



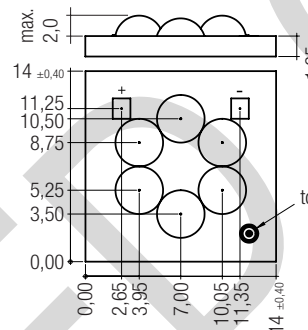
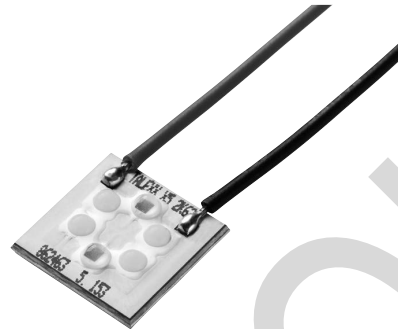
TALEX® module XED® DECO EOS

Product description

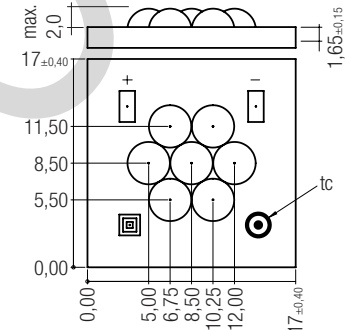
- For spotlights, downlights and wallwashers
(for decorative illumination)
- Red-white technology
- High module efficiency up to 90 lm/W at $t_c = 75^\circ\text{C}$
- High-flux LED module
- High colour rendering index $\text{CRI} \geq 90$
- Compact design 14 x 14 mm or 17 x 17 mm
- Excellent thermal management^①
- High-power LED module in chip-on-board technology (COB)
- Attached with optional mounting frame
- 10 minutes warm up time for steady colour value
- Built-in LED module
- Connection: Cable 200 mm
- Cooling required

Technical data

Beam characteristic	140°
Ambient temperature t_a	-25 ... +45 °C
Max. t_c point	75 °C
Weight	0.002 kg
Risk group (EN 62471:2008)	0



XED@-3 - 9 DECO



XED@-11 DECO

Ordering data

Type [®]	Article number	Colour temperature	Packaging carton	Weight per pcs.
XED@-3 DECO 14x14MM CABLES	89601504	3.000 K	25 Stk.	0.002 kg
XED@-4 DECO 14x14MM CABLES	89601505	3.000 K	25 Stk.	0.002 kg
XED@-5 DECO 14x14MM CABLES	89601507	3.000 K	25 Stk.	0.002 kg
XED@-6 DECO 14x14MM CABLES	89601508	3.000 K	25 Stk.	0.003 kg
XED@-7 DECO 14x14MM CABLES	89601509	3.000 K	25 Stk.	0.003 kg
XED@-8 DECO 14x14MM CABLES	89601510	3.000 K	25 Stk.	0.003 kg
XED@-9 DECO 14x14MM CABLES	89601511	3.000 K	25 Stk.	0.002 kg
XED@-11 DECO 17x17MM CABLES	89601512	3.000 K	25 Stk.	0.003 kg



Accessories mounting frame, page 2

Standards, page 4

Colour temperatures and tolerances, page 6

Specific technical data

Type [®]	Typ. luminous flux ^②	Max. forward current ^{③ ④ ⑤}	Typ. forward voltage ^②	Typ. power consumption module ^②	Efficacy module at $t_c = 75^\circ\text{C}$	Efficacy module at $t_c = 25^\circ\text{C}$	Colour rendering index CRI
XED@-3 DECO 14x14MM CABLES	255 lm	350 mA	11.4 V	4.0 W	64 lm/W	75 lm/W	90
XED@-4 DECO 14x14MM CABLES	330 lm	350 mA	13.3 V	4.7 W	71 lm/W	82 lm/W	90
XED@-5 DECO 14x14MM CABLES	400 lm	350 mA	16.8 V	5.9 W	68 lm/W	85 lm/W	90
XED@-6 DECO 14x14MM CABLES	460 lm	350 mA	16.8 V	5.9 W	78 lm/W	94 lm/W	90
XED@-7 DECO 14x14MM CABLES	525 lm	500 mA	13.6 V	6.8 W	77 lm/W	95 lm/W	90
XED@-8 DECO 14x14MM CABLES	615 lm	500 mA	16.6 V	8.3 W	74 lm/W	94 lm/W	90
XED@-9 DECO 14x14MM CABLES	920 lm	500 mA	17.5 V	8.8 W	81 lm/W	105 lm/W	90
XED@-11 DECO 17x17MM CABLES	1150 lm	500 mA	21.4 V	11.8 W	75 lm/W	99 lm/W	90

All values at $t_a = 25^\circ\text{C}$, $t_c = 75^\circ\text{C}$.

