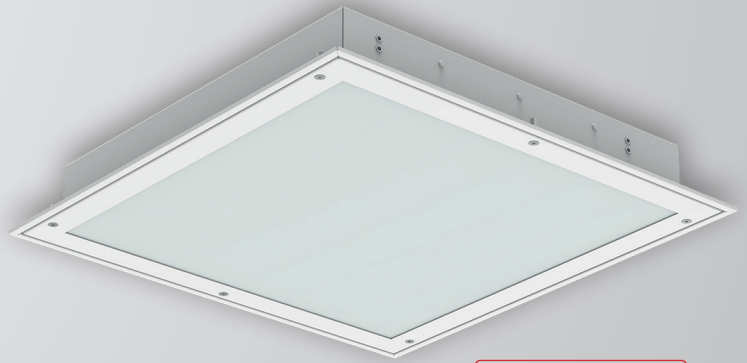
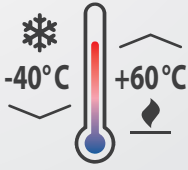


BORDER-N-LED-M598

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

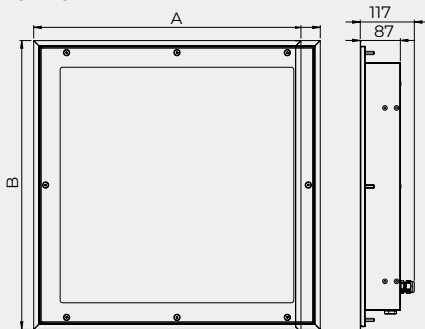
Fastening: Installation using nivelation set for metal suspended ceilings M598 / M623 (not included). Minimum height of mounting space is 200 mm.

Connection: Screwless terminal block for easy mounting, maximum diameter of wires 2.5 mm²

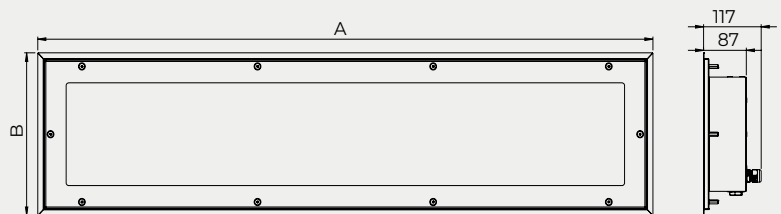
Standard equipment: 2pcs rubber plug M20 for diameter of cable 7-12 mm and 3 pcs EX M20 sealing plug

