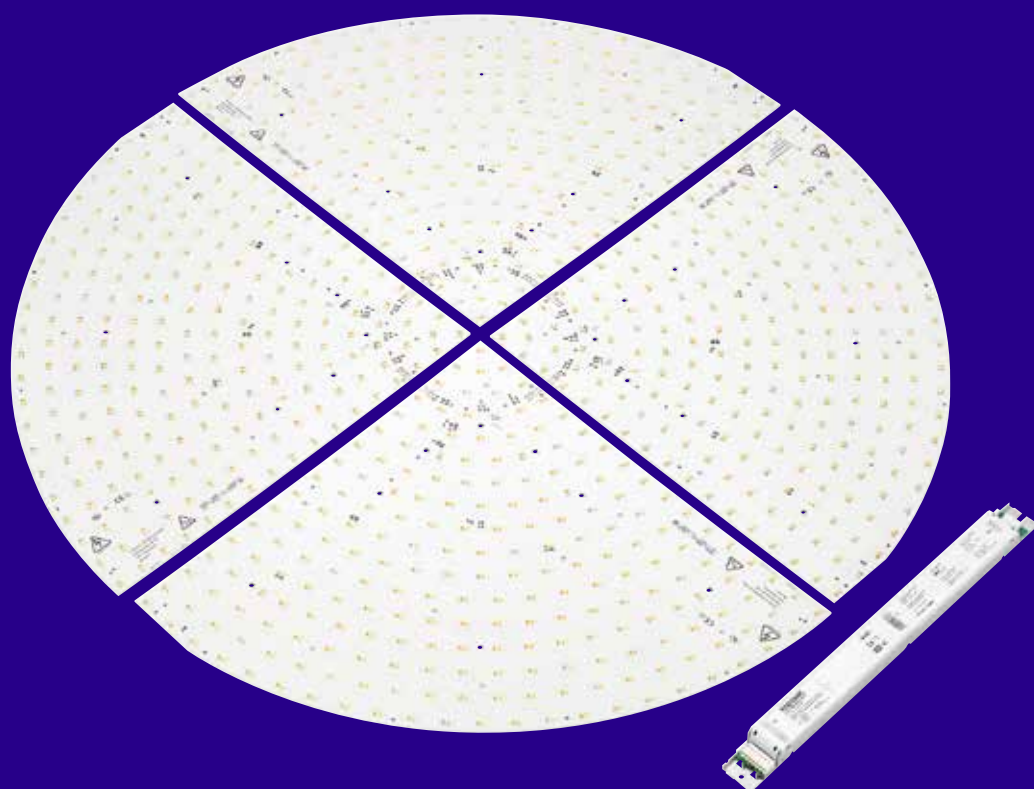


LED module and LED module integrated

## **Module CLE**

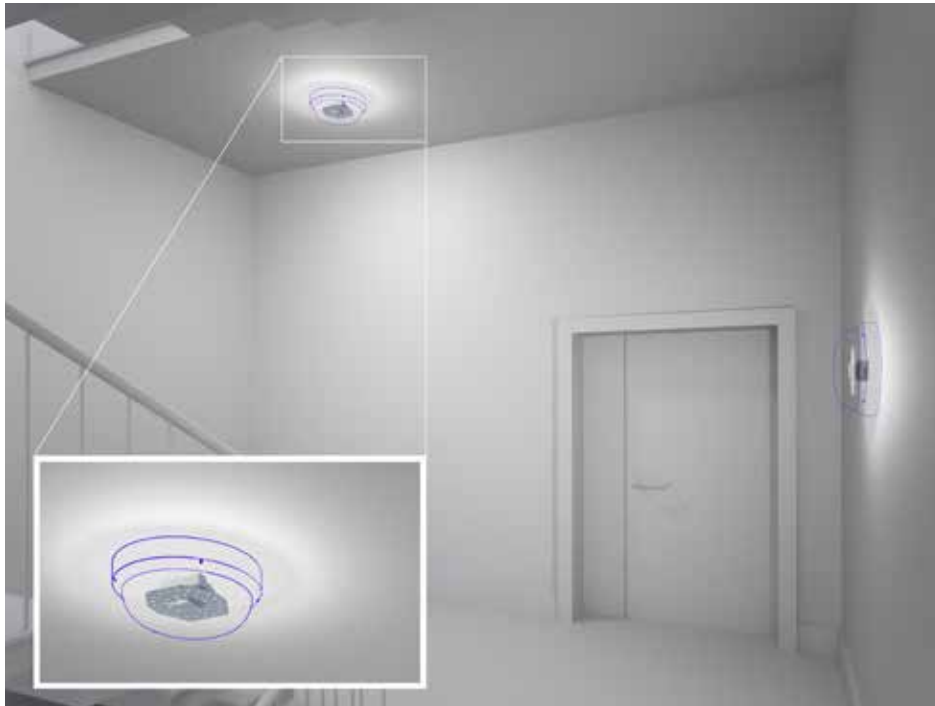
for wall and ceiling luminaires




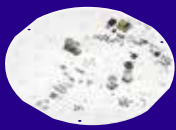
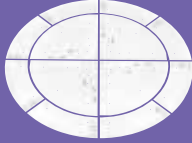
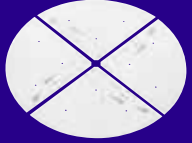

**TRIDONIC**

# Applications and Product Portfolio

## System solution for wall and ceiling luminaires



### Product Portfolio – Overview

	Module CLE		Engine CLE integrated	Module CLE Quadrant	Module CLE Shallow	Engine CLE PREMIUM
						
	on page 3		on page 6	on page 8	on page 9	on page 10
CLE Type	CLE 50-315 mm	CLE 160-315 mm	CLE AC 160 mm-220 mm	CLE Quadrant	CLE Shallow	CLE PREMIUM
Application	Diffuse Downlights	Decorative wall luminaires	Diffuse Downlights, Decorative wall luminaires	Pendant and surface-mounted ceiling luminaires	Extra flat pendant and surface-mounted ceiling luminaires	Decorative Pendant and surface-mounted ceiling luminaires
Mounting	>50 mm	>50 mm	>50 mm	>50 mm	30 mm	>50 mm
Variants	50, 80, 120, 160, 315 mm	160, 190, 220, 315 mm	160 mm, 220 mm	261, 401, 541 mm	160, 370, 522, 802, 1.082 mm	261, 401, 541 mm
Focus	Cost	Cost	Cost	Design/Trend	Design/Trend	Design/Trend

