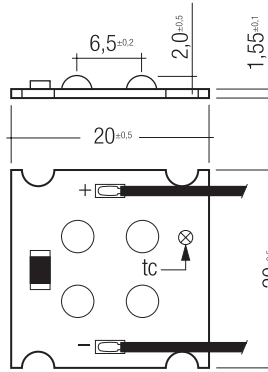


RoHS

TALEXmodule EOS P214-4 EOS

Product description

- General lighting
- Design and effect lighting
- Spotlights
- High-flux LED module
- Narrow colour temperature tolerance band
- Compact design
- Excellent thermal management
- Integrated polarity reversal protection
- Optional spot lens accessory TALEXaccessories LENS 0214
- High-power LED module in chip-on-board technology (COB)
- Low thermal resistance $R_{th,j-hs} < 2.5 \text{ K/W}$
- Attached with premounted thermally conductive adhesive tape
- Connection: Cable 200 mm
- Cooling required



Technical data

Beam characteristic	140°
Ambient temperature t_a	-25 ... +55 °C
Typ. tc point	65 °C
Risk group (EN 62471:2008)	0



Standards, page 3

Colour temperatures and tolerances, page 5

Ordering data

Type	Article number	Colour	Colour temperature	Packaging carton	Weight per pc.
P214-4 WW	89601373	Warm white	3,000 K	25 pc(s).	0.004 kg
P214-4 NW	89601372	Neutral white	4,200 K	25 pc(s).	0.004 kg
P214-4 DL	89601371	Daylight white	6,500 K	25 pc(s).	0.005 kg

Specific technical data

Type	Typ. luminous flux		Typ. Current ^① ② ③	Max. Current ^① ② ③	Typ. forward voltage at 350 mA ^①	Typ. forward voltage at 700 mA ^①	Power at 350 mA ^①	Power at 700 mA ^①	Colour rendering index CRI	Typ. efficacy at		Energy classification
	at 350 mA ^①	at 700 mA ^①								350 mA	700 mA	
P214-4 WW	310 lm	515 lm	350 mA	700 mA	13.6 V	14.0 V	4.8 W	9.8 W	> 80	65 lm/W	53 lm/W	A at 350 mA / B at 700 mA
P214-4 NW	340 lm	525 lm	350 mA	700 mA	13.6 V	14.0 V	4.8 W	9.8 W	> 80	71 lm/W	54 lm/W	A at 350 mA / B at 700 mA
P214-4 DL	410 lm	620 lm	350 mA	700 mA	13.6 V	14.0 V	4.8 W	9.8 W	> 70	85 lm/W	63 lm/W	A at 350 mA / B at 700 mA

All values for $t_a = 25 \text{ °C}$ and $t_c = 65 \text{ °C}$.

① Tolerance range for optical and electrical data: $\pm 15 \%$.

② $R_{th,j-hs}$ = Thermal Resistance (Junction – Heat Sink). Exceeding the max. temperature limits leads to a reduced life or the module can be damaged. Measuring of the temperature at the tc-point in the thermally stable state.

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

For more information please contact

lightmoves (03) 9701 2500
info@lightmoves.com.au

138-146 Browns Rd, Noble Park VIC 3174

LED control gear matrix – TALEX(module EOS P214-4

IN-BUILT LCI

Type	0030 K500 one4all	LCAI 80 W 350mA one4all Ip [Ⓢ] [Ⓢ]	LCAI 80 W 700mA one4all Ip [Ⓢ] [Ⓢ]	0018 K350 DALI RGB
Article number	86458561	86458997 / 86458846	86459191	86458276

Assignable LED control gear

Type	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
TALEX(module EOS P214-4	2	3	10	14	5	7	1	1

[Ⓢ] Not SELV.

[Ⓢ] Additional insulation required.

LED control gear matrix – TALEX(module EOS P214-4

REMOTE LCI

Type	LCAI 15 W 350 mA one4all	LCAI 30 W 700 mA one4all	LCI 5 W 350 mA	LCI 15 W 350 mA	LCI 15 W 700 mA	LCI 30 W 700 mA	LCCI 16 W 350 mA	LCCI 16 W 500 mA	LCCI 16 W 700 mA
Article number	86458899	86458900	24166311	24166312	24166313	24166314	86459210	86459211	86459212

Assignable LED control gear

Type	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
TALEX(module EOS P214-4	1	2	1	2	1	1	2	2	1	1	2	2	1	3	1	2	1	1

Controls-Matrix – TALEX(module EOS P214-4

IN-BUILT

Type	C350-2 12-24 V DC 350 mA 8 VA	C700 12-24 V DC 700 mA 16 VA	C350 dim	C700 dim
Article number	86458453	86458513	86458944	86458945

REMOTE

C350-2 4-Channel
86458693

Assignable controls

Type	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
TALEX(module EOS P214-4	1	1	1	1	1	3	1	3

Assignable controls

Min.	Max.
1	12

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 TALEXmodule EOS will be greatly reduced or the TALEXmodule EOS may be destroyed.

