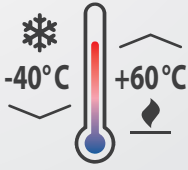


# BORDER-N-LED-M623

IP66/  ZONE 2/21, 22



FTZÚ 23 ATEX 0038X

FTZÚ 23 ATEX 0039X



**Application:** Recessed LED lighting fixture **designed for lighting of hazardous areas ATEX ZONE 2/21, 22** (pharmaceutical industry, food production, chemical warehouses, electric car battery production, etc.) Housing made of white painted steel sheet (RAL9016), stainless steel AISI304 or AISI316 as option. Diffuser made of clear glass in combination with opal or microprismatic diffuser, opal or microprismatic plastic diffuser. Equipped with high quality electronic components **for high lifetime up to 100 000 h and efficiency up to 158 lm/W**. Characterized by high lower degree of protection (IP66). Suitable for ambient temperatures from -40°C up to 60°C. Classified for **clean areas in compliance with ISO 14644-1**. Large variability of luminaires according to installation types - false ceiling M600/625, metal ceiling M598/M623 or plasterboard.

**Driver:** EP – electronic 220-240V / 50-60Hz AC, 220-240V, 0 Hz DC

**Light source:** LED, 4000K, CRI +80, MacAdam3

**Housing:** White painted steel sheet RAL 9016

**Diffuser:** **GLM** – matt tempered safety glass

**OP** – clear PC + opal plexiglass

**MP** – clear PC + microprismatic plexiglass

**CGOP** - clear tempered safety glass + opal plexiglass

**CGMP** - clear tempered safety glass + microprismatic plexiglass

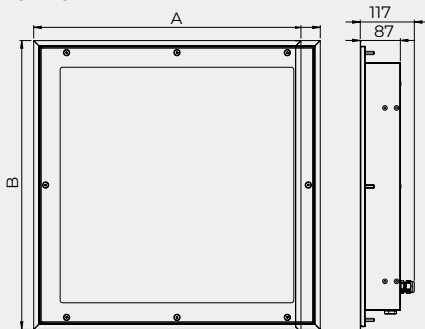
**Fastening:** Installation using nivelation set for metal suspended ceilings M598 / M623 (not included). Minimum height of mounting space is 200 mm.

**Connection:** Screwless terminal block for easy mounting, maximum diameter of wires 2.5 mm<sup>2</sup>

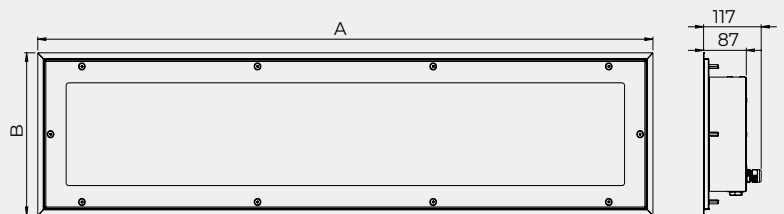
**Standard equipment:** 2pcs rubber plug M20 for diameter of cable 7-12 mm and 3 pcs EX M20 sealing plug

**Calculated lifetime – LED modules:** L80B10 Ta30 – 70 000 h, L70B10 Ta30 – 100 000 h

SQ - SQUARE



R - RECTANGULAR



## ADVANTAGES:

- European product - Made in Czech Republic
- ATEX certification ZONE 2/21, 22
- Robust steel sheet or stainless steel housing
- High efficiency up to 158 lm/W
- Luminous flux versions from 3 300 to 12 000 lm
- Wide temperature resistance from -40°C to 60°C
- Classified for clean areas in compliance with ISO 14644-1

