	1	1	0
	550 HV		2	1	1	2	1
	650 LV		1	0	1	1	0
	650 HV		2	1	1	2	1
	700 LV		1	0	1	1	0
	700 HV		2	1	1	2	1
	1,050 LV		1	0	1	1	0
	1,050 HV		0	0	1	0	0
LCO 60/200-1050/100 o4a NF C EXC3	200 HV	87500710	3-4	2	2	3-4	2
LCO 60/200-1050/100 NF C ADV3	350 LV	87500824	2	1	1	2	1
	350 HV		3-4	2	2	3-4	2
	500 LV		2	1	1	2	1
	500 HV		3-4	2	2	3-4	2
	550 LV		2	1	1	2	1
	550 HV		3-4	2	2	0	2
	650 LV		2	1	1	2	1
	650 HV		3	0	2	3	0
	700 LV		2	1	1	2	1
	700 HV		3	0	2	3	0
	1,050 LV		2	1	1	2	1
Driver essence2 (SNC2)							
LCO 75/500/150 fixC L SNC2	500	28002297	3-6	2-3	2-4	3-6	2-3
LCO 75/700/108 fixC L SNC2	700	28002298	2-4	1-2	1-2	2-4	1-2
LCO 75/1050/72 fixC L SNC2	1,050	28002299	1-2	1	1	0	0
LCO 100/500/200 fixC L SNC2	500	28002301	3-8	2-4	2-5	3-8	2-4
LCO 100/700/143 fixC L SNC2	700	28002302	2-5	1-2	2-3	2-5	1-2
LCO 100/1050/95 fixC L SNC2	1,050	28002303	2-3	1	1-2	0	0
LCO 150/500/300 fixC L SNC2	500	28002305	5-12	3-6	3-8	5-12	3-6
LCO 150/700/214 fixC L SNC2	700	28002306	3-8	2-4	2-5	3-8	2-4
LCO 150/1050/142 fixC L SNC2	1,050	28002307	2-5	1-2	2-3	0	0
LCO 200/500/400 fixC L SNC2	500	28002309	7-16	4-8	5-10	7-16	4-8
LCO 200/700/285 fixC L SNC2	700	28002310	5-11	3-5	3-7	5-11	3-5
LCO 200/1050/190 fixC L SNC2	1,050	28002311	3-7	2-3	2-5	0	0

Specification: Number of possible modules per LED driver

Modules RLE excite (EXC) / advanced (ADV) series

The corresponding drivers (number of possible LED modules connected in series per LED driver)

