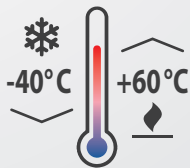


BORDER-N-LED-M600

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 or surface mounting with surface frame.

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

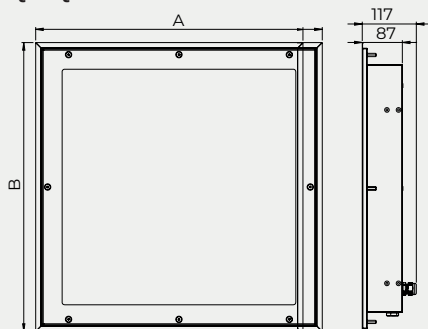
Fastening: Mounting into false ceilings of M600 modules, minimum height of mounting space is 200 mm or installation using frame for surface mounting.

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

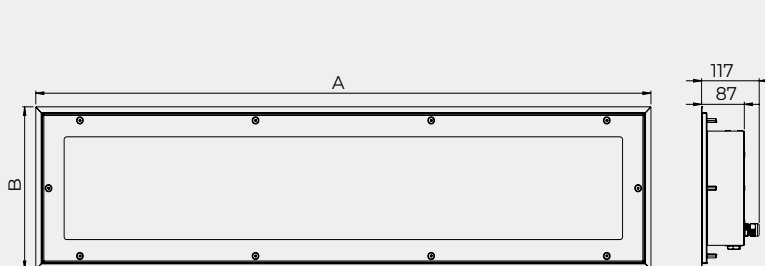
Standard equipment: 2pcs rubber plug M20 for diameter of cable 7-12 mm and 3 pcs EX M20 sealing plug

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 2300 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

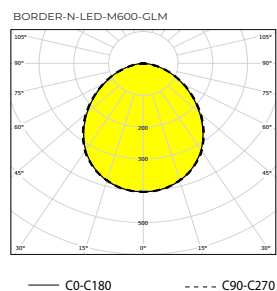


Car industry
workdecks

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							
080550	BORDER-N-LED-2/21-M600-SQ-GLM-3300-4K, IP66	2688	17	158	-20°C/60°C	595x595x87	10,5
080551	BORDER-N-LED-2/21-M600-SQ-GLM-4800-4K, IP66	3978	27	147	-20°C/60°C	595x595x87	10,5
080552	BORDER-N-LED-2/21-M600-SQ-GLM-6300-4K, IP66	5237	37	142	-20°C/60°C	595x595x87	10,5
080553	BORDER-N-LED-2/21-M600-SQ-GLM-7200-4K, IP66	6067	41	148	-20°C/60°C	595x595x87	10,5
080554	BORDER-N-LED-2/21-M600-SQ-GLM-8700-4K, IP66	7277	49	149	-20°C/60°C	595x595x87	10,5
080555	BORDER-N-LED-2/21-M600-SQ-GLM-12000-4K, IP66	9996	70	143	-20°C/45°C	595x595x87	10,5
SQ - FROST							
081300	BORDER-N-LED-2/21-M600-FROST-SQ-GLM-3300-4K, IP66	2688	17	158	-40°C/55°C	595x595x87	10,5
081301	BORDER-N-LED-2/21-M600-FROST-SQ-GLM-4800-4K, IP66	3978	27	147	-40°C/55°C	595x595x87	10,5
081302	BORDER-N-LED-2/21-M600-FROST-SQ-GLM-6300-4K, IP66	5237	37	142	-40°C/55°C	595x595x87	10,5
081303	BORDER-N-LED-2/21-M600-FROST-SQ-GLM-7200-4K, IP66	6067	41	148	-40°C/60°C	595x595x87	10,5
081304	BORDER-N-LED-2/21-M600-FROST-SQ-GLM-8700-4K, IP66	7277	49	149	-40°C/60°C	595x595x87	10,5
R							
080580	BORDER-N-LED-2/21-M600-R-GLM-3300-4K, IP66	2630	17	155	-20°C/60°C	1195x295x87	11,5
080581	BORDER-N-LED-2/21-M600-R-GLM-4800-4K, IP66	3906	27	145	-20°C/60°C	1195x295x87	11,5
080582	BORDER-N-LED-2/21-M600-R-GLM-6300-4K, IP66	5143	37	139	-20°C/60°C	1195x295x87	11,5
080583	BORDER-N-LED-2/21-M600-R-GLM-7200-4K, IP66	5928	41	145	-20°C/60°C	1195x295x87	11,5
080584	BORDER-N-LED-2/21-M600-R-GLM-8700-4K, IP66	7077	49	144	-20°C/55°C	1195x295x87	11,5
080585	BORDER-N-LED-2/21-M600-R-GLM-12000-4K, IP66	9816	70	140	-20°C/45°C	1195x295x87	11,5
R - FROST							
081330	BORDER-N-LED-2/21-M600-FROST-R-GLM-3300-4K, IP66	2630	17	155	-40°C/60°C	1195x295x87	11,5
081331	BORDER-N-LED-2/21-M600-FROST-R-GLM-4800-4K, IP66	3906	27	145	-40°C/60°C	1195x295x87	11,5
081332	BORDER-N-LED-2/21-M600-FROST-R-GLM-6300-4K, IP66	5143	37	139	-40°C/60°C	1195x295x87	11,5
081333	BORDER-N-LED-2/21-M600-FROST-R-GLM-7200-4K, IP66	5928	41	145	-40°C/60°C	1195x295x87	11,5
081334	BORDER-N-LED-2/21-M600-FROST-R-GLM-8700-4K, IP66	7077	49	144	-40°C/60°C	1195x295x87	11,5