## BORDER-N-LED ZONE 2/21 (FTZÚ 23 ATEX 0038X)

- Ⓜ II 3G Ex nR IIC T6 Gc
- Ⓜ II 2D Ex tb op is IIIC T85°C Db

## BORDER-N-LED ZONE 2/22 (FTZÚ 23 ATEX 0039X)

- Ⓜ II 3G Ex nR IIC T6 Gc
- Ⓜ II 3D Ex tc IIIC T85°C Dc

## TYPICAL APPLICATION:



Pharma  
& Laboratories



Food & beverages  
production areas



Petrochemical



Chemical  
warehouses



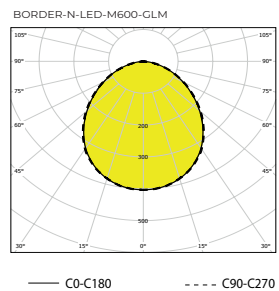
Car industry  
workdecks

GLM - matt tempered safety glass

Order number	Name	Lighting fixture luminous flux (lm)	Power input (W)	Rated power output (lm/W)	Ta (°C)	Dimensions of lighting fixture A x B x C (mm)	Weight (kg)
<b>SQ</b>							
080730	BORDER-N-LED-2/21-M623-SQ-GLM-3300-4K, IP66	2688	17	158	-20°C/60°C	623x623x87	11
080731	BORDER-N-LED-2/21-M623-SQ-GLM-4800-4K, IP66	3978	27	147	-20°C/60°C	623x623x87	11
080732	BORDER-N-LED-2/21-M623-SQ-GLM-6300-4K, IP66	5237	37	142	-20°C/60°C	623x623x87	11
080733	BORDER-N-LED-2/21-M623-SQ-GLM-7200-4K, IP66	6067	41	148	-20°C/60°C	623x623x87	11
080734	BORDER-N-LED-2/21-M623-SQ-GLM-8700-4K, IP66	7277	49	149	-20°C/60°C	623x623x87	11
080735	BORDER-N-LED-2/21-M623-SQ-GLM-12000-4K, IP66	9996	70	143	-20°C/45°C	623x623x87	11
<b>SQ - FROST</b>							
081480	BORDER-N-LED-2/21-M623-FROST-SQ-GLM-3300-4K, IP66	2688	17	158	-40°C/55°C	623x623x87	11
081481	BORDER-N-LED-2/21-M623-FROST-SQ-GLM-4800-4K, IP66	3978	27	147	-40°C/55°C	623x623x87	11
081482	BORDER-N-LED-2/21-M623-FROST-SQ-GLM-6300-4K, IP66	5237	37	142	-40°C/55°C	623x623x87	11
081483	BORDER-N-LED-2/21-M623-FROST-SQ-GLM-7200-4K, IP66	6067	41	148	-40°C/60°C	623x623x87	11
081484	BORDER-N-LED-2/21-M623-FROST-SQ-GLM-8700-4K, IP66	7277	49	149	-40°C/60°C	623x623x87	11
<b>R</b>							
080760	BORDER-N-LED-2/21-M623-R-GLM-3300-4K, IP66	2630	17	155	-20°C/60°C	1247x312x87	12
080761	BORDER-N-LED-2/21-M623-R-GLM-4800-4K, IP66	3906	27	145	-20°C/60°C	1247x312x87	12
080762	BORDER-N-LED-2/21-M623-R-GLM-6300-4K, IP66	5143	37	139	-20°C/60°C	1247x312x87	12
080763	BORDER-N-LED-2/21-M623-R-GLM-7200-4K, IP66	5928	41	145	-20°C/60°C	1247x312x87	12
080764	BORDER-N-LED-2/21-M623-R-GLM-8700-4K, IP66	7077	49	144	-20°C/55°C	1247x312x87	12
080765	BORDER-N-LED-2/21-M623-R-GLM-12000-4K, IP66	9816	70	140	-20°C/45°C	1247x312x87	12
<b>R - FROST</b>							
081510	BORDER-N-LED-2/21-M623-FROST-R-GLM-3300-4K, IP66	2630	17	155	-40°C/60°C	1247x312x87	12
081511	BORDER-N-LED-2/21-M623-FROST-R-GLM-4800-4K, IP66	3906	27	145	-40°C/60°C	1247x312x87	12
081512	BORDER-N-LED-2/21-M623-FROST-R-GLM-6300-4K, IP66	5143	37	139	-40°C/60°C	1247x312x87	12
081513	BORDER-N-LED-2/21-M623-FROST-R-GLM-7200-4K, IP66	5928	41	145	-40°C/60°C	1247x312x87	12
081514	BORDER-N-LED-2/21-M623-FROST-R-GLM-8700-4K, IP66	7077	49	144	-40°C/60°C	1247x312x87	12