^① If the max. temperature limits are exceeded, the life of the system will be greatly reduced or the system may be damaged.
The temperature of the TALEX® module at the t_c -point is to be measured in the thermally stable state with a temperature sensor or or temperature-sensitive sticker as per EN 60598-1. For the precise position of the t_c point see the drawing above.

^② Tolerance range for optical and electrical data: $\pm 15\%$.

^③ Exceeding the max. operating current leads to an overload on the TALEX® module.
This may in turn result in a significant reduction in lifetime or even destruction of the TALEX® module.

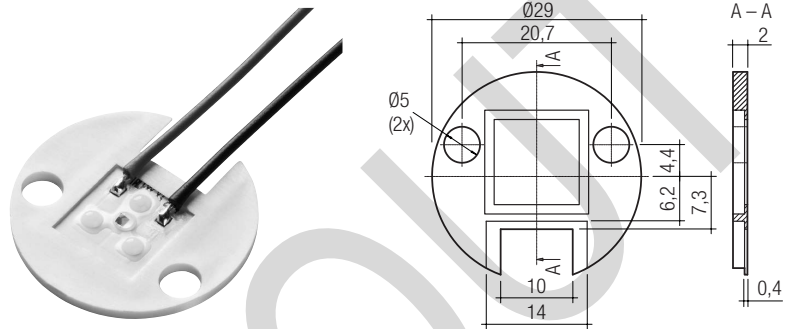
^④ Max. permissible surge current: 3 A, duration max. 10 μs .

^⑤ Tolerance range current: $\pm 5\%$.

[®] XED® is a registered trademark of Lexedis.

Product description

- Mounting frame for fastening the XED®-3 to XED®-9 modules on a heat sink
- Recess 14 x 14 mm
- Attached with M3 screws
- Integrated cable implementation



Ordering data

Type	Article number	Packaging bag
TALEXaccessories XED® Mounting Frame 14x14MM	06003312	100 pc./pcs.

Converter matrix – TALEX(module XED® DECO

IN-BUILT LCI – serial wiring							
Type	0030 K500 one4all	LCCI 016/0350 Q010		LCCI 016/0500 Q010			
Art. no.	86458561	86459213		86459214			
Assignable converter							
Type		Min.	Max.	Min.	Max.	Min.	Max.
XED®-3 DECO 14x14MM CABLE	89601504	–	–	1	3	–	–
XED®-4 DECO 14x14MM CABLE	89601505	–	–	1	3	–	–
XED®-5 DECO 14x14MM CABLE	89601507	–	–	1	2	–	–
XED®-6 DECO 14x14MM CABLE	89601508	–	–	1	2	–	–
XED®-7 DECO 14x14MM CABLE	89601509	2	2	–	–	1	2
XED®-8 DECO 14x14MM CABLE	89601510	2	2	–	–	1	1
XED®-9 DECO 14x14MM CABLE	89601511	2	2	–	–	1	1
XED®-11 DECO 17x17MM CABLE	89601512	2	2	–	–	1	1

Converter matrix – TALEX(module XED® DECO

REMOTE LCI – serial wiring											
Type	LCI 0005/0350	LCAI 015/0350		LCI 015/0350		LCCI 016/0350 B020		LCCI 016/0500 B020			
Art. no.	24166311	86458899		24166312		86459210		86459211			
Assignable converter											
Type		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
XED®-3 DECO 14x14MM CABLE	89601504	1	1	1	3	3	3	1	3	–	–
XED®-4 DECO 14x14MM CABLE	89601505	1	1	1	2	2	3	1	3	–	–
XED®-5 DECO 14x14MM CABLE	89601507	–	–	1	2	2	2	1	2	–	–
XED®-6 DECO 14x14MM CABLE	89601508	–	–	1	2	2	2	1	2	–	–
XED®-7 DECO 14x14MM CABLE	89601509	–	–	–	–	–	–	–	–	1	2
XED®-8 DECO 14x14MM CABLE	89601510	–	–	–	–	–	–	–	–	1	1
XED®-9 DECO 14x14MM CABLE	89601511	–	–	–	–	–	–	–	–	1	1
XED®-11 DECO 17x17MM CABLE	89601512	–	–	–	–	–	–	–	–	1	1