Driver			RLE 2x4 2000lm HP EXC2 OTD	RLE 2x8 4000lm HP EXC2 OTD	RLE 2x6 3000lm HP EXC2 OTD	RLE 4x8 2000lm MP ADV2 OTD	RLE 4x16 4000lm MP ADV2 OTD	
Designation	Output current (mA)	Order No.						
LCO 135/200-1050/220 o4a NF C EXC3 LCO 135/200-1050/220 NF C ADV3	200	HV	87500716 87500826	7-9	4	5-6	7-9	4
	350	LV		4-5	2	3	4-5	2
		HV		5-9	3-4	4-6	5-9	3-4
	500	LV		3-5	2	2-3	3-5	2
		HV		5-9	3-4	4-6	5-8	3-4
	550	LV		3-5	2	2-3	3-5	2
		HV		5-9	3-4	4-6	5-8	3-4
	650	LV		3-5	2	2-3	3-5	2
		HV		5-8	3-4	4-5	5-8	3-4
	700	LV		3-5	2	2-3	3-5	2
		HV		5-7	3	4-5	5-7	3
	1.050	LV		3-5	2	2-3	3-4	2
HV		5	0	0	0	0		
LCO 200/200-1050/355 o4a NF C EXC3 LCO 200/200-1050/355 NF C ADV3	200	LV	87500710 87500824	8	4	0	8-9	4
	350	HV		9-15	5-7	6-10	9-15	5-7
		LV		5-8	3-4	4-5	5-8	3-4
	500	HV		9-14	5-7	6-9	8-14	4-7
		LV		5-8	3-4	4-5	5-8	3-4
	550	HV		8-14	4-7	6-9	8-14	4-7
		LV		5-8	3-4	4-5	5-8	3-4
	650	HV		8-14	4-7	6-9	8-14	4-7
		LV		5-8	3-4	4-5	5-8	3-4
	700	HV		8-12	4-6	6-8	8-12	4-6
		LV		5-8	3-4	4-5	5-8	3-4
	1.050	LV		8-11	4-5	6-7	8-11	4-5
1.050	LV	5-7	3	4-5	5-7	3		
Driver essence2								
LCO 75/500/150 fixC L SNC2	500	28002297	3-6	2-3	2-4	3-6	2-3	
LCO 75/700/108 fixC L SNC2	700	28002298	2-4	1-2	1-2	2-4	1-2	
LCO 75/1050/72 fixC L SNC2	1.050	28002299	1-2	1	1	0	0	
LCO 100/500/200 fixC L SNC2	500	28002301	3-8	2-4	2-5	3-8	2-4	
LCO 100/700/143 fixC L SNC2	700	28002302	2-5	1-2	2-3	2-5	1-2	
LCO 100/1050/95 fixC L SNC2	1.050	28002303	2-3	1	1-2	0	0	
LCO 150/500/300 fixC L SNC2	500	28002305	5-12	3-6	3-8	5-12	3-6	
LCO 150/700/214 fixC L SNC2	700	28002306	3-8	2-4	2-5	3-8	2-4	
LCO 150/1050/142 fixC L SNC2	1.050	28002307	2-5	1-2	2-3	0	0	
LCO 200/500/400 fixC L SNC2	500	28002309	7-16	4-8	5-10	7-16	4-8	
LCO 200/700/285 fixC L SNC2	700	28002310	5-11	3-5	3-7	5-11	3-5	
LCO 200/1050/190 fixC L SNC2	1.050	28002311	3-7	2-3	2-5	0	0	

Specification: Number of possible modules per LED driver; parallel or mixed circuits can be found in the Setbuilder

Reference project

Street lighting with Partner SECE, Spain



The Spanish towns of Lloret de Mar, Tarragona and Granollers commissioned outdoor lighting that could adapt to the widely varying visitor frequency, be controlled centrally and consume as little energy as possible. The possibility of central control and the existing lighting infrastructure were to be maintained. Dimmable outdoor premium drivers with universal one4all interface were used as the control gear for the new LED luminaires. The illuminance can be adjusted via the GridControl function. With the U6Me2 protocol, signals can be transmitted directly via the mains line, which enables a particularly convenient luminaire configuration at the control cabinet.

Requirements:

- More efficient lighting while maintaining the existing lighting infrastructure
- Improved comfort and flexibility of the existing control options
- Adaptable illuminance with regard to seasons and number of visitors

Solution:

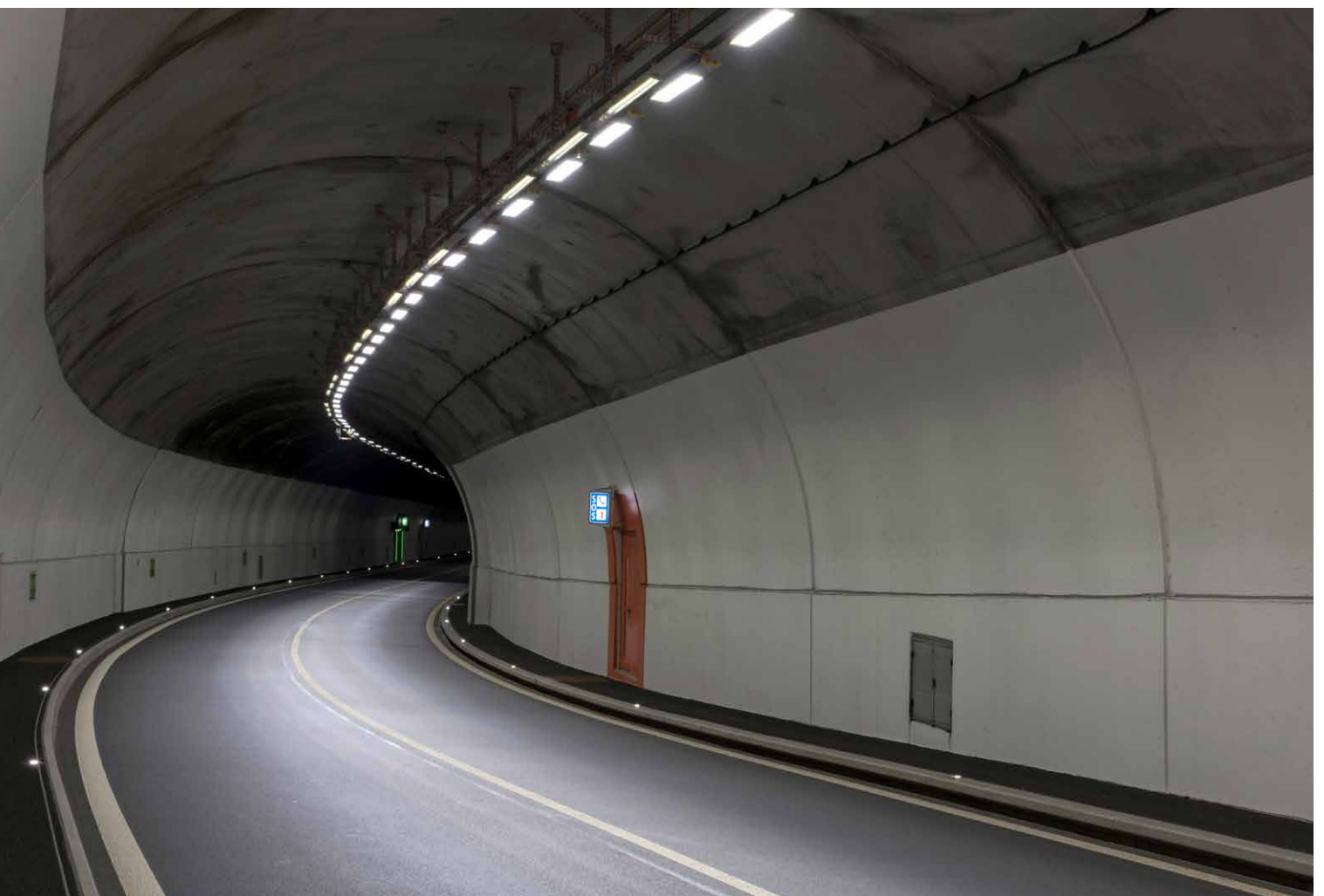
- Premium dimmable drivers equipped with a universal one4all interface as control devices for the new LED lamps
- Centralised Telecontrol-system via GridControl (U6Me2) Technology: SECE, a Spanish Utility company developed a remote control system that brings smart and connected lighting functionality based on U6Me2
- chronoSTEP function to adapt dimming level automatically or manually to dusk and dawn

Reference projects

Schallbergtunnel, Switzerland

Following the general refurbishment, the 500 m long Schallbergtunnel is shining in a new light. The luminaires were developed by Rigamonti, the Swiss specialist in tunnel lighting, and executed with LED components by Tridonic. The result is an efficient lighting system with high visual comfort, which has a positive impact on the perception of safety.

New LED modules, based on the highly efficient RLE series, are used in the adaptation luminaires of the entrance and exit areas.



The Light

Discover the hidden lighting asset.

Tridonic is a world-leading supplier of lighting technology, supporting its customers with intelligent hardware and software and offering the highest level of quality, reliability and energy savings. As a global driver of innovation in the field of lighting-based network technology, Tridonic develops scalable, future-oriented solutions that enable new business models for lighting manufacturers, building managers, systems integrators, planners and many other types of customers.

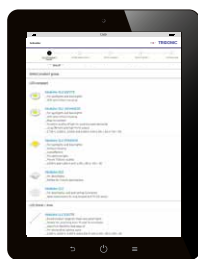
Supporting information and instruments:



LED solutions
product catalogue



Data sheets at
www.tridonic.com,
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Setbuilder V2.0
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Software
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