Tolerance of luminous flux and power input of the lighting

GLM – matt tempered safety glass

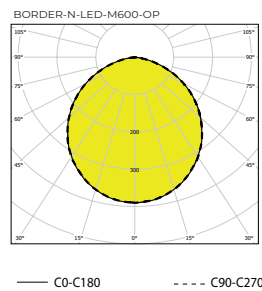


OP – clear PC + opal plexiglass

Order number	Name	Lighting fixture luminous flux (lm)	Power input (W)	Rated power output (lm/W)	Ta (°C)	Dimensions of lighting fixture A x B x C (mm)	Weight (kg)
<b>SQ</b>							
080736	BORDER-N-LED-2/21-M623-SQ-OP-3300-4K, IP66	2372	17	140	-20°C/60°C	623x623x87	11
080737	BORDER-N-LED-2/21-M623-SQ-OP-4800-4K, IP66	3510	27	130	-20°C/60°C	623x623x87	11
080738	BORDER-N-LED-2/21-M623-SQ-OP-6300-4K, IP66	4621	37	125	-20°C/60°C	623x623x87	11
080739	BORDER-N-LED-2/21-M623-SQ-OP-7200-4K, IP66	5353	41	131	-20°C/60°C	623x623x87	11
080740	BORDER-N-LED-2/21-M623-SQ-OP-8700-4K, IP66	6420	49	131	-20°C/60°C	623x623x87	11
080741	BORDER-N-LED-2/21-M623-SQ-OP-12000-4K, IP66	8820	70	126	-20°C/45°C	623x623x87	11
<b>SQ - FROST</b>							
081486	BORDER-N-LED-2/21-M623-FROST-SQ-OP-3300-4K, IP66	2372	17	140	-40°C/55°C	623x623x87	11
081487	BORDER-N-LED-2/21-M623-FROST-SQ-OP-4800-4K, IP66	3510	27	130	-40°C/55°C	623x623x87	11
081488	BORDER-N-LED-2/21-M623-FROST-SQ-OP-6300-4K, IP66	4621	37	125	-40°C/55°C	623x623x87	11
081489	BORDER-N-LED-2/21-M623-FROST-SQ-OP-7200-4K, IP66	5353	41	131	-40°C/60°C	623x623x87	11
081490	BORDER-N-LED-2/21-M623-FROST-SQ-OP-8700-4K, IP66	6420	49	131	-40°C/60°C	623x623x87	11
<b>R</b>							
080766	BORDER-N-LED-2/21-M623-R-OP-3300-4K, IP66	2370	17	139	-20°C/60°C	1247x312x87	12
080767	BORDER-N-LED-2/21-M623-R-OP-4800-4K, IP66	3519	27	130	-20°C/60°C	1247x312x87	12
080768	BORDER-N-LED-2/21-M623-R-OP-6300-4K, IP66	4634	37	125	-20°C/60°C	1247x312x87	12
080769	BORDER-N-LED-2/21-M623-R-OP-7200-4K, IP66	5341	41	130	-20°C/60°C	1247x312x87	12
080770	BORDER-N-LED-2/21-M623-R-OP-8700-4K, IP66	6376	49	130	-20°C/55°C	1247x312x87	12
080771	BORDER-N-LED-2/21-M623-R-OP-12000-4K, IP66	8844	70	126	-20°C/40°C	1247x312x87	12
<b>R - FROST</b>							
081516	BORDER-N-LED-2/21-M623-FROST-R-OP-3300-4K, IP66	2370	17	139	-40°C/60°C	1247x312x87	12
081517	BORDER-N-LED-2/21-M623-FROST-R-OP-4800-4K, IP66	3519	27	130	-40°C/60°C	1247x312x87	12
081518	BORDER-N-LED-2/21-M623-FROST-R-OP-6300-4K, IP66	4634	37	125	-40°C/60°C	1247x312x87	12
081519	BORDER-N-LED-2/21-M623-FROST-R-OP-7200-4K, IP66	5341	41	130	-40°C/60°C	1247x312x87	12
081520	BORDER-N-LED-2/21-M623-FROST-R-OP-8700-4K, IP66	6376	49	130	-40°C/60°C	1247x312x87	12