Converter matrix – TALEX(module XED® DECO

REMOTE LCI – parallel wiring						
Type		LCAI 030/0700		LCI 030/700 E020		
Art. no.		86458900		24166314		
Assignable converter						
Type		Min.	Max.	Min.	Max.	
XED®-3 DECO 14x14MM CABLE	89601504	2	6	6	6	
XED®-4 DECO 14x14MM CABLE	89601505	2	4	4	4	
XED®-5 DECO 14x14MM CABLE	89601507	2	4	4	4	
XED®-6 DECO 14x14MM CABLE	89601508	2	4	4	4	
XED®-7 DECO 14x14MM CABLE	89601509	–	–	–	–	
XED®-8 DECO 14x14MM CABLE	89601510	–	–	–	–	
XED®-9 DECO 14x14MM CABLE	89601511	–	–	–	–	
XED®-11 DECO 17x17MM CABLE	89601512	–	–	–	–	

Standards

EN 62031

EN 62471

Thermal design and heat sink

The rated life of TALEX® products depends to a large extent on the temperature. If the permissible temperature limits are exceeded, the life of the TALEX® module XED® DECO will be greatly reduced or the TALEX® module XED® DECO may be destroyed.

Therefore the TALEX® module XED® DECO needs to be mounted onto a heat sink.

Tridonic's excellent thermal design for the TALEX® module XED® DECO products provides the lowest thermal resistance and therefore allowing new compact designs without sacrificing quality, safety and life time.

tc point, ambient temperature and lifetime

The temperature at tc reference point is crucial for the light output and life time of a TALEX® product.

For TALEX® module XED® DECO a tc temperature of 75 °C has to be complied in order to achieve an optimum between heat sink requirements, light output and life time.

Compliance with the maximum permissible reference temperature at the tc point must be checked under operating conditions in a thermally stable state. The maximum value must be determined under worst-case conditions for the relevant application.

**Mounting instruction**

TALEX® module XED® DECO from Tridonic which have to be installed on a heat sink have to be connected with heat-conducting paste or heat conducting adhesive film and fixED® with M3 screws.

The fixing/cooling surface must be cleaned before installing the TALEX® modules to remove all dirt, dust and grease.

None of the components of the TALEX® module XED® DECO (substrate, LED, electronic components etc.) may be exposed to tensile or compressive stresses.

Max. torque for fixing: 0.5 Nm.

**EOS/ESD safety guidelines**

The device / module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken. No special measures need be taken for devices/modules with enclosed casings (contact with the pc board not possible), just normal installation practice. Please note the requirements set out in the document EOS / ESD guidelines (Guideline_EOS_ESD.pdf) at: <http://www.tridonic.com/com/en/technical-docs.asp>

Heat sink values**TALEX® module XED®-3 DECO**

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	12.0 K/W	55.6 cm ²
35 °C	75 °C	9.5 K/W	70.2 cm ²
45 °C	75 °C	7.0 K/W	95.2 cm ²

TALEX® module XED®-4 DECO

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	10.1 K/W	65.8 cm ²
35 °C	75 °C	8.0 K/W	83.2 cm ²
45 °C	75 °C	5.9 K/W	113.3 cm ²

TALEX® module XED®-5 DECO

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	8.0 K/W	83.6 cm ²
35 °C	75 °C	6.3 K/W	106.2 cm ²
45 °C	75 °C	4.6 K/W	145.4 cm ²

TALEX® module XED®-6 DECO

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	6.9 K/W	96.6 cm ²
35 °C	75 °C	5.4 K/W	123.5 cm ²
45 °C	75 °C	3.9 K/W	170.5 cm ²

TALEX® module XED®-7 DECO

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	7.7 K/W	95.7 cm ²
35 °C	75 °C	6.1 K/W	121.9 cm ²
45 °C	75 °C	4.4 K/W	167.6 cm ²

TALEX® module XED®-8 DECO

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	5.5 K/W	120.7 cm ²
35 °C	75 °C	4.3 K/W	154.3 cm ²
45 °C	75 °C	3.1 K/W	214.1 cm ²