Therefore the TALEXmodule EOS P214-4 needs to be mounted onto a heat sink.

Tridonic's excellent thermal design for the TALEXmodule EOS products provides the lowest thermal resistance and therefore allowing new compact designs without sacrificing quality, safety and life time.

tc point, ambient temperature t_a , temperature and service life

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

For TALEXmodule EOS P214-4 a max. t_c temperature of 75 °C is recommended in order to achieve an optimum between heat sink requirements, light output and life time.

Compliance with the maximum permissible reference temperature at the t_c 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



TALEXmodule EOS from Tridonic which have to be installed on a heat sink are equipped as standard with thermally conductive adhesive tape on the back of the pc board.

These TALEX products must be installed with this adhesive tape. To ensure permanent adhesion the fixing/cooling surface must be cleaned before installing the TALEX modules to remove all dirt, dust and grease.

For further information please refer to the brochure entitled "TALEX installation instructions and guidelines".



Chemical substance may harm the LED module. Chemical reactions could lead to colour shift, reduced luminous flux or a total failure of the module caused by corrosion of electrical connections.

Materials which are used in LED applications (e.g. sealings, adhesives) must not produce dissolver gas. They must not be condensation curing based, acetate curing based or contain sulfur, chlorine or phthalate. Avoid corrosive atmosphere during usage and storage.

Recommended heat sink surface

TALEXmodule EOS P214-4, 350 mA

t_a	t_c	$R_{th, hs-a}$
25 °C	65 °C	7.7 K/W
35 °C	65 °C	5.6 K/W
45 °C	65 °C	3.5 K/W
55 °C	65 °C	1.4 K/W

TALEXmodule EOS P214-4, 700 mA

t_a	t_c	$R_{th, hs-a}$
25 °C	65 °C	3.4 K/W
35 °C	65 °C	2.3 K/W
45 °C	65 °C	1.3 K/W
55 °C	65 °C	0.2 K/W

Notes

$R_{th, hs-a}$ = required thermal resistance of heat sink

The actual required heat sink surface need to be corrected according to the actually measured temperature at t_c .

Matrix temperature

f(soldering time) for the modules

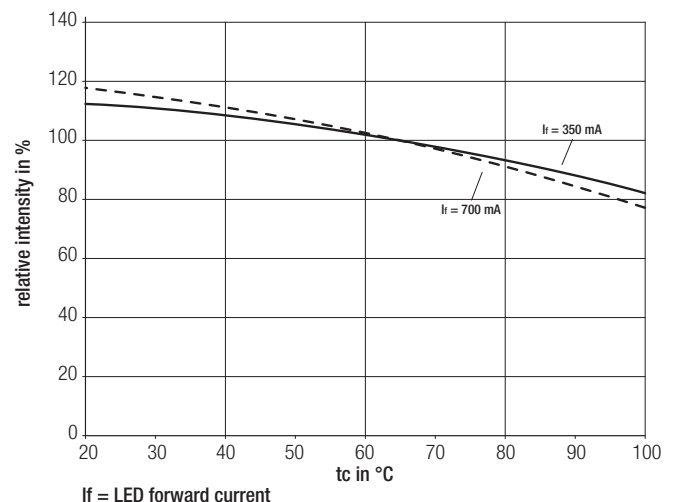
Temperature	Max. time without heat sink	Max. time with optimized heat sink
330 °C	15 s	–
340 °C	12 s	–
350 °C	10 s	–
360 °C	5 s	15 s
370 °C	3 s	12 s
380 °C	2 s	10 s
390 °C	1 s	5 s

The values apply for soldering without heat sink. To reduce the duration of soldering it is recommended to pre-heat the module at t_a max., e.g. on a plate.