Tolerance of luminous flux and power input of the lighting

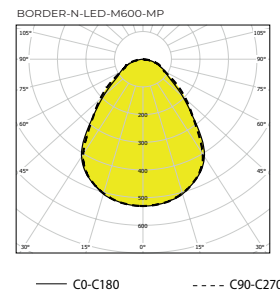
OP – clear PC + opal plexiglass



Lighting fixtures for areas with danger of explosion

Order number	Name	Lighting fixture luminous flux (lm)	Power input (W)	Rated power output (lm/W)	Ta (°C)	Dimensions of lighting fixture A x B x C (mm)	Weight (kg)
<b>SQ</b>							
080742	BORDER-N-LED-2/21-M623-SQ-MP-3300-4K, IP66	2359	17	139	-20°C/60°C	623x623x87	11
080743	BORDER-N-LED-2/21-M623-SQ-MP-4800-4K, IP66	3491	27	129	-20°C/60°C	623x623x87	11
080744	BORDER-N-LED-2/21-M623-SQ-MP-6300-4K, IP66	4596	37	124	-20°C/60°C	623x623x87	11
080745	BORDER-N-LED-2/21-M623-SQ-MP-7200-4K, IP66	5324	41	130	-20°C/60°C	623x623x87	11
080746	BORDER-N-LED-2/21-M623-SQ-MP-8700-4K, IP66	6386	49	130	-20°C/60°C	623x623x87	11
080747	BORDER-N-LED-2/21-M623-SQ-MP-12000-4K, IP66	8772	70	125	-20°C/45°C	623x623x87	11

**MP** - clear PC + microprismatic plexiglass



<b>SQ - FROST</b>							
081492	BORDER-N-LED-2/21-M623-FROST-SQ-MP-3300-4K, IP66	2359	17	139	-40°C/55°C	623x623x87	11
081493	BORDER-N-LED-2/21-M623-FROST-SQ-MP-4800-4K, IP66	3491	27	129	-40°C/55°C	623x623x87	11
081494	BORDER-N-LED-2/21-M623-FROST-SQ-MP-6300-4K, IP66	4596	37	124	-40°C/55°C	623x623x87	11
081495	BORDER-N-LED-2/21-M623-FROST-SQ-MP-7200-4K, IP66	5324	41	130	-40°C/60°C	623x623x87	11
081496	BORDER-N-LED-2/21-M623-FROST-SQ-MP-8700-4K, IP66	6386	49	130	-40°C/60°C	623x623x87	11

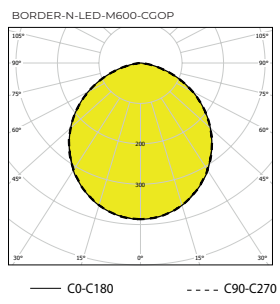
<b>R</b>							
080772	BORDER-N-LED-2/21-M623-R-MP-3300-4K, IP66	2347	17	138	-20°C/60°C	1247x312x87	12
080773	BORDER-N-LED-2/21-M623-R-MP-4800-4K, IP66	3486	27	129	-20°C/60°C	1247x312x87	12
080774	BORDER-N-LED-2/21-M623-R-MP-6300-4K, IP66	4590	37	124	-20°C/60°C	1247x312x87	12
080775	BORDER-N-LED-2/21-M623-R-MP-7200-4K, IP66	5291	41	129	-20°C/60°C	1247x312x87	12
080776	BORDER-N-LED-2/21-M623-R-MP-8700-4K, IP66	6315	49	129	-20°C/55°C	1247x312x87	12
080777	BORDER-N-LED-2/21-M623-R-MP-12000-4K, IP66	8760	70	125	-20°C/40°C	1247x312x87	12

<b>R - FROST</b>							
081522	BORDER-N-LED-2/21-M623-FROST-R-MP-3300-4K, IP66	2347	17	138	-40°C/60°C	1247x312x87	12
081523	BORDER-N-LED-2/21-M623-FROST-R-MP-4800-4K, IP66	3486	27	129	-40°C/60°C	1247x312x87	12
081524	BORDER-N-LED-2/21-M623-FROST-R-MP-6300-4K, IP66	4590	37	124	-40°C/60°C	1247x312x87	12
081525	BORDER-N-LED-2/21-M623-FROST-R-MP-7200-4K, IP66	5291	41	129	-40°C/60°C	1247x312x87	12
081526	BORDER-N-LED-2/21-M623-FROST-R-MP-8700-4K, IP66	6315	49	129	-40°C/60°C	1247x312x87	12