**Module CLE provides perfectly homogeneous illumination in round and square luminaires with no shadow effects. As an efficient, high-quality and user-friendly system solution, CLE is the ideal replacement for ring-shaped and TC DD fluorescent lamps.**

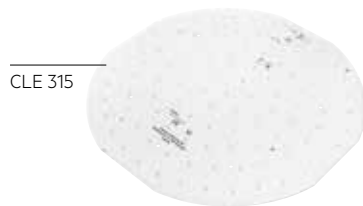
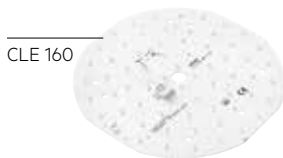
In combination with the EM powerLED emergency lighting system, Module CLE performs the functions of an emergency luminaire. In addition, thanks to SWITCH Sensor HF a simple corridorFUNCTION (CF) is available for stepless dimming.

# For diffused LED downlights and wall luminaires



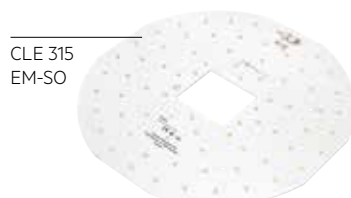
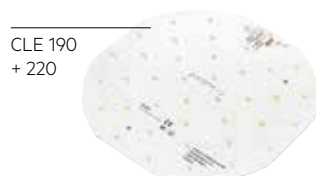
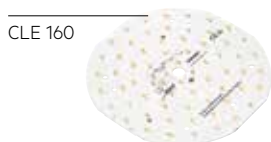
## For diffused LED downlights

- Marginal applications (e.g. stairwells, corridors)
- Different sizes: 50mm, 80 mm, 120 mm, 160mm and 315 mm
- Ideal for creating simple luminaire designs
- Easy to adapt to the existing luminaire structure
- The luminaire body can act as a heat sink
- Replacement for compact fluorescent lamps



## For decorative wall luminaires

- Design for decorative wall luminaires
- Different sizes: 160 mm, 190 mm, 220 mm and 315 mm
- Perfectly homogenous illumination with no shadow effects
- Thanks to high energy efficiency Engine CLE needs only 10 W, whereas a DD lamp for example requires 28 W.
- As a replacement for T5 circular fluorescent lamps it needs only 30 W compared with 60 W



