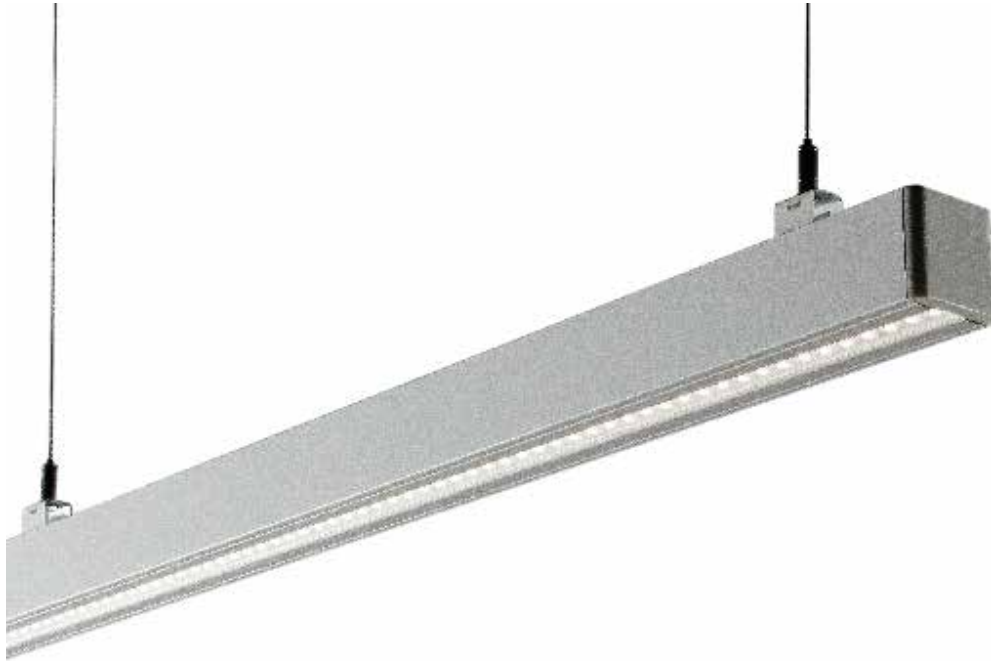


FUNCTIONAL LIGHT LINE FOR RETAIL, INDUSTRY AND WAREHOUSING

BRAGI

- ✔ Excellent lighting performance for main applications in retail, industry and warehousing
- ✔ Minimized total costs of ownership (low energy consumption-, investment-, mounting- and maintenance costs)
- ✔ Luminous efficacy of up to 165 lm/W for the high-efficiency version
- ✔ Functional clean design in minimized dimensions
- ✔ Range of applications
 - Five light distributions optimized to key applications
 - 4m, 3m, 2m and 1m long open ended light line sections
 - LED driver and LED boards with optics come integrated in light line sections
 - Emergency lighting, daylight sensors, presence control can be integrated
 - Standard range and high-efficiency range available





Light line sections for continuous light 4000 lm/m

Length	4 m	3 m	2 m	1 m
Luminous flux	16.000 lm	12.000 lm	8.000 lm	4.000lm
Luminous efficacy	up to 120 lm/W in standard version and up to 160 lm/W in high-efficiency version			

Light line sections for continuous light 3000 lm/m

Length	4 m	3 m	2 m	1 m
Luminous flux	12.000 lm	9.000 lm	6.000 lm	3.000lm
Luminous efficacy	up to 120 lm/W in standard version and up to 160 lm/W in high-efficiency version			

Light line sections for discontinuous light 2000 lm/m

Length	4 m 2 x 1m light and 2 x 1m dark gaps	3 m 2 x 1m light and 1m dark gap in between
Luminous flux	8.000 lm	8.000 lm
Luminous efficacy	up to 125 lm/W in standard version and up to 165 lm/W in high-efficiency version	

Colour temperature	3000 Kelvin / 4000 Kelvin
CRI	R _a >80
Optic / light distribution	narrow-, medium, double asymmetrical, wide beam and opal
Lifetime	50.000 hours, lumen maintenance of 80%
Weight	approx. 2,5 kg per meter
Operating temperature	-20° C to 35° C

ELECTRICAL SPECIFICATIONS

Driver	STD standard, DALI dimming DC suitable
Input voltage	230 V, 50 Hz
LED module	Mid-Power LED boards (1-row)
Through Wiring	3x1.5 mm ² , 5x1.5 mm ² , 7x1.5 mm ²
PF, THD	0,9; 20% max.

COMPLIMENTARY SPECIFICATIONS

Housing material / colour	trunking made from steel, coated white (RAL9016), moreover black (RAL9005) and silver (RAL9006) on request.
Optic material	PMMA

Dimensional drawing

All measures in millimeter

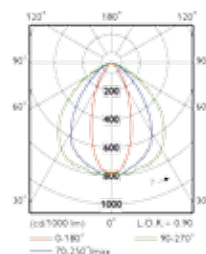


Available in 1, 2, 3, 4 meter

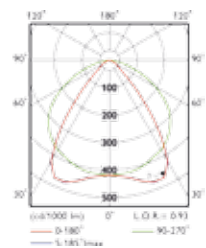


cross section

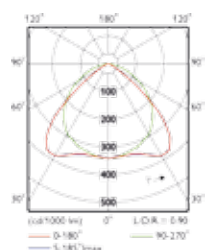
Light distribution



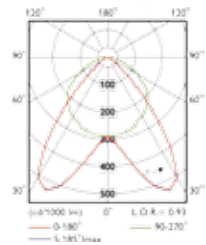
NB, Narrow beam



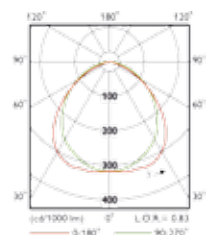
MB, Medium beam



WB, Wide beam



DA, Double asymmetrical



O, Opal

BRAGI CONFIGURATION MATRIX

MATERIAL LIST FOR CONTINUOUS LIGHT

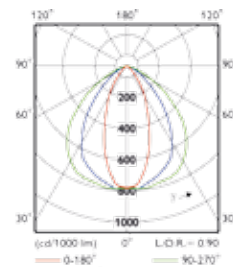
Length of light line (meter)	4 m sections continuous light	3 m sections continuous light	2 m sections continuous light	1 m sections continuous light	ceiling mounting brackets	coupling pieces between trunking sections	end-of-line set (mains connector + 2 trunking end caps + 2 light line end pieces)
1				1	2	0	1
2			1		2	0	1
3		1			2	0	1
4	1				2	0	1
5		1	1		3	1	1
6	1		1		3	1	1
7	1	1			3	1	1
8	2				3	1	1
9	2			1	4	2	1
10	2		1		4	2	1
11	2	1			4	2	1
12	3				4	2	1
13	3			1	5	3	1
14	3		1		5	3	1
15	3	1			5	3	1
16	4				5	3	1
17	4			1	6	4	1
18	4		1		6	4	1
19	4	1			6	4	1
20	5				6	4	1
21	5			1	7	5	1
22	5		1		7	5	1
23	5	1			7	5	1
24	6				7	5	1
25	6			1	8	6	1
26	6		1		8	6	1

MATERIAL LIST FOR NON CONTINUOUS LIGHT (1M LIGHT GAPS)