Tolerance of luminous flux and power input of the lighting

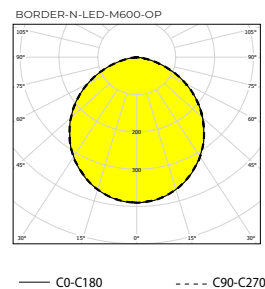
GLM – matt tempered safety glass



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							
080556	BORDER-N-LED-2/21-M600-SQ-OP-3300-4K, IP66	2370	17	139	-20°C/60°C	595x595x87	10,5
080557	BORDER-N-LED-2/21-M600-SQ-OP-4800-4K, IP66	3519	27	130	-20°C/60°C	595x595x87	10,5
080558	BORDER-N-LED-2/21-M600-SQ-OP-6300-4K, IP66	4634	37	125	-20°C/60°C	595x595x87	10,5
080559	BORDER-N-LED-2/21-M600-SQ-OP-7200-4K, IP66	5341	41	130	-20°C/60°C	595x595x87	10,5
080560	BORDER-N-LED-2/21-M600-SQ-OP-8700-4K, IP66	6376	49	130	-20°C/60°C	595x595x87	10,5
080561	BORDER-N-LED-2/21-M600-SQ-OP-12000-4K, IP66	8844	70	126	-20°C/45°C	595x595x87	10,5
SQ - FROST							
081306	BORDER-N-LED-2/21-M600-FROST-SQ-OP-3300-4K, IP66	2372	17	140	-40°C/55°C	595x595x87	10,5
081307	BORDER-N-LED-2/21-M600-FROST-SQ-OP-4800-4K, IP66	3510	27	130	-40°C/55°C	595x595x87	10,5
081308	BORDER-N-LED-2/21-M600-FROST-SQ-OP-6300-4K, IP66	4621	37	125	-40°C/55°C	595x595x87	10,5
081309	BORDER-N-LED-2/21-M600-FROST-SQ-OP-7200-4K, IP66	5353	41	131	-40°C/60°C	595x595x87	10,5
081310	BORDER-N-LED-2/21-M600-FROST-SQ-OP-8700-4K, IP66	6420	49	131	-40°C/60°C	595x595x87	10,5
R							
080586	BORDER-N-LED-2/21-M600-R-OP-3300-4K, IP66	2356	18	131	-20°C/60°C	1195x295x87	11,5
080587	BORDER-N-LED-2/21-M600-R-OP-4800-4K, IP66	3486	29	120	-20°C/60°C	1195x295x87	11,5
080588	BORDER-N-LED-2/21-M600-R-OP-6300-4K, IP66	4590	40	115	-20°C/60°C	1195x295x87	11,5
080589	BORDER-N-LED-2/21-M600-R-OP-7200-4K, IP66	5317	45	118	-20°C/60°C	1195x295x87	11,5
080590	BORDER-N-LED-2/21-M600-R-OP-8700-4K, IP66	6391	53	121	-20°C/55°C	1195x295x87	11,5
080591	BORDER-N-LED-2/21-M600-R-OP-12000-4K, IP66	8760	71	123	-20°C/40°C	1195x295x87	11,5
R - FROST							
081336	BORDER-N-LED-2/21-M600-FROST-R-OP-3300-4K, IP66	2370	17	139	-40°C/60°C	1195x295x87	11,5
081337	BORDER-N-LED-2/21-M600-FROST-R-OP-4800-4K, IP66	3519	27	130	-40°C/60°C	1195x295x87	11,5
081338	BORDER-N-LED-2/21-M600-FROST-R-OP-6300-4K, IP66	4634	37	125	-40°C/60°C	1195x295x87	11,5
081339	BORDER-N-LED-2/21-M600-FROST-R-OP-7200-4K, IP66	5341	41	130	-40°C/60°C	1195x295x87	11,5
081340	BORDER-N-LED-2/21-M600-FROST-R-OP-8700-4K, IP66	6376	49	130	-40°C/60°C	1195x295x87	11,5