# essence series (SNC)

For diffused LED downlights

## Module CLE SNC

Type	Colour-temperature (K)	Mac Adam	Typ. luminous flux <sup>0</sup> Operation mode tp = 65°C (lm)	Typ. power draw <sup>0</sup> Operation mode tp = 65°C (W)	Module efficacy tp = 65°C (lm/W)	Size (mm)	Order No.
CLE G1 50mm 1000lm 830 SNC	3,000	SDCM 4	1,000	7.8	up to 130	Ø 50	89602904
CLE G1 50mm 1000lm 840 SNC	4,000	SDCM 4	1,070	7.8	up to 138	Ø 50	89602905
CLE G1 80mm 2000lm 830 SNC	3,000	SDCM 4	2,000	15.5	up to 130	Ø 80	89602906
CLE G1 80mm 2000lm 840 SNC	4,000	SDCM 4	2,140	15.5	up to 138	Ø 80	89602907
CLE G1 120mm 2500lm 830 SNC	3,000	SDCM 4	2,690	20.9	up to 128	Ø 120	89602908
CLE G1 120mm 2500lm 840 SNC	4,000	SDCM 4	2,860	20.9	up to 137	Ø 120	89602909
CLE G1 160mm 3000lm 830 SNC	3,000	SDCM 4	3,150	24.3	up to 130	Ø 160	89602910
CLE G1 160mm 3000lm 840 SNC	4,000	SDCM 4	3,360	24.3	up to 138	Ø 160	89602911
CLE G1 315mm 4000lm 830 SNC	3,000	SDCM 4	4,120	30.7	up to 134	Ø 315	89602912
CLE G1 315mm 4000lm 840 SNC	4,000	SDCM 4	4,390	30.7	up to 143	Ø 315	89602913

<sup>0</sup> Tolerance range for optical and electrical data ±10 %.

## Matching Driver

Module	Order No.	CLE G1 50mm 1000lm 8x0 SNC	CLE G1 80mm 2000lm 8x0 SNC	CLE G1 120mm 2500lm 8x0 SNC	CLE G1 160mm 3000lm 8x0 SNC	CLE G1 315mm 4000lm 8x0 SNC
LC 10W 350mA fixC C SNC	87500577	■				
LC 10W 350mA fixC SR SNC	87500581	■				
LC 20W 700mA fixC C SNC	87500567		■			
LC 20W 700mA fixC SR SNC	87500574		■			
LC 25W 600mA fixC C SNC	87500575		■			
LC 25W 600mA fixC SC SNC	87500459		■			
LC 30W 700mA fixC C SNC	87500559				■	
LC 30W 700mA fixC SR SNC	87500546				■	
LC 30W 700mA fixC SC SNC	87500460				■	
LC 40W 900mA fixC C SNC	87500560					■
LC 40W 900mA fixC SC SNC	87500462					■
LC 40W 900mA fixC SR SNC	87500551					■
LC 15W 350mA fixC SC ADV	87500448	■				
LC 20W 350/500/700mA flexC SR ADV	87500621		■			
LC 25W 600mA fixC C ADV	87500345		■	■		
LC 25W 600mA fixC SC ADV	87500341		■	■		
LC 30W 700mA fixC C ADV	87500346		■		■	
LC 30W 700mA fixC SC ADV	87500342		■		■	
LC 35W 700mA fixC SC ADV	87500450				■	
LC 35W 700/800/1050mA flexC SR ADV	87500623				■	
LC 40W 900mA fixC C ADV	87500348					■
LC 40W 900mA fixC SC ADV	87500344					■
LC 42W 700/900/1050 flexC SR ADV	87500624					■
LCA 15W 180-350mA flexC PH-C SR ADV	87500627	■				
LCBI 10W 350mA phase-cut/1-10V SR	87500274	■				
LCBI 10W 350mA phase-cut/1-10V lp	87500283	■				
LCBI 15W 350mA BASIC PH-CUT SR ADV	87500386	■				
LCBI 15W 350mA BASIC lp	89800255	■				
LCBI 25W 700mA BASIC phase-cut SR	89800307		■			
LCA 21W 300-500mA flexC PH-C SR ADV	87500603			■		
LCA 44W 700-1050mA flexC PH-C SR ADV	87500605				■	■