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



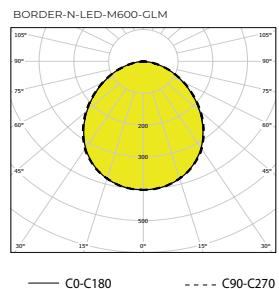
Car industry
workdecks

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)
SQ							
080670	BORDER-N-LED-2/21-M598-SQ-GLM-3300-4K, IP66	2688	17	158	-20°C/60°C	598x598x87	10,5
080671	BORDER-N-LED-2/21-M598-SQ-GLM-4800-4K, IP66	3978	27	147	-20°C/60°C	598x598x87	10,5
080672	BORDER-N-LED-2/21-M598-SQ-GLM-6300-4K, IP66	5237	37	142	-20°C/60°C	598x598x87	10,5
080673	BORDER-N-LED-2/21-M598-SQ-GLM-7200-4K, IP66	6067	41	148	-20°C/60°C	598x598x87	10,5
080674	BORDER-N-LED-2/21-M598-SQ-GLM-8700-4K, IP66	7277	49	149	-20°C/60°C	598x598x87	10,5
080675	BORDER-N-LED-2/21-M598-SQ-GLM-12000-4K, IP66	9996	70	143	-20°C/45°C	598x598x87	10,5
SQ - FROST							
081420	BORDER-N-LED-2/21-M598-FROST-SQ-GLM-3300-4K, IP66	2688	17	158	-40°C/55°C	598x598x87	10,5
081421	BORDER-N-LED-2/21-M598-FROST-SQ-GLM-4800-4K, IP66	3978	27	147	-40°C/55°C	598x598x87	10,5
081422	BORDER-N-LED-2/21-M598-FROST-SQ-GLM-6300-4K, IP66	5237	37	142	-40°C/55°C	598x598x87	10,5
081423	BORDER-N-LED-2/21-M598-FROST-SQ-GLM-7200-4K, IP66	6067	41	148	-40°C/60°C	598x598x87	10,5
081424	BORDER-N-LED-2/21-M598-FROST-SQ-GLM-8700-4K, IP66	7277	49	149	-40°C/60°C	598x598x87	10,5
R							
080700	BORDER-N-LED-2/21-M598-R-GLM-3300-4K, IP66	2630	17	155	-20°C/60°C	1198x298x87	11,5
080701	BORDER-N-LED-2/21-M598-R-GLM-4800-4K, IP66	3906	27	145	-20°C/60°C	1198x298x87	11,5
080702	BORDER-N-LED-2/21-M598-R-GLM-6300-4K, IP66	5143	37	139	-20°C/60°C	1198x298x87	11,5
080703	BORDER-N-LED-2/21-M598-R-GLM-7200-4K, IP66	5928	41	145	-20°C/60°C	1198x298x87	11,5
080704	BORDER-N-LED-2/21-M598-R-GLM-8700-4K, IP66	7077	49	144	-20°C/55°C	1198x298x87	11,5
080705	BORDER-N-LED-2/21-M598-R-GLM-12000-4K, IP66	9816	70	140	-20°C/45°C	1198x298x87	11,5
R - FROST							
081450	BORDER-N-LED-2/21-M598-FROST-R-GLM-3300-4K, IP66	2630	17	155	-40°C/60°C	1198x298x87	11,5
081451	BORDER-N-LED-2/21-M598-FROST-R-GLM-4800-4K, IP66	3906	27	145	-40°C/60°C	1198x298x87	11,5
081452	BORDER-N-LED-2/21-M598-FROST-R-GLM-6300-4K, IP66	5143	37	139	-40°C/60°C	1198x298x87	11,5
081453	BORDER-N-LED-2/21-M598-FROST-R-GLM-7200-4K, IP66	5928	41	145	-40°C/60°C	1198x298x87	11,5
081454	BORDER-N-LED-2/21-M598-FROST-R-GLM-8700-4K, IP66	7077	49	144	-40°C/60°C	1198x298x87	11,5

