RoHS

TALEX(module EM-AP 003

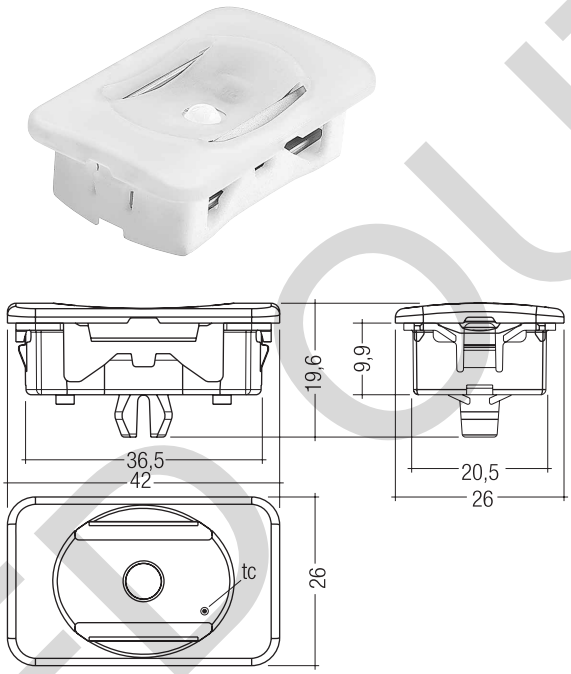
EM-LED light sources

Product description

- LED emergency lighting module
- Anti-panic emergency lighting: illuminance E ≥ 0.5 lux (as per EN 1838)
- Compatible with EM powerLED 1 W

Properties

- High-power LED in chip-on-board technology (COB)
- Long life thanks to integrated heat removal
- Optimised system eiciency with broad beam characteristic
- Integrated bi-colour status LED
- Reverse polarity protection
- Small dimensions
- Different installation options
- Connection: cable 300 mm



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Technical data

Colour rendering index CRI	> 70
Ambient temperature ta	-20 ... +50 °C
tc point②	60 °C

Ordering data

Type	Article number	Colour⑤	Colour temperature	Packaging	Weight per pc.
EM-AP 003	**89600960**	Daylight white	6,500 K	10 pc(s).	0.025 kg

Specific technical data

Type	Typ. luminous flux	Min. luminous flux	Max. current③	Power① ④
EM-AP 003	100 lm	90 lm	350 mA	1.2 W

① Data for operation with 350 mA.
② If the max. temperature limits are exceeded, the life of the module will be reduced or the module may be damaged. The temperature of the TALEX(module at the tc-point is to be measured in the thermally stable state. For tc-point see the above diagram.
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 Tolerance range for optical and electrical data: ±15 %.
⑤ Colour temperature and colour rendering index CRI according to CIE 1931.

Standards
- EN 62031
- EN 62471

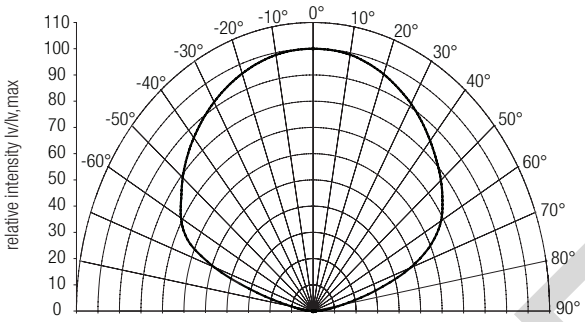
Optical properties

Max. spacing for >0.5 lux for maintained mode ①

Height	Centre to end ②	Centre to centre ③
2.5 m	2.55 m	8.10 m
3.0 m	2.60 m	8.65 m
4.0 m	2.60 m	9.50 m
5.0 m	2.35 m	10.00 m

all values for tc = 45 °C
① Maintainance factor = 0.8
Photometric data available on request
② Distance between module and wall
③ Distance between two modules

Light distribution



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.

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.