# advanced series (ADV)

## For decorative wall luminaires

### Module CLE ADV

Type	Colour-temperature (K)	Mac Adam	Typ. luminous flux <sup>9)</sup> Operation mode tp = 65°C (lm)		Typ. power draw <sup>9)</sup> tp = 65°C (W)		Module efficacy tp = 65°C (lm/W)	Size (mm)	Order No.
			HE	HO	HE	HO			
CLE G3 160mm 3000lm 827 ADV	2,700	SDCM 3	1,980	2,750	12.6	18.7	up to 157	Ø 160	89603022
CLE G3 160mm 3000lm 830 ADV	3,000	SDCM 3	1,980	2,750	12.6	18.7	up to 157	Ø 160	89602856
CLE G3 160mm 3000lm 840 ADV	4,000	SDCM 3	2,190	3,040	12.6	18.7	up to 173	Ø 160	89602857
CLE G3 190mm 1500lm 827 ADV EM	2,700	SDCM 3	1,360	1,860	8.9	13.3	bis zu 152	Ø 190	89603023
CLE G3 190mm 1500lm 830 ADV EM	3,000	SDCM 3	1,360	2,000	8.9	13.3	up to 152	Ø 190	89602858
CLE G3 190mm 1500lm 840 ADV EM	4,000	SDCM 3	1,360	2,000	8.9	13.3	up to 152	Ø 190	89602859
CLE G3 190mm 1500lm 830 ADV EM SO	3,000	SDCM 3	1,510	2,060	8.9	13.3	up to 169	Ø 190	89602860
CLE G3 190mm 1500lm 840 ADV EM SO	4,000	SDCM 3	1,510	2,060	8.9	13.3	up to 169	Ø 190	89602861
CLE G3 220mm 1500lm 827 ADV EM	2,700	SDCM 3	1,360	1,860	8.9	13.3	up to 152	Ø 220	89603024
CLE G3 220mm 1500lm 830 ADV EM	3,000	SDCM 3	1,360	2,000	8.9	13.3	up to 152	Ø 220	89602862
CLE G3 220mm 1500lm 840 ADV EM	4,000	SDCM 3	1,360	2,000	8.9	13.3	up to 152	Ø 220	89602863
CLE G3 220mm 1500lm 830 ADV EM SO	3,000	SDCM 3	1,510	2,060	8.9	13.3	up to 169	Ø 220	89602864
CLE G3 220mm 1500lm 840 ADV EM SO	4,000	SDCM 3	1,510	2,060	8.9	13.3	up to 169	Ø 220	89602865
CLE G3 315mm 4000lm 830 ADV EM	3,000	SDCM 3	2,600	3,720	17.0	26.7	up to 153	Ø 315	89602866
CLE G3 315mm 4000lm 840 ADV EM	4,000	SDCM 3	2,870	4,100	17.0	26.7	up to 169	Ø 315	89602867
CLE G3 315mm 4000lm 830 ADV EM SO	3,000	SDCM 3	2,600	3,720	17.0	26.7	up to 153	Ø 315	89602868
CLE G3 315mm 4000lm 840 ADV EM SO	4,000	SDCM 3	2,870	4,100	17.0	26.7	up to 169	Ø 315	89602869

<sup>9)</sup> Tolerance range for optical and electrical data ±10% HE=High Efficiency, HO=High Output

### Matching Driver

Module	Order No.	CLE 160-HE	CLE 160-HO	CLE 190/220-HE	CLE 190/220-HO	CLE 315-HE	CLE 315-HO
Driver SNC	LC 15W 350mA fixC C SNC	87500565	■				
	LC 20W 500mA fixC C SNC	87500566		■			
	LC 20W 500mA fixC SR SNC	87500573		■			
	LC 10W 350mA fixC C SNC	87500577		■			
	LC 10W 350mA fixC SR SNC	87500581		■			
Driver ADV	LC 15W 350mA fixC SC ADV	87500448	■	■			
	LC 20W 500mA fixC SC ADV	87500449		■	■		
	LC 25W 600mA fixC C ADV	87500345				■	
	LC 25W 600mA fixC SC ADV	87500341				■	
	LC 40W 900mA fixC C ADV	87500348					■
LC 40W 900mA fixC SC ADV	87500344					■	
Driver EXC	LC 17W 250-700mA flexC C EXC	28000693	■	■			
	LC 17W 250-700mA flexC SC EXC	28000705	■	■			
	LCBI 15W 350mA BASIC Ip	89800255	■				
	LCBI 15W 500mA BASIC Ip	89800256				■	
	LC 25W 350-1050mA flexC C EXC	28000694		■		■	
LC 25W 350-1050mA flexC SC EXC	28000706		■		■		
LC 45W 500-1400mA flexC C EXC	28000695					■	
Driver ADV-Phase-cut	LCBI 15W 350mA BASIC PH-CUT SR ADV	87500386	■				
	LCBI 15W 500mA BASIC PH-CUT SR ADV	87500320			■		
	LCBI 25W 700mA BASIC phase-cut SR	89800307				■	
	LCBI 15W 180-350mA flexC PH-C SR ADV	87500627	■				
	LCA 21W 350-500mA flexC PH-C SR ADV	87500603		■			
	LCBI 10W 350mA phase-cut/1-10 V SR	87500274			■		
	LCBI 10W 350mA phase-cut/1-10V Ip	87500283			■		
LCBI 15W 180-350mA flexC PH-C SR ADV	87500627				■		