Tolerance of luminous flux and power input of the lighting

GLM – matt tempered safety glass

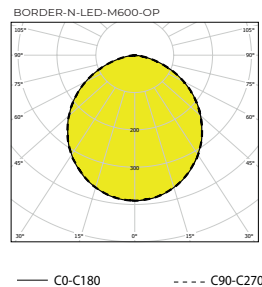


OP – clear PC + opal plexiglass

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)
SQ							
080676	BORDER-N-LED-2/21-M598-SQ-OP-3300-4K, IP66	2372	17	140	-20°C/60°C	598x598x87	10,5
080677	BORDER-N-LED-2/21-M598-SQ-OP-4800-4K, IP66	3510	27	130	-20°C/60°C	598x598x87	10,5
080678	BORDER-N-LED-2/21-M598-SQ-OP-6300-4K, IP66	4621	37	125	-20°C/60°C	598x598x87	10,5
080679	BORDER-N-LED-2/21-M598-SQ-OP-7200-4K, IP66	5353	41	131	-20°C/60°C	598x598x87	10,5
080680	BORDER-N-LED-2/21-M598-SQ-OP-8700-4K, IP66	6420	49	131	-20°C/60°C	598x598x87	10,5
080681	BORDER-N-LED-2/21-M598-SQ-OP-12000-4K, IP66	8820	70	126	-20°C/45°C	598x598x87	10,5
SQ - FROST							
081426	BORDER-N-LED-2/21-M598-FROST-SQ-OP-3300-4K, IP66	2372	17	140	-40°C/55°C	598x598x87	10,5
081427	BORDER-N-LED-2/21-M598-FROST-SQ-OP-4800-4K, IP66	3510	27	130	-40°C/55°C	598x598x87	10,5
081428	BORDER-N-LED-2/21-M598-FROST-SQ-OP-6300-4K, IP66	4621	37	125	-40°C/55°C	598x598x87	10,5
081429	BORDER-N-LED-2/21-M598-FROST-SQ-OP-7200-4K, IP66	5353	41	131	-40°C/60°C	598x598x87	10,5
081430	BORDER-N-LED-2/21-M598-FROST-SQ-OP-8700-4K, IP66	6420	49	131	-40°C/60°C	598x598x87	10,5
R							
080706	BORDER-N-LED-2/21-M598-R-OP-3300-4K, IP66	2370	17	139	-20°C/60°C	1198x298x87	11,5
080707	BORDER-N-LED-2/21-M598-R-OP-4800-4K, IP66	3519	27	130	-20°C/60°C	1198x298x87	11,5
080708	BORDER-N-LED-2/21-M598-R-OP-6300-4K, IP66	4634	37	125	-20°C/60°C	1198x298x87	11,5
080709	BORDER-N-LED-2/21-M598-R-OP-7200-4K, IP66	5341	41	130	-20°C/60°C	1198x298x87	11,5
080710	BORDER-N-LED-2/21-M598-R-OP-8700-4K, IP66	6376	49	130	-20°C/55°C	1198x298x87	11,5
080711	BORDER-N-LED-2/21-M598-R-OP-12000-4K, IP66	8844	70	126	-20°C/40°C	1198x298x87	11,5
R - FROST							
081456	BORDER-N-LED-2/21-M598-FROST-R-OP-3300-4K, IP66	2370	17	139	-40°C/60°C	1198x298x87	11,5
081457	BORDER-N-LED-2/21-M598-FROST-R-OP-4800-4K, IP66	3519	27	130	-40°C/60°C	1198x298x87	11,5
081458	BORDER-N-LED-2/21-M598-FROST-R-OP-6300-4K, IP66	4634	37	125	-40°C/60°C	1198x298x87	11,5
081459	BORDER-N-LED-2/21-M598-FROST-R-OP-7200-4K, IP66	5341	41	130	-40°C/60°C	1198x298x87	11,5
081460	BORDER-N-LED-2/21-M598-FROST-R-OP-8700-4K, IP66	6376	49	130	-40°C/60°C	1198x298x87	11,5

Tolerance of luminous flux and power input of the lighting

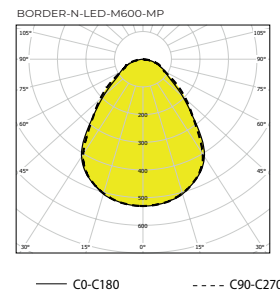
OP – clear PC + opal plexiglass



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)
SQ							
080682	BORDER-N-LED-2/21-M598-SQ-MP-3300-4K, IP66	2359	17	139	-20°C/60°C	598x598x87	10,5
080683	BORDER-N-LED-2/21-M598-SQ-MP-4800-4K, IP66	3491	27	129	-20°C/60°C	598x598x87	10,5
080684	BORDER-N-LED-2/21-M598-SQ-MP-6300-4K, IP66	4596	37	124	-20°C/60°C	598x598x87	10,5
080685	BORDER-N-LED-2/21-M598-SQ-MP-7200-4K, IP66	5324	41	130	-20°C/60°C	598x598x87	10,5
080686	BORDER-N-LED-2/21-M598-SQ-MP-8700-4K, IP66	6386	49	130	-20°C/60°C	598x598x87	10,5
080687	BORDER-N-LED-2/21-M598-SQ-MP-12000-4K, IP66	8772	70	125	-20°C/45°C	598x598x87	10,5

MP - clear PC + microprismatic plexiglass



SQ - FROST							
081432	BORDER-N-LED-2/21-M598-FROST-SQ-MP-3300-4K, IP66	2359	17	139	-40°C/55°C	598x598x87	10,5
081433	BORDER-N-LED-2/21-M598-FROST-SQ-MP-4800-4K, IP66	3491	27	129	-40°C/55°C	598x598x87	10,5
081434	BORDER-N-LED-2/21-M598-FROST-SQ-MP-6300-4K, IP66	4596	37	124	-40°C/55°C	598x598x87	10,5
081435	BORDER-N-LED-2/21-M598-FROST-SQ-MP-7200-4K, IP66	5324	41	130	-40°C/60°C	598x598x87	10,5
081436	BORDER-N-LED-2/21-M598-FROST-SQ-MP-8700-4K, IP66	6386	49	130	-40°C/60°C	598x598x87	10,5