Tolerance of luminous flux and power input of the lighting

OP – clear PC + opal plexiglass



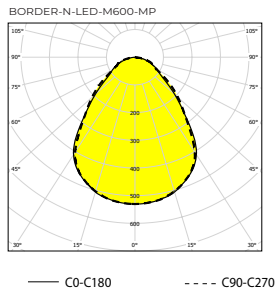
Order number	Name	Lighting fixture luminous flux (lm)	Power input (W)	Rated power output (lm/W)	Ta (°C)	Dimensions of lighting fixture A x B x C (mm)	Weight (kg)
SQ							
080562	BORDER-N-LED-2/21-M600-SQ-MP-3300-4K, IP66	2359	17	139	-20°C/60°C	595x595x87	10,5
080563	BORDER-N-LED-2/21-M600-SQ-MP-4800-4K, IP66	3491	27	129	-20°C/60°C	595x595x87	10,5
080564	BORDER-N-LED-2/21-M600-SQ-MP-6300-4K, IP66	4596	37	124	-20°C/60°C	595x595x87	10,5
080565	BORDER-N-LED-2/21-M600-SQ-MP-7200-4K, IP66	5324	41	130	-20°C/60°C	595x595x87	10,5
080566	BORDER-N-LED-2/21-M600-SQ-MP-8700-4K, IP66	6386	49	130	-20°C/60°C	595x595x87	10,5
080567	BORDER-N-LED-2/21-M600-SQ-MP-12000-4K, IP66	8772	70	125	-20°C/45°C	595x595x87	10,5
SQ - FROST							
081312	BORDER-N-LED-2/21-M600-FROST-SQ-MP-3300-4K, IP66	2359	17	139	-40°C/55°C	595x595x87	10,5
081313	BORDER-N-LED-2/21-M600-FROST-SQ-MP-4800-4K, IP66	3491	27	129	-40°C/55°C	595x595x87	10,5
081314	BORDER-N-LED-2/21-M600-FROST-SQ-MP-6300-4K, IP66	4596	37	124	-40°C/55°C	595x595x87	10,5
081315	BORDER-N-LED-2/21-M600-FROST-SQ-MP-7200-4K, IP66	5324	41	130	-40°C/60°C	595x595x87	10,5
081316	BORDER-N-LED-2/21-M600-FROST-SQ-MP-8700-4K, IP66	6386	49	130	-40°C/60°C	595x595x87	10,5
R							
080592	BORDER-N-LED-2/21-M600-R-MP-3300-4K, IP66	2347	17	138	-20°C/60°C	1195x295x87	11,5
080593	BORDER-N-LED-2/21-M600-R-MP-4800-4K, IP66	3486	27	129	-20°C/60°C	1195x295x87	11,5
080594	BORDER-N-LED-2/21-M600-R-MP-6300-4K, IP66	4590	37	124	-20°C/60°C	1195x295x87	11,5
080595	BORDER-N-LED-2/21-M600-R-MP-7200-4K, IP66	5291	41	129	-20°C/60°C	1195x295x87	11,5
080596	BORDER-N-LED-2/21-M600-R-MP-8700-4K, IP66	6315	49	129	-20°C/55°C	1195x295x87	11,5
080597	BORDER-N-LED-2/21-M600-R-MP-12000-4K, IP66	8760	70	125	-20°C/40°C	1195x295x87	11,5
R - FROST							
081342	BORDER-N-LED-2/21-M600-FROST-R-MP-3300-4K, IP66	2347	17	138	-40°C/60°C	1195x295x87	11,5
081343	BORDER-N-LED-2/21-M600-FROST-R-MP-4800-4K, IP66	3486	27	129	-40°C/60°C	1195x295x87	11,5
081344	BORDER-N-LED-2/21-M600-FROST-R-MP-6300-4K, IP66	4590	37	124	-40°C/60°C	1195x295x87	11,5
081345	BORDER-N-LED-2/21-M600-FROST-R-MP-7200-4K, IP66	5291	41	129	-40°C/60°C	1195x295x87	11,5
081346	BORDER-N-LED-2/21-M600-FROST-R-MP-8700-4K, IP66	6315	49	129	-40°C/60°C	1195x295x87	11,5