Module CLE AC integrated

## advanced series (ADV)

### CLE Integrated – Compact overall package

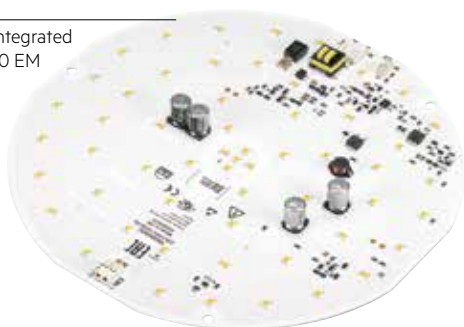
CLE Integrated  
G2 220



CLE Integrated  
160



CLE Integrated  
G2 220 EM



#### At a glance: Engine CLE Integrated

- Module with integrated electronics
- Economic single component solution
- Phase-Cut dimmable (CLE AC G2) or On/Off

#### At a glance: Engine CLE integrated EM

- Separate input for simple CORRIDOR-FUNCTION (simple CF)
- Switching between 100% and 10% light in combination with motion sensor
- Emergency lighting circuit with special emergency lighting LED, controllable with EM powerLED

**As simple and extremely cost-effective single-component solutions, the integrated engine CLE LED systems offer the benefit of flat design. A separate LED Driver is superfluous. The LED engine can be connected directly to 230 V.**

With the latest generation of module CLE integrated G2, Tridonic presents the first dimmable single-component solution, further increasing system efficiency. The portfolio has been expanded with the addition of the large 220 mm version. An additional heat sink is not required thanks to integrated self-cooling.

#### Your benefits

- Direct connection to the power circuit
- The basis for particular low-profile luminaire design
- Quick and simple installation by attaching the module to the gear tray
- Protected against accidental contact: Accessory: cover for contact protection
- Complete solution from a single source: Standard dimmable (CLE AC G2) or on/off, emergency lighting and simple CORRIDOR FUNCTION
- Self-Cooling (CLE AC G2)
- Simple upgrade from existing luminaires with DD compact fluorescent lamps and circular T5 lamps to LEDs



Module CLE AC integrated

# advanced series (ADV)

## CLE Integrated

### Engine CLE Integrated ADV

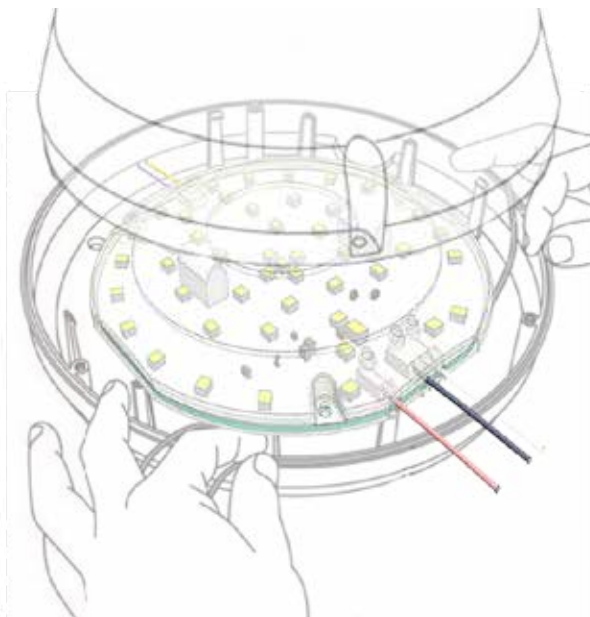
Module	Colour-temperature (K)	Mac Adam	Typ. luminous flux (lm)	CRI	Typ. power draw (W)	System-efficiency (lm/W)	Order No.
CLE-AC-160-1500-830-CLA	3,000	SDCM 3	1,450	> 80	14.5	100	89800421
CLE-AC-160-1500-840-CLA	4,000	SDCM 3	120	> 80	14.5	100	89800422
CLE-AC-160-1500-830-CLA EM-CF	3,000	SDCM 3	120	> 80	-	-	89800423
CLE-AC-160-1500-840-CLA EM-CF	4,000	SDCM 3	1,450	> 80	-	-	89800424
CLE AC G2 220mm 2500lm 830 ADV	3,000	SDCM 3	2,500	> 80	20.8	120	89800515
CLE AC G2 220mm 2500lm 840 ADV	4,000	SDCM 3	2,500	> 80	20.8	120	89800516
CLE AC G2 220mm 2500lm 830 ADV EM-CF	3,000	SDCM 3	2,500	> 80	20.8	120	89800517
CLE AC G2 220mm 2500lm 840 ADV EM-CF	4,000	SDCM 3	2,500	> 80	20.8	120	89800518