TALEX® module XED®-9 DECO

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	6.2 K/W	107.5 cm ²
35 °C	75 °C	4.8 K/W	138.9 cm ²
45 °C	75 °C	3.5 K/W	190.5 cm ²

TALEX® module XED®-11 DECO

ta	tc	R _{th, hs-a}	heat sink surface
25 °C	75 °C	4.0 K/W	143.2 cm ²
35 °C	75 °C	3.1 K/W	179.7 cm ²
45 °C	75 °C	2.2 K/W	250.8 cm ²

Notes

The actual cooling surface can differ because of the material, the structural shape, outside influences and the installation situation. A thermal connection between TALEX® module XED® DECO and heat sink with heat-conducting paste or heat conducting adhesive film is absolutely necessary. Additionally the TALEX® module XED® DECO has to be fixED® on the heat sink with M3 screws to optimise the thermal connection.

Thermal behaviour

storage temperature	-30 ... +80 °C
operating temperature	-25 ... +45 °C
t _c max. (at typ. current)	75 °C
max. rel. humidity	0 ... 80 %

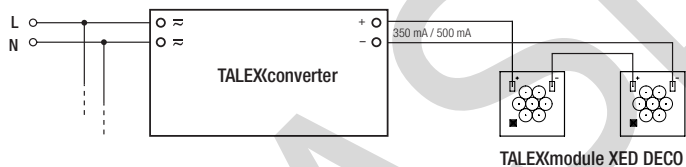
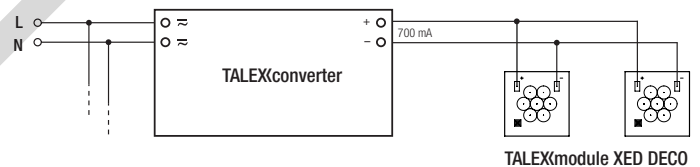
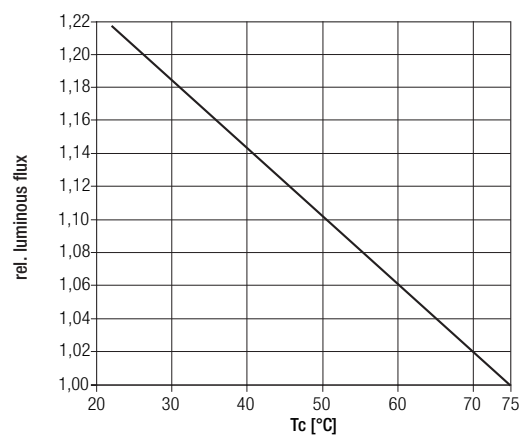
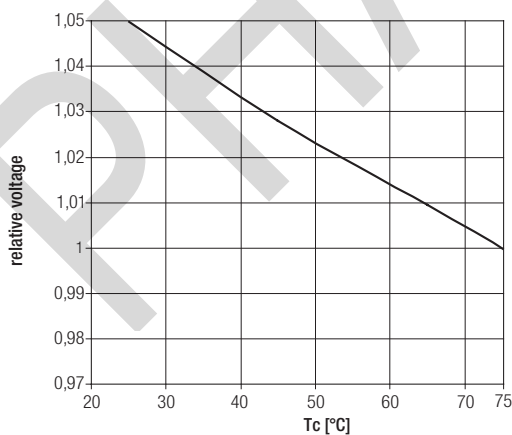
Lifetime

t _c temperature in °C	luminous flux in %	lifetime in h
25	80	60,000
	70	81,000
	50	132,000
45	80	44,000
	70	64,000
	50	110,000
65	80	32,000
	70	50,000
	50	91,000
75	80	25,000
	70	41,000
	50	81,000

Wiring

Cable: AWG24; length 200 mm

colour	red	black
function	+ LED	- LED

Wiring example serial**Wiring example parallel****Relative forward voltage and relative luminous flux**

The diagrams based on statistic values.
The real values can be different.

Electrical supply/choice of converter

TALEXmodule XED® DECO from Tridonic are not protected against overvoltages, overcurrents, overloads or short-circuit currents. Safe and reliable operation can only be guaranteed in conjunction with a converter which complies with the relevant standards. The use of TALEX converters from Tridonic in combination with TALEXmodule XED® DECO guarantees the necessary protection for safe and reliable operation.