Tolerance of luminous flux and power input of the lighting

Order number	Name	Lighting fixture luminous flux (lm)	Power input (W)	Rated power output (lm/W)	Ta (°C)	Dimensions of lighting fixture A x B x C (mm)	Weight (kg)
<b>SQ</b>							
080748	BORDER-N-LED-2/21-M623-SQ-CGOP-3300-4K, IP66	2459	17	145	-20°C/60°C	623x623x87	11
080749	BORDER-N-LED-2/21-M623-SQ-CGOP-4800-4K, IP66	3639	27	135	-20°C/60°C	623x623x87	11
080750	BORDER-N-LED-2/21-M623-SQ-CGOP-6300-4K, IP66	4791	37	129	-20°C/60°C	623x623x87	11
080751	BORDER-N-LED-2/21-M623-SQ-CGOP-7200-4K, IP66	5550	41	135	-20°C/60°C	623x623x87	11
080752	BORDER-N-LED-2/21-M623-SQ-CGOP-8700-4K, IP66	6656	49	136	-20°C/60°C	623x623x87	11
080753	BORDER-N-LED-2/21-M623-SQ-CGOP-12000-4K, IP66	9144	70	131	-20°C/45°C	623x623x87	11

**CGOP** - clear tempered safety glass + opal plexiglass



<b>SQ - FROST</b>							
081498	BORDER-N-LED-2/21-M623-FROST-SQ-CGOP-3300-4K, IP66	2459	17	145	-40°C/55°C	623x623x87	11
081499	BORDER-N-LED-2/21-M623-FROST-SQ-CGOP-4800-4K, IP66	3639	27	135	-40°C/55°C	623x623x87	11
081500	BORDER-N-LED-2/21-M623-FROST-SQ-CGOP-6300-4K, IP66	4791	37	129	-40°C/55°C	623x623x87	11
081501	BORDER-N-LED-2/21-M623-FROST-SQ-CGOP-7200-4K, IP66	5550	41	135	-40°C/60°C	623x623x87	11
081502	BORDER-N-LED-2/21-M623-FROST-SQ-CGOP-8700-4K, IP66	6656	49	136	-40°C/60°C	623x623x87	11

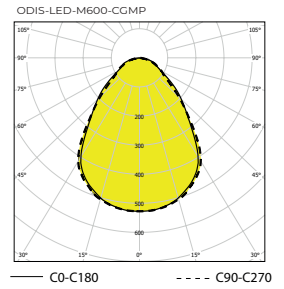
<b>R</b>							
080778	BORDER-N-LED-2/21-M623-R-CGOP-3300-4K, IP66	2331	17	137	-20°C/60°C	1247x312x87	12
080779	BORDER-N-LED-2/21-M623-R-CGOP-4800-4K, IP66	3462	27	128	-20°C/60°C	1247x312x87	12
080780	BORDER-N-LED-2/21-M623-R-CGOP-6300-4K, IP66	4558	37	123	-20°C/60°C	1247x312x87	12
080781	BORDER-N-LED-2/21-M623-R-CGOP-7200-4K, IP66	5254	41	128	-20°C/60°C	1247x312x87	12
080782	BORDER-N-LED-2/21-M623-R-CGOP-8700-4K, IP66	6272	49	128	-20°C/55°C	1247x312x87	12
080783	BORDER-N-LED-2/21-M623-R-CGOP-12000-4K, IP66	8700	70	124	-20°C/40°C	1247x312x87	12

<b>R - FROST</b>							
081528	BORDER-N-LED-2/21-M623-FROST-R-CGOP-3300-4K, IP66	2331	17	137	-40°C/60°C	1247x312x87	12
081529	BORDER-N-LED-2/21-M623-FROST-R-CGOP-4800-4K, IP66	3462	27	128	-40°C/60°C	1247x312x87	12
081530	BORDER-N-LED-2/21-M623-FROST-R-CGOP-6300-4K, IP66	4558	37	123	-40°C/60°C	1247x312x87	12
081531	BORDER-N-LED-2/21-M623-FROST-R-CGOP-7200-4K, IP66	5254	41	128	-40°C/60°C	1247x312x87	12
081532	BORDER-N-LED-2/21-M623-FROST-R-CGOP-8700-4K, IP66	6272	49	128	-40°C/60°C	1247x312x87	12