#### Contact protection as appropriate accessory

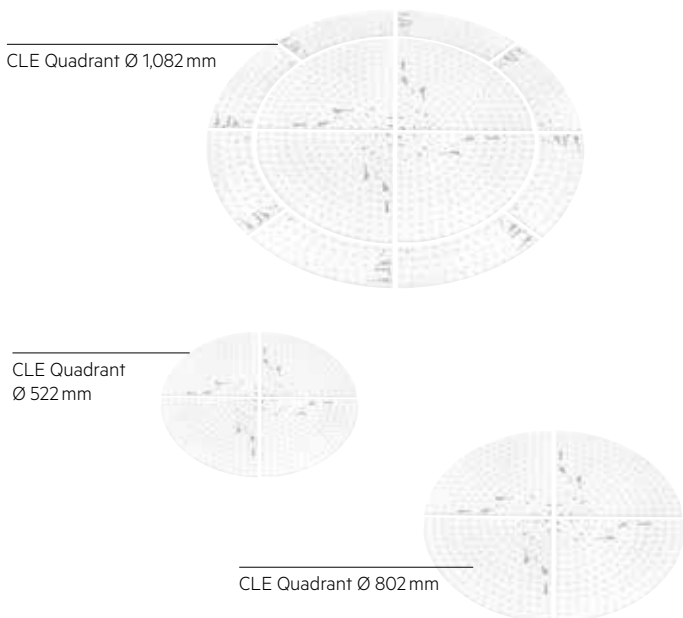
- Safety cover plate to the board that needs to protect the installer from any high voltage
- Fixing of the board and touch cover to the gear tray with non-removal fasteners to lock/unlock wires
- Access via three cut outs (wholes) to the terminals with safety cover on

Product name	Order No.
ACC COVER 160mm TRANSP	28001033
ACC COVER 220mm TRANSP	28001048



# advanced series (ADV)

## CLE Quadrant G3 – Efficiency and performance combined



### At a glance: Module CLE Quadrant ADV

- Ideal for round shaped and flat ceiling and pendant luminaires
- The solution to realise XXL luminaires Ø 1,082 mm
- High module efficacy up to 201lm/W
- High Output and High Efficiency Mode enables more flexibility on luminaire design
- Narrow diffuser distances possible
- Small colour tolerance MacAdam 3
- Lifetime 50,000 h and 5-year guarantee

Type	Colour-temperature (K)	Mac Adam	Typ. luminous flux <sup>1)</sup> tp = 45°C (lm)		CRI	Typ. power draw <sup>1)</sup> tp = 45°C (W)	Module efficacy tp = 45°C (lm/W)	Order No.
			HE	HO				
CLE Quadrant G3 261mm 1200lm 830 ADV	3,000	SDCM 3	1,250	1,890	> 80	6.7	188	89603016
CLE Quadrant G3 261mm 1200lm 840 ADV	4,000	SDCM 3	1,320	1,990	> 80	6.7	198	89603017
CLE Quadrant G3 401mm 2500lm 830 ADV	3,000	SDCM 3	2,520	3,930	> 80	13.2	190	89603018
CLE Quadrant G3 401mm 2500lm 840 ADV	4,000	SDCM 3	2,660	4,150	> 80	13.2	201	89603019
CLE Quadrant G3 541mm 1000lm 830 ADV	3,000	SDCM 3	1,010	1,480	> 80	5.4	188	89603020
CLE Quadrant G3 541mm 1000lm 840 ADV	4,000	SDCM 3	1,070	1,560	> 80	5.4	199	89603021

<sup>1)</sup>Tolerance range for optical and electrical data: ±10 %. Data applies for four quadrants. HE=High Efficiency, HO=High Output