Tolerance of luminous flux and power input of the lighting

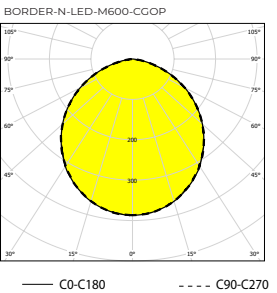
Order number	Name	Lighting fixture luminous flux (lm)	Power input (W)	Rated power output (lm/W)	Ta (°C)	Dimensions of lighting fixture A x B x C (mm)	Weight (kg)
SQ							
080568	BORDER-N-LED-2/21-M600-SQ-CGOP-3300-4K, IP66	2459	17	145	-20°C/60°C	595x595x87	10,5
080569	BORDER-N-LED-2/21-M600-SQ-CGOP-4800-4K, IP66	3639	27	135	-20°C/60°C	595x595x87	10,5
080570	BORDER-N-LED-2/21-M600-SQ-CGOP-6300-4K, IP66	4791	37	129	-20°C/60°C	595x595x87	10,5
080571	BORDER-N-LED-2/21-M600-SQ-CGOP-7200-4K, IP66	5550	41	135	-20°C/60°C	595x595x87	10,5
080572	BORDER-N-LED-2/21-M600-SQ-CGOP-8700-4K, IP66	6656	49	136	-20°C/60°C	595x595x87	10,5
080573	BORDER-N-LED-2/21-M600-SQ-CGOP-12000-4K, IP66	9144	70	131	-20°C/45°C	595x595x87	10,5
SQ - FROST							
081318	BORDER-N-LED-2/21-M600-FROST-SQ-CGOP-3300-4K, IP66	2459	17	145	-40°C/55°C	595x595x87	10,5
081319	BORDER-N-LED-2/21-M600-FROST-SQ-CGOP-4800-4K, IP66	3639	27	135	-40°C/55°C	595x595x87	10,5
081320	BORDER-N-LED-2/21-M600-FROST-SQ-CGOP-6300-4K, IP66	4791	37	129	-40°C/55°C	595x595x87	10,5
081321	BORDER-N-LED-2/21-M600-FROST-SQ-CGOP-7200-4K, IP66	5550	41	135	-40°C/60°C	595x595x87	10,5
081322	BORDER-N-LED-2/21-M600-FROST-SQ-CGOP-8700-4K, IP66	6656	49	136	-40°C/60°C	595x595x87	10,5
R							
080598	BORDER-N-LED-2/21-M600-R-CGOP-3300-4K, IP66	2331	17	137	-20°C/60°C	1195x295x87	11,5
080599	BORDER-N-LED-2/21-M600-R-CGOP-4800-4K, IP66	3462	27	128	-20°C/60°C	1195x295x87	11,5
080600	BORDER-N-LED-2/21-M600-R-CGOP-6300-4K, IP66	4558	37	123	-20°C/60°C	1195x295x87	11,5
080601	BORDER-N-LED-2/21-M600-R-CGOP-7200-4K, IP66	5254	41	128	-20°C/60°C	1195x295x87	11,5
080602	BORDER-N-LED-2/21-M600-R-CGOP-8700-4K, IP66	6272	49	128	-20°C/55°C	1195x295x87	11,5
080603	BORDER-N-LED-2/21-M600-R-CGOP-12000-4K, IP66	8700	70	124	-20°C/40°C	1195x295x87	11,5
R - FROST							
081348	BORDER-N-LED-2/21-M600-FROST-R-CGOP-3300-4K, IP66	2331	17	137	-40°C/60°C	1195x295x87	11,5
081349	BORDER-N-LED-2/21-M600-FROST-R-CGOP-4800-4K, IP66	3462	27	128	-40°C/60°C	1195x295x87	11,5
081350	BORDER-N-LED-2/21-M600-FROST-R-CGOP-6300-4K, IP66	4558	37	123	-40°C/60°C	1195x295x87	11,5
081351	BORDER-N-LED-2/21-M600-FROST-R-CGOP-7200-4K, IP66	5254	41	128	-40°C/60°C	1195x295x87	11,5
081352	BORDER-N-LED-2/21-M600-FROST-R-CGOP-8700-4K, IP66	6272	49	128	-40°C/60°C	1195x295x87	11,5