Tolerance of luminous flux and power input of the lighting

Order number	Name	Lighting fixture luminous flux (lm)	Power input (W)	Rated power output (lm/W)	Ta (°C)	Dimensions of lighting fixture A x B x C (mm)	Weight (kg)
<b>SQ</b>							
080754	BORDER-N-LED-2/21-M623-SQ-CGMP-3300-4K, IP66	2440	17	144	-20°C/60°C	623x623x87	11
080755	BORDER-N-LED-2/21-M623-SQ-CGMP-4800-4K, IP66	3610	27	134	-20°C/60°C	623x623x87	11
080756	BORDER-N-LED-2/21-M623-SQ-CGMP-6300-4K, IP66	4753	37	128	-20°C/60°C	623x623x87	11
080757	BORDER-N-LED-2/21-M623-SQ-CGMP-7200-4K, IP66	5506	41	134	-20°C/60°C	623x623x87	11
080758	BORDER-N-LED-2/21-M623-SQ-CGMP-8700-4K, IP66	6604	49	135	-20°C/60°C	623x623x87	11
080759	BORDER-N-LED-2/21-M623-SQ-CGMP-12000-4K, IP66	9072	70	130	-20°C/45°C	623x623x87	11
<b>SQ - FROST</b>							
081504	BORDER-N-LED-2/21-M623-FROST-SQ-CGMP-3300-4K, IP66	2440	17	144	-40°C/55°C	623x623x87	11
081505	BORDER-N-LED-2/21-M623-FROST-SQ-CGMP-4800-4K, IP66	3610	27	134	-40°C/55°C	623x623x87	11
081506	BORDER-N-LED-2/21-M623-FROST-SQ-CGMP-6300-4K, IP66	4753	37	128	-40°C/55°C	623x623x87	11
081507	BORDER-N-LED-2/21-M623-FROST-SQ-CGMP-7200-4K, IP66	5506	41	134	-40°C/60°C	623x623x87	11
081508	BORDER-N-LED-2/21-M623-FROST-SQ-CGMP-8700-4K, IP66	6604	49	135	-40°C/60°C	623x623x87	11
<b>R</b>							
080784	BORDER-N-LED-2/21-M623-R-CGMP-3300-4K, IP66	2360	17	139	-20°C/60°C	1247x312x87	12
080785	BORDER-N-LED-2/21-M623-R-CGMP-4800-4K, IP66	3505	27	130	-20°C/60°C	1247x312x87	12
080786	BORDER-N-LED-2/21-M623-R-CGMP-6300-4K, IP66	4615	37	125	-20°C/60°C	1247x312x87	12
080787	BORDER-N-LED-2/21-M623-R-CGMP-7200-4K, IP66	5320	41	130	-20°C/60°C	1247x312x87	12
080788	BORDER-N-LED-2/21-M623-R-CGMP-8700-4K, IP66	6350	49	130	-20°C/55°C	1247x312x87	12
080789	BORDER-N-LED-2/21-M623-R-CGMP-12000-4K, IP66	8808	70	126	-20°C/45°C	1247x312x87	12
<b>R - FROST</b>							
081534	BORDER-N-LED-2/21-M623-FROST-R-CGMP-3300-4K, IP66	2360	17	139	-40°C/60°C	1247x312x87	12
081535	BORDER-N-LED-2/21-M623-FROST-R-CGMP-4800-4K, IP66	3505	27	130	-40°C/60°C	1247x312x87	12
081536	BORDER-N-LED-2/21-M623-FROST-R-CGMP-6300-4K, IP66	4615	37	125	-40°C/60°C	1247x312x87	12
081537	BORDER-N-LED-2/21-M623-FROST-R-CGMP-7200-4K, IP66	5320	41	130	-40°C/60°C	1247x312x87	12
081538	BORDER-N-LED-2/21-M623-FROST-R-CGMP-8700-4K, IP66	6350	49	130	-40°C/60°C	1247x312x87	12