R							
080712	BORDER-N-LED-2/21-M598-R-MP-3300-4K, IP66	2347	17	138	-20°C/60°C	1198x298x87	11,5
080713	BORDER-N-LED-2/21-M598-R-MP-4800-4K, IP66	3486	27	129	-20°C/60°C	1198x298x87	11,5
080714	BORDER-N-LED-2/21-M598-R-MP-6300-4K, IP66	4590	37	124	-20°C/60°C	1198x298x87	11,5
080715	BORDER-N-LED-2/21-M598-R-MP-7200-4K, IP66	5291	41	129	-20°C/60°C	1198x298x87	11,5
080716	BORDER-N-LED-2/21-M598-R-MP-8700-4K, IP66	6315	49	129	-20°C/55°C	1198x298x87	11,5
080717	BORDER-N-LED-2/21-M598-R-MP-12000-4K, IP66	8760	70	125	-20°C/40°C	1198x298x87	11,5

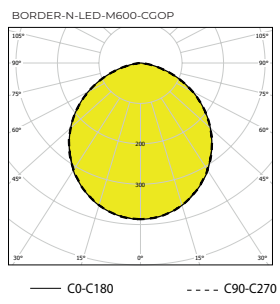
R - FROST							
081462	BORDER-N-LED-2/21-M598-FROST-R-MP-3300-4K, IP66	2347	17	138	-40°C/60°C	1198x298x87	11,5
081463	BORDER-N-LED-2/21-M598-FROST-R-MP-4800-4K, IP66	3486	27	129	-40°C/60°C	1198x298x87	11,5
081464	BORDER-N-LED-2/21-M598-FROST-R-MP-6300-4K, IP66	4590	37	124	-40°C/60°C	1198x298x87	11,5
081465	BORDER-N-LED-2/21-M598-FROST-R-MP-7200-4K, IP66	5291	41	129	-40°C/60°C	1198x298x87	11,5
081466	BORDER-N-LED-2/21-M598-FROST-R-MP-8700-4K, IP66	6315	49	129	-40°C/60°C	1198x298x87	11,5

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)
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SQ							
080688	BORDER-N-LED-2/21-M598-SQ-CGOP-3300-4K, IP66	2459	17	145	-20°C/60°C	598x598x87	10,5
080689	BORDER-N-LED-2/21-M598-SQ-CGOP-4800-4K, IP66	3639	27	135	-20°C/60°C	598x598x87	10,5
080690	BORDER-N-LED-2/21-M598-SQ-CGOP-6300-4K, IP66	4791	37	129	-20°C/60°C	598x598x87	10,5
080691	BORDER-N-LED-2/21-M598-SQ-CGOP-7200-4K, IP66	5550	41	135	-20°C/60°C	598x598x87	10,5
080692	BORDER-N-LED-2/21-M598-SQ-CGOP-8700-4K, IP66	6656	49	136	-20°C/60°C	598x598x87	10,5
080693	BORDER-N-LED-2/21-M598-SQ-CGOP-12000-4K, IP66	9144	70	131	-20°C/45°C	598x598x87	10,5

CGOP - clear tempered safety glass + opal plexiglass



SQ - FROST							
081438	BORDER-N-LED-2/21-M598-FROST-SQ-CGOP-3300-4K, IP66	2459	17	145	-40°C/55°C	598x598x87	10,5
081439	BORDER-N-LED-2/21-M598-FROST-SQ-CGOP-4800-4K, IP66	3639	27	135	-40°C/55°C	598x598x87	10,5
081440	BORDER-N-LED-2/21-M598-FROST-SQ-CGOP-6300-4K, IP66	4791	37	129	-40°C/55°C	598x598x87	10,5
081441	BORDER-N-LED-2/21-M598-FROST-SQ-CGOP-7200-4K, IP66	5550	41	135	-40°C/60°C	598x598x87	10,5
081442	BORDER-N-LED-2/21-M598-FROST-SQ-CGOP-8700-4K, IP66	6656	49	136	-40°C/60°C	598x598x87	10,5