Tolerance of luminous flux and power input of the lighting

MP - clear PC + microprismatic plexiglass



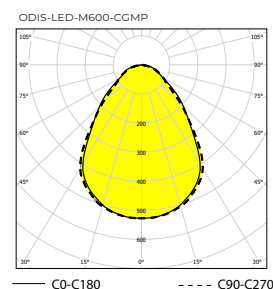
CGOP - clear tempered safety glass + opal plexiglass



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							
080574	BORDER-N-LED-2/21-M600-SQ-CGMP-3300-4K, IP66	2440	17	144	-20°C/60°C	595x595x87	10,5
080575	BORDER-N-LED-2/21-M600-SQ-CGMP-4800-4K, IP66	3610	27	134	-20°C/60°C	595x595x87	10,5
080576	BORDER-N-LED-2/21-M600-SQ-CGMP-6300-4K, IP66	4753	37	128	-20°C/60°C	595x595x87	10,5
080577	BORDER-N-LED-2/21-M600-SQ-CGMP-7200-4K, IP66	5506	41	134	-20°C/60°C	595x595x87	10,5
080578	BORDER-N-LED-2/21-M600-SQ-CGMP-8700-4K, IP66	6604	49	135	-20°C/60°C	595x595x87	10,5
080579	BORDER-N-LED-2/21-M600-SQ-CGMP-12000-4K, IP66	9072	70	130	-20°C/45°C	595x595x87	10,5
SQ - FROST							
081324	BORDER-N-LED-2/21-M600-FROST-SQ-CGMP-3300-4K, IP66	2440	17	144	-40°C/55°C	595x595x87	10,5
081325	BORDER-N-LED-2/21-M600-FROST-SQ-CGMP-4800-4K, IP66	3610	27	134	-40°C/55°C	595x595x87	10,5
081326	BORDER-N-LED-2/21-M600-FROST-SQ-CGMP-6300-4K, IP66	4753	37	128	-40°C/55°C	595x595x87	10,5
081327	BORDER-N-LED-2/21-M600-FROST-SQ-CGMP-7200-4K, IP66	5506	41	134	-40°C/60°C	595x595x87	10,5
081328	BORDER-N-LED-2/21-M600-FROST-SQ-CGMP-8700-4K, IP66	6604	49	135	-40°C/60°C	595x595x87	10,5
R							
080604	BORDER-N-LED-2/21-M600-R-CGMP-3300-4K, IP66	2360	17	139	-20°C/60°C	1195x295x87	11,5
080605	BORDER-N-LED-2/21-M600-R-CGMP-4800-4K, IP66	3505	27	130	-20°C/60°C	1195x295x87	11,5
080606	BORDER-N-LED-2/21-M600-R-CGMP-6300-4K, IP66	4615	37	125	-20°C/60°C	1195x295x87	11,5
080607	BORDER-N-LED-2/21-M600-R-CGMP-7200-4K, IP66	5320	41	130	-20°C/60°C	1195x295x87	11,5
080608	BORDER-N-LED-2/21-M600-R-CGMP-8700-4K, IP66	6350	49	130	-20°C/55°C	1195x295x87	11,5
080609	BORDER-N-LED-2/21-M600-R-CGMP-12000-4K, IP67	8808	70	126	-20°C/45°C	1195x295x87	11,5
R - FROST							
081354	BORDER-N-LED-2/21-M600-FROST-R-CGMP-3300-4K, IP66	2360	17	139	-40°C/60°C	1195x295x87	11,5
081355	BORDER-N-LED-2/21-M600-FROST-R-CGMP-4800-4K, IP66	3505	27	130	-40°C/60°C	1195x295x87	11,5
081356	BORDER-N-LED-2/21-M600-FROST-R-CGMP-6300-4K, IP66	4615	37	125	-40°C/60°C	1195x295x87	11,5
081357	BORDER-N-LED-2/21-M600-FROST-R-CGMP-7200-4K, IP66	5320	41	130	-40°C/60°C	1195x295x87	11,5
081358	BORDER-N-LED-2/21-M600-FROST-R-CGMP-8700-4K, IP66	6350	49	130	-40°C/60°C	1195x295x87	11,5