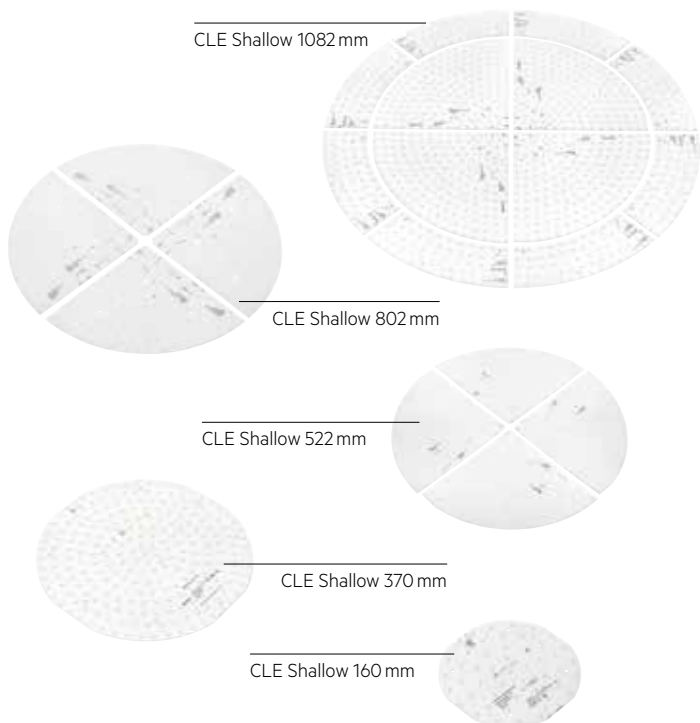
**Module CLE Quadrant stands for maximum flexibility in lighting technology. Extremely efficient and at the same time high luminous fluxes can be generated in a single module.**

In its third generation, the CLE Quadrant ADVANCED for round wall and ceiling luminaires offers an impressive increase in efficiency of up to 198 lumens per watt. The choice between High Output and High Efficiency mode allows for efficient operation or maximum luminous fluxes, depending on requirements. Thanks to the various module sizes, luminaires can largely be designed without restriction.



# excite series (EXC)

## CLE Shallow – More design variety thanks to small mounting depths



### At a glance: Engine CLE Shallow EXC

- Ideal for round and extra low-profile ceiling and pendant luminaires thanks to its small mounting depth of 30 mm
- Robust module, high homogeneity and durability
- CCT 3,000K/4,000K and CRI>90
- Compatible with ADV, EXC and PRE drivers in different modes (HE, NM, HO) enables more flexibility in luminaire design
- Lifetime 50,000 h and 5-year guarantee

NEW	Type	Colour-temperature (K)	Mac Adam	Typ. luminous flux <sup>0</sup> tp = 65°C (lm) NM <sup>2</sup>	CRI	Typ. power draw <sup>0</sup> (W)	Module efficacy tp = 65°C (lm/W)	Order No.
	CLE Shallow G2 160mm 750lm 930 EXC	3,000	SDCM 3	1,630	> 90	10.3	158	89603353
	CLE Shallow G2 160mm 750lm 940 EXC	4,000	SDCM 3	1,700	> 90	10.3	165	89603354
	CLE Shallow G2 370mm 2900lm 930 EXC	3,000	SDCM 3	3,880	> 90	24.0	161	89603355
	CLE Shallow G2 370mm 2900lm 940 EXC	4,000	SDCM 3	4,050	> 90	24.0	168	89603356
	CLE Shallow G2 522mm 1750lm 930 EXC	3,000	SDCM 3	2,210	> 90	13.8	160	89603357
	CLE Shallow G2 522mm 1750lm 940 EXC	4,000	SDCM 3	2,310	> 90	13.8	167	89603358
	CLE Shallow G2 802mm 3800lm 930 EXC	3,000	SDCM 3	4,980	> 90	31.0	161	89603359
	CLE Shallow G2 802mm 3800lm 940 EXC	4,000	SDCM 3	5,200	> 90	31.0	168	89603360
	CLE Shallow G2 1082mm 1500lm 930 EXC	3,000	SDCM 3	2,120	> 90	13.3	160	89603361
	CLE Shallow G2 1082mm 1500lm 940 EXC	4,000	SDCM 3	2,210	> 90	13.3	167	89603362