Thermal behaviour

Storage temperature	-25–80 °C
Operating temperature	-25–55 °C
t_c max.	75 °C

relative luminous flux vs. t_c point



Electrical supply/choice of LED control gear

TALEXmodule EOS 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 LED control gear which complies with the relevant standards. The use of TALEXconverter from Tridonic in combination with TALEXmodule EOS guarantees the necessary protection for safe and reliable operation.

The TALEXmodule EOS are only for the operation with SELV < 60V. The operation at LED control gears with outputvoltage > 60V is with an additional preparations possible. Further information on request.

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

- Short-circuit protection
- Overload protection

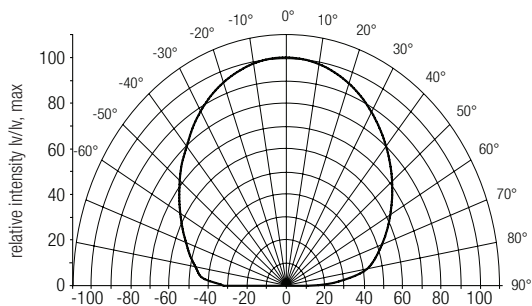


TALEXmodule EOS P214-4 must be supplied by a constant current LED control gear. Operation with a constant voltage LED control gear will lead to an irreversible damage of the module. The TALEXmodule EOS P214-4 are protected against reversed polarity.

Optical characteristics TALEXmodule EOS P214-4

The optical design of the TALEXmodule EOS lens system ensures an optimum of homogeneity for the light distribution.

Light distribution $I_v/I_{v,max}$

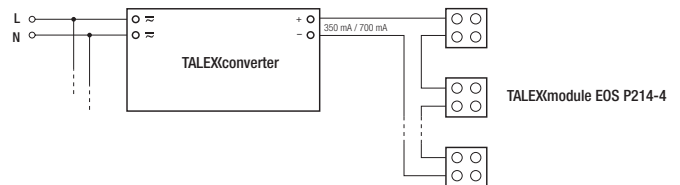


Wiring

Cable: AWG24; length 200 mm

Colour	red	black
Function	+	-

Wiring example < 60V



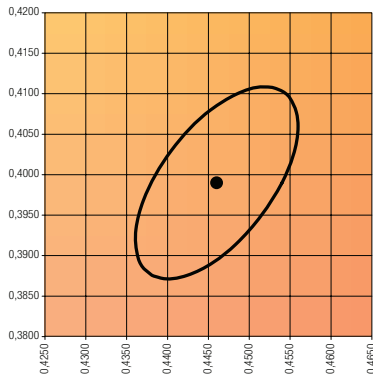
Colour	$I_{v,max}$ 350 mA	$I_{v,max}$ 700 mA
Warm white (WW)	55.6 cd	91.2 cd
Neutral white (NW)	64.0 cd	104.4 cd
Daylight white (DL)	79.2 cd	130.4 cd

For further information see Design-in Guide, 3D data and photometric data on www.tridonic.com or on request.

Coordinates and tolerances according to CIE 1964

3,000 K

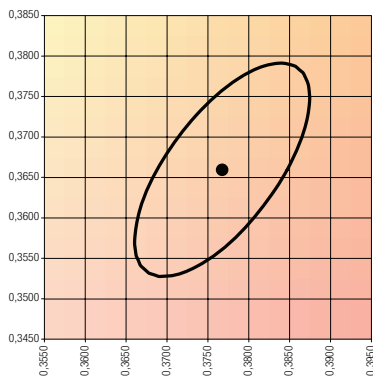
	x0	y0
Centre	0.4460	0.3990



MacAdam ellipse: 5SDCM

4,200 K

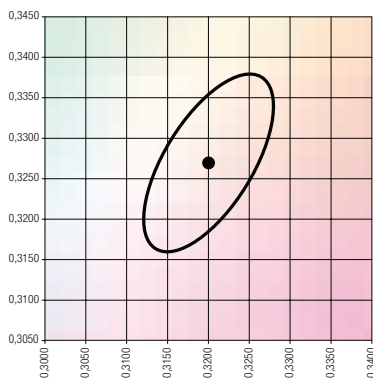
	x0	y0
Centre	0.3770	0.3660



MacAdam ellipse: 5SDCM

6,500 K

	x0	y0
Centre	0.3200	0.3270



MacAdam ellipse: 5SDCM

For more information please contact
lightmoves (03) 9701 2500
 info@lightmoves.com.au
 138-146 Browns Rd, Noble Park VIC 3174