Tolerance of luminous flux and power input of the lighting

CGMP - clear tempered safety glass + microprismatic plexiglass



Diffuser options

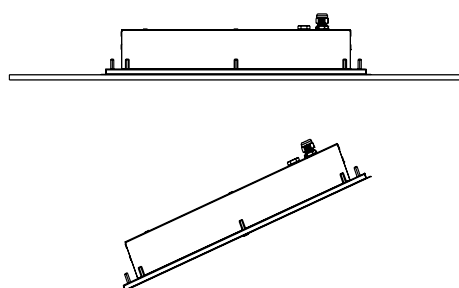
GLM – matt tempered safety glass

MP – clear PC + microprismatic plexiglass
CGMP - clear tempered safety glass + microprismatic plexiglass

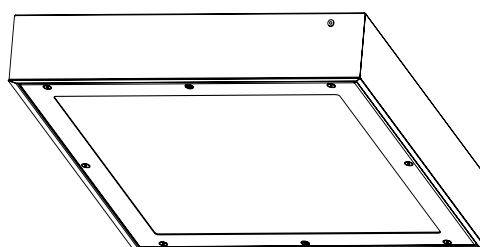
OP – clear PC + opal plexiglass
CGOP - clear tempered safety glass + opal plexiglass

Mounting of luminaire

Mounting into false ceilings of M600 modules



Frame for surface mounting



Accessories on request

051232	Set of safety suspension BORDER
065725	Frame for surface mounting BORDER-SQ 600x600
065726	Frame for surface mounting BORDER-R 1200x300
051233	Nivelation set for BORDER-N-LED

On request

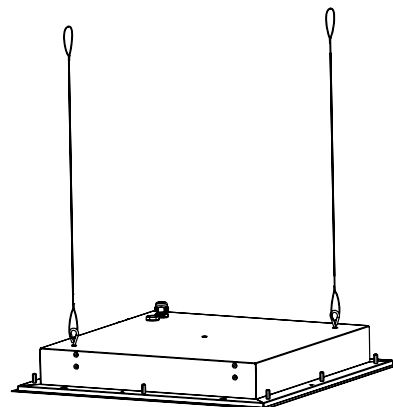
MULTI – maintained emergency lighting is always on (standard luminaire with emergency lighting module) (1h, 3h)

DIM – dimmable electronic ballast (DALI)

3000/4000/5000/6500 K – colour temperatures

Frame for surface mounting

CB – central battery system



Set of safety suspension BORDER

Code of luminaire

BORDER-N-LED-2/21-M600-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

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