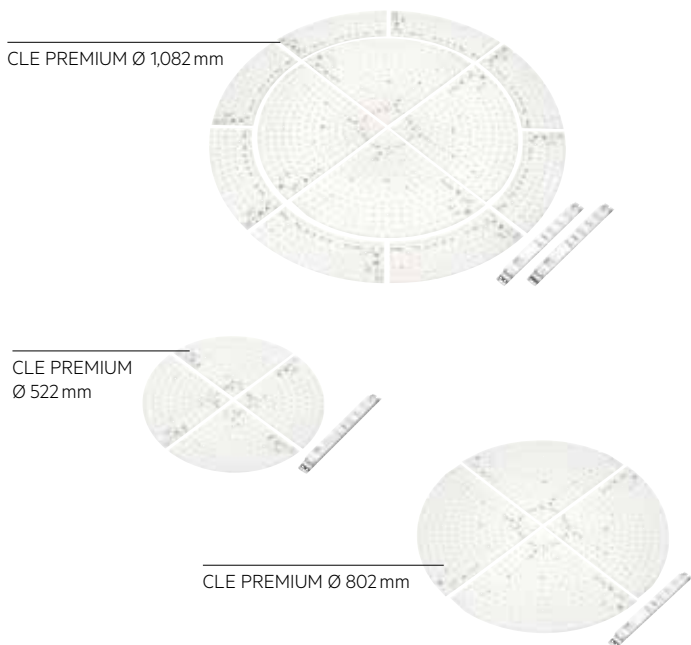
<sup>0</sup>Tolerance range for optical and electrical data: ±10 %, NM=Nominal

**The second generation of CLE shallow EXC modules – now also available with CRI 90 – allows round luminaires to feature a simple and extremely flat design.**

With a mounting depth of only 30 mm the CLE Shallow will enhance any slim luminaire design and become established as the ideal module for round extra low-profile pendant and ceiling mounted luminaires. In order to achieve excellent homogeneity, even with simple covers, Tridonic has optimised both the arrangement of LED chips and the light technology they use. In order to maintain this homogeneity even for very large sizes, additional drill holes have been integrated for mounting alongside ZHAGA-compliant drill holes.

# premium series (PRE)

## Dynamic Light with Tunable White



### At a glance: Engine CLE PRE

- Circular Tunable White system with adjustable colour temperature from 3,000 to 6,000 K at constant luminous flux
- Sets calibrated at the factory to ensure high quality of light and colour consistency (SDCM 3) across the entire adjustable range
- Dimming range 10–100% without change of colour temperature
- Low-profile LED Driver with digital interface (DALI Device Type 8, DSI, switchDIM, colourTEMPERATURE)
- Self cooling (no additional heat sink required)
- Long life-time of 50,000 h and 5-year system guarantee

Type	Colour-temperature (K)	Typ. luminous flux <sup>1)</sup> (lm)	CRI	Mac Adam	Typ. power draw <sup>1)</sup> (W)	System efficacy (lm/W)	Size per module (mm)	Order No.
TW CLE G1 261mm 4x1150lm 830-860 PRE KIT (1 LED-Driver + 4 LED-Module)	3.000–6.000 Tunable White	4.650	> 80	SDCM 3	28,4	up to 160	261 x 261	89602612
TW CLE G1 401mm 4x2450lm 830-860 PRE KIT (LED-Driver + 4 LED-Module)	3.000–6.000 Tunable White	9.610	> 80	SDCM 3	58	up to 162	401 x 401	89602613
TW CLE G1 541mm 8x900lm 830-860 PRE KIT (1 LED-Driver + 8 LED-Module)	3.000–6.000 Tunable White	7.410	> 80	SDCM 3	43,5	up to 166	541 x 35	89602614

<sup>1)</sup>Toleranzbereich elektrische Daten: ±5%. Toleranzbereich lichttechnische Daten: ±15%

**Tunable White systems of Tridonic gives you the option of setting the colour temperature of white light to any value between 3,000 K and 6,000 K. This function is essential for contemporary biologically effective lighting solutions which aim to simulate natural light indoors. The light in daylight quality promotes a feeling of well-being and productivity for people who have to spend many hours a day in artificial light. This explains the high importance attached to lighting concepts involving Tunable White and optimum light quality in offices, education establishments and health care facilities.**

The Tunable White Kit for round shaped ceiling and pendant luminaires is precalibrated at the factory and offered in sets comprising a converter and 3 to 5 LED modules. Constant luminous flux over the entire adjustable colour temperature range is particularly important for professional room planning. Engine Tunable White opens up a really interesting area of application, not least thanks to its reproducible and consistent colour rendering.



# Support and advice

## From a single source



Engine DLE



Engine CLE



Engine CLE Integrated



Engine LLE-FLEX



Engine SLE



Engine EM ready2apply



Engine LLE



Engine QLE

We will help you to create lighting solutions that are unbeatable in terms of economy and functionality, according to the slogan:  
We devote all our energy to your light.

As an international company, Tridonic is represented worldwide by 30 branch offices and partners in 73 countries.



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Light you want to follow.