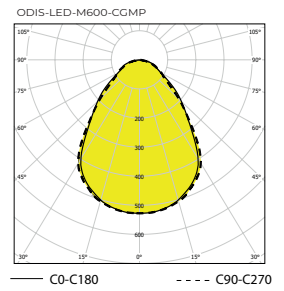
R							
080718	BORDER-N-LED-2/21-M598-R-CGOP-3300-4K, IP66	2331	17	137	-20°C/60°C	1198x298x87	11,5
080719	BORDER-N-LED-2/21-M598-R-CGOP-4800-4K, IP66	3462	27	128	-20°C/60°C	1198x298x87	11,5
080720	BORDER-N-LED-2/21-M598-R-CGOP-6300-4K, IP66	4558	37	123	-20°C/60°C	1198x298x87	11,5
080721	BORDER-N-LED-2/21-M598-R-CGOP-7200-4K, IP66	5254	41	128	-20°C/60°C	1198x298x87	11,5
080722	BORDER-N-LED-2/21-M598-R-CGOP-8700-4K, IP66	6272	49	128	-20°C/55°C	1198x298x87	11,5
080723	BORDER-N-LED-2/21-M598-R-CGOP-12000-4K, IP66	8700	70	124	-20°C/40°C	1198x298x87	11,5

R - FROST							
081468	BORDER-N-LED-2/21-M598-FROST-R-CGOP-3300-4K, IP66	2331	17	137	-40°C/60°C	1198x298x87	11,5
081469	BORDER-N-LED-2/21-M598-FROST-R-CGOP-4800-4K, IP66	3462	27	128	-40°C/60°C	1198x298x87	11,5
081470	BORDER-N-LED-2/21-M598-FROST-R-CGOP-6300-4K, IP66	4558	37	123	-40°C/60°C	1198x298x87	11,5
081471	BORDER-N-LED-2/21-M598-FROST-R-CGOP-7200-4K, IP66	5254	41	128	-40°C/60°C	1198x298x87	11,5
081472	BORDER-N-LED-2/21-M598-FROST-R-CGOP-8700-4K, IP66	6272	49	128	-40°C/60°C	1198x298x87	11,5

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)
SQ							
080694	BORDER-N-LED-2/21-M598-SQ-CGMP-3300-4K, IP66	2440	17	144	-20°C/60°C	598x598x87	10,5
080695	BORDER-N-LED-2/21-M598-SQ-CGMP-4800-4K, IP66	3610	27	134	-20°C/60°C	598x598x87	10,5
080696	BORDER-N-LED-2/21-M598-SQ-CGMP-6300-4K, IP66	4753	37	128	-20°C/60°C	598x598x87	10,5
080697	BORDER-N-LED-2/21-M598-SQ-CGMP-7200-4K, IP66	5506	41	134	-20°C/60°C	598x598x87	10,5
080698	BORDER-N-LED-2/21-M598-SQ-CGMP-8700-4K, IP66	6604	49	135	-20°C/60°C	598x598x87	10,5
080699	BORDER-N-LED-2/21-M598-SQ-CGMP-12000-4K, IP66	9072	70	130	-20°C/45°C	598x598x87	10,5
SQ - FROST							
081444	BORDER-N-LED-2/21-M598-FROST-SQ-CGMP-3300-4K, IP66	2440	17	144	-40°C/55°C	598x598x87	10,5
081445	BORDER-N-LED-2/21-M598-FROST-SQ-CGMP-4800-4K, IP66	3610	27	134	-40°C/55°C	598x598x87	10,5
081446	BORDER-N-LED-2/21-M598-FROST-SQ-CGMP-6300-4K, IP66	4753	37	128	-40°C/55°C	598x598x87	10,5
081447	BORDER-N-LED-2/21-M598-FROST-SQ-CGMP-7200-4K, IP66	5506	41	134	-40°C/60°C	598x598x87	10,5
081448	BORDER-N-LED-2/21-M598-FROST-SQ-CGMP-8700-4K, IP66	6604	49	135	-40°C/60°C	598x598x87	10,5
R							
080724	BORDER-N-LED-2/21-M598-R-CGMP-3300-4K, IP66	2360	17	139	-20°C/60°C	1198x298x87	11,5
080725	BORDER-N-LED-2/21-M598-R-CGMP-4800-4K, IP66	3505	27	130	-20°C/60°C	1198x298x87	11,5
080726	BORDER-N-LED-2/21-M598-R-CGMP-6300-4K, IP66	4615	37	125	-20°C/60°C	1198x298x87	11,5
080727	BORDER-N-LED-2/21-M598-R-CGMP-7200-4K, IP66	5320	41	130	-20°C/60°C	1198x298x87	11,5
080728	BORDER-N-LED-2/21-M598-R-CGMP-8700-4K, IP66	6350	49	130	-20°C/55°C	1198x298x87	11,5
080729	BORDER-N-LED-2/21-M598-R-CGMP-12000-4K, IP66	8808	70	126	-20°C/45°C	1198x298x87	11,5
R - FROST							
081474	BORDER-N-LED-2/21-M598-FROST-R-CGMP-3300-4K, IP66	2360	17	139	-40°C/60°C	1198x298x87	11,5
081475	BORDER-N-LED-2/21-M598-FROST-R-CGMP-4800-4K, IP66	3505	27	130	-40°C/60°C	1198x298x87	11,5
081476	BORDER-N-LED-2/21-M598-FROST-R-CGMP-6300-4K, IP66	4615	37	125	-40°C/60°C	1198x298x87	11,5
081477	BORDER-N-LED-2/21-M598-FROST-R-CGMP-7200-4K, IP66	5320	41	130	-40°C/60°C	1198x298x87	11,5
081478	BORDER-N-LED-2/21-M598-FROST-R-CGMP-8700-4K, IP66	6350	49	130	-40°C/60°C	1198x298x87	11,5