If a converter other than Tridonic TALEXconverter is used, it must provide the following protection:

- Short-circuit protection
- Overload protection
- Overtemperature protection

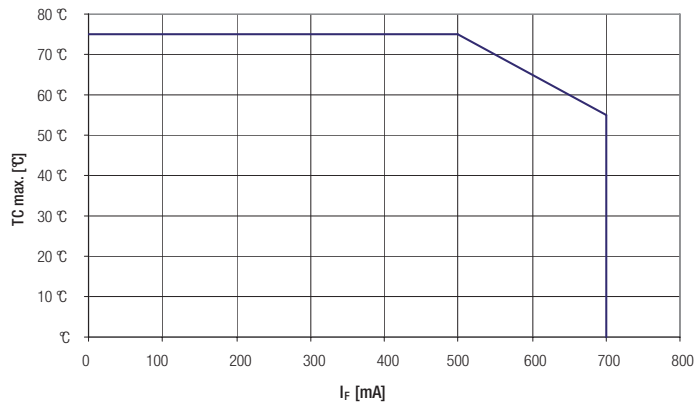


TALEXmodule XED® DECO must be supplied by a constant current converter.

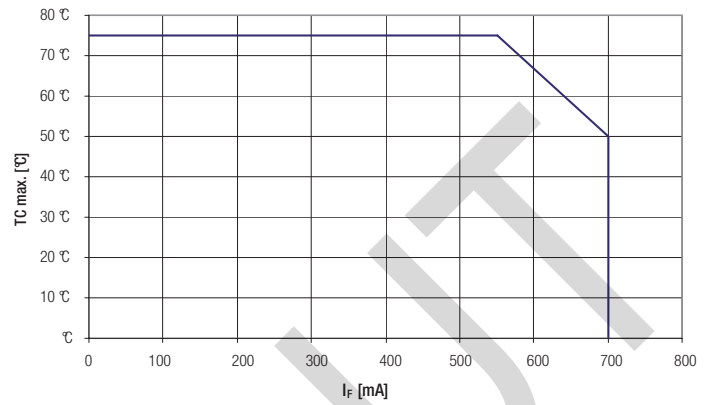
Operation with a constant voltage converter will lead to an irreversible damage of the module.

Wrong polarity can damage the TALEXmodule XED® DECO.

Derating curve XED®-9



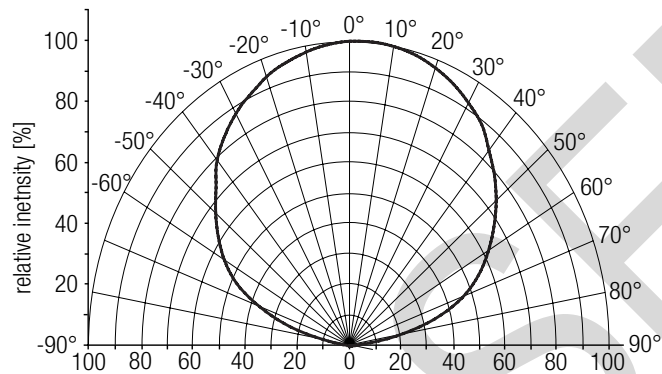
Derating curve XED®-11



Optical characteristics TALEX® module XED® DECO

The optical design of the TALEX® module XED® DECO product line ensures optimum homogeneity for the light distribution.

Light distribution

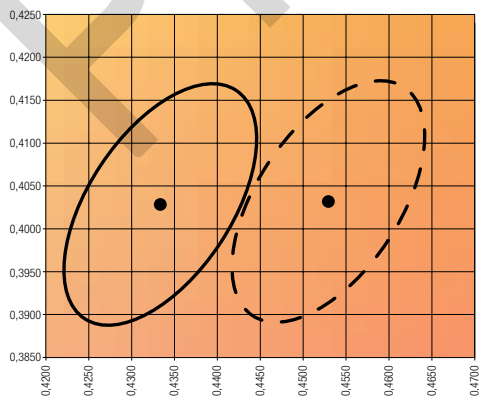


Coordinates and tolerances according to CIE 1931

The specified colour coordinates are measured by a current impulse with typical values of module and a duration of 100 ms.
The ambient temperature of the measurement is $t_a = 25^\circ\text{C}$.
The measurement tolerance of the colour coordinates are ± 0.01 .

3.000 K

	x0	y0
Centre Tc=25 °C - - -	0.4530	0.40350
Centre Tc=75 °C —	0.4338	0.40300



MacAdam ellipse: 7SDCM