**CGMP** - clear tempered safety glass + microprismatic plexiglass



CCGMP - clear tempered safety glass + microprismatic plexiglass

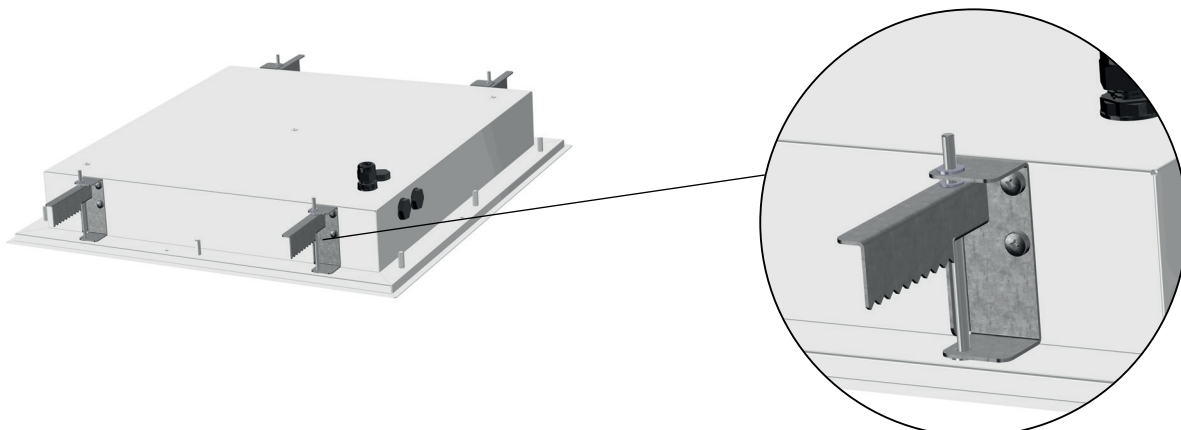
Tolerance of luminous flux and power input of the lighting fixture +/- 10%

## Diffuser options

<b>GLM</b> – matt tempered safety glass	<b>MP</b> – clear PC + microprismatic plexiglass <b>CGMP</b> - clear tempered safety glass + microprismatic plexiglass	<b>OP</b> – clear PC + opal plexiglass <b>CGOP</b> - clear tempered safety glass + opal plexiglass
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## Mounting of luminaire

Installation using nivellation set for metal suspended ceilings M598 / M623 (not included), deatl below.



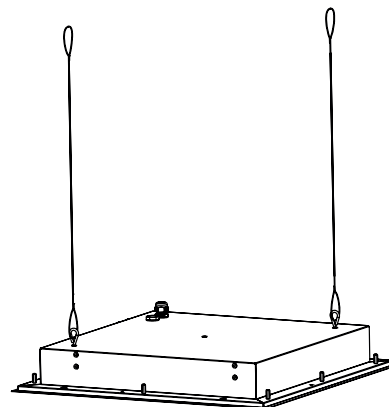
Lighting fixtures for areas with danger of explosion

## Accessories on request

- 051232 Set of safety suspension BORDER
- 051233 Nivelation set for BORDER-N-LED

## On request

- MULTI** – maintained emergency lighting is always on (standard luminaire with emergency lighting module) (1h, 3h)
- DIM** – dimmable electronic ballast (DALI)
- 3000/4000/5000/6500 K** – colour temperatures
- Frame for surface mounting
- CB** – central battery system
- NEREZ** - body from stainless steel sheet AISI 304 nebo AISI 316 (at stainless steel design is ambient temperature lower about 5-10°C)



Set of safety suspension BORDER

## Code of luminaire

# BORDER-N-LED-2/21-M623-SQ-GLM-3300-IP66

name of luminaire	light source	ATEX ZONE	type of ceiling	shape of luminaire R/SQ	type of diffuser	luminous flux of LED source	protection of luminaire
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Use of lighting fixtures in areas with danger of explosion	Marking of external influences	Area classification	
		Marking	Directive
Danger of explosion of flammable dust	BE3N1	ZONE 21, 22	ČSN EN 60079-14, ČSN EN 60079-10-2
Danger of explosion of flammable gases and vapours	BE3N2	ZONE 2	ČSN EN 60079-14, ČSN EN 60079-10-1

Lighting fixtures for areas with danger of explosion