CGMP - clear tempered safety glass + microprismatic plexiglass



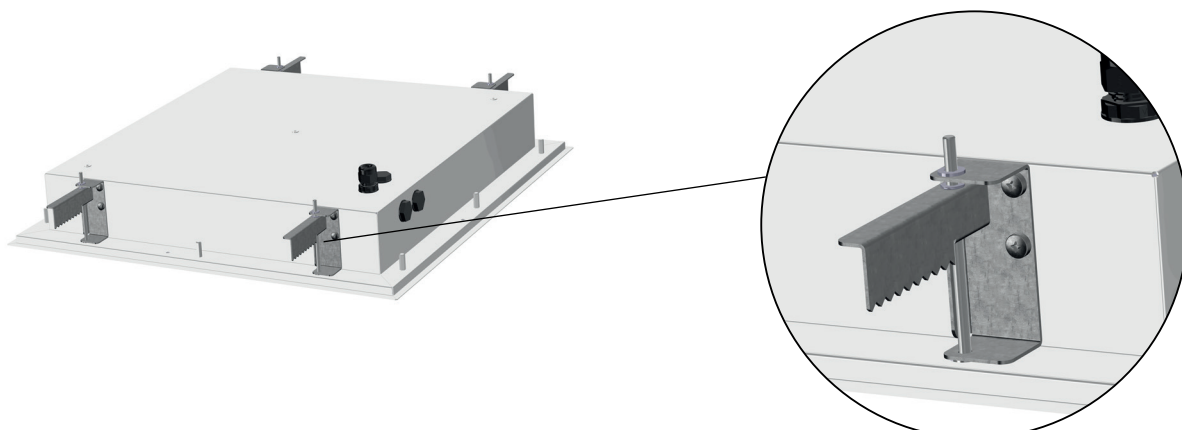
Tolerance of luminous flux and power input of the lighting

Diffuser options

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

Mounting into false ceilings of M600 modules. Installation using nivelation set for metal suspended ceilings M598 / M623 (not included), detail below.



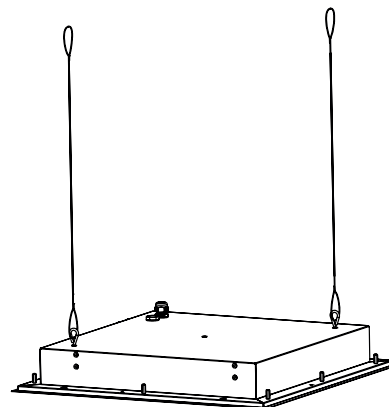
Lighting fixtures for areas with danger of explosion

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-M598-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