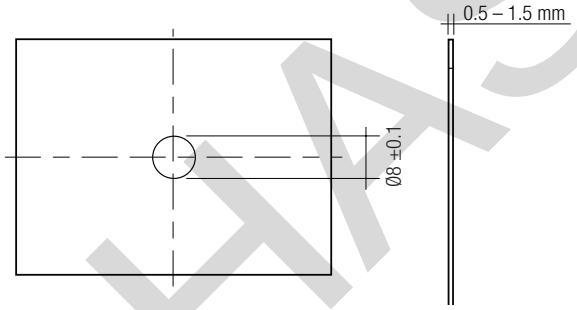
Thermal behaviour

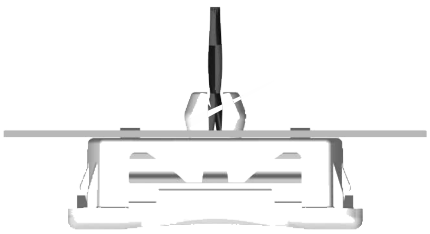
Storage temperature	-20 – 80 °C
Operating temperature	-20 – 50 °C
tc max. (at typ. current)	75 °C

Glow-wire test according to EN 61347-1 with increased temperature of 960 °C passed.

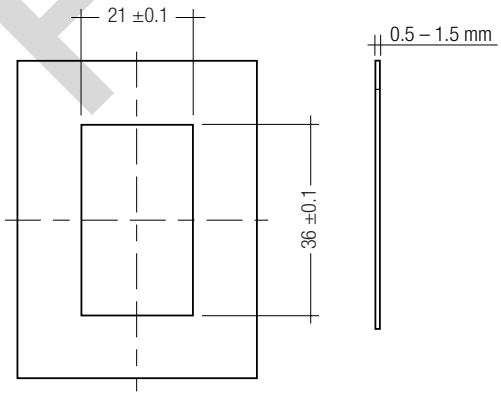
Mounting

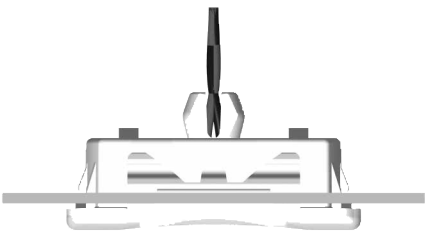
Surface mounting:





Recessed mounting:





Electrical supply/choice of converter

TALEXengine EM-AP 003 modules 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 EM powerLED converters from Tridonic in combination with TALEXengine EM-AP 003 modules guarantees the necessary protection for safe and reliable operation.

If a converter other than Tridonic EM powerLED converter is used, it must provide the following protection:
- SELV
- Short-circuit protection
- Overload protection
- Overtemperature protection

The TALEXengine EM-AP 003 module must be supplied by a constant current converter. Operation with a constant voltage converter will lead to an irreversible damage of the module. The TALEXengine EM-AP 003 modules is protected against reversed polarity.

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.

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

Wiring
Cable: AWG24; length 300 mm

Colour	red	black	orange	pink
Function	+	-	Status A	Status K

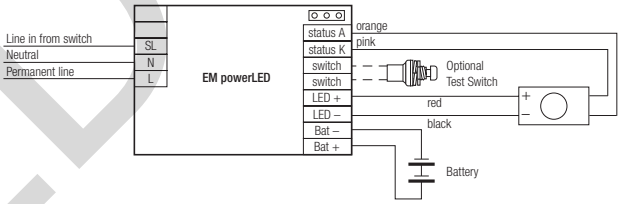
Notes
The wiring acc. to the information above is valid for the usage in conjunction with EM powerLED ST and EM powerLED PRO.
When the EM-AP 003 is used with the EM powerLED BASIC the polarity of the indicator LED has to be changed. Connect the orange lead to the terminal “P “ and the pink lead to the terminal “O“.

When two EM-AP modules are used with an EM powerLED 2W converter module only one indicator LED can be connected to the driver.

When the EM-AP 003 is used in mains operation a separate indication LED must be used.

Note:
The indication LED is part of the EM-AP module.

Wiring example



Coordinates and tolerances according to CIE 1964

The specified colour coordinates are measured by a current impulse of 350 mA and a duration of 100 ms.
The ambient temperature of the measurement is ta = 25 °C.
The measurement tolerance of the colour coordinates are ± 0.01.

CIE coordinates:

Daylight white

	x0	y0
Centre	0.3200	0.3270

MacAdam ellipse: 8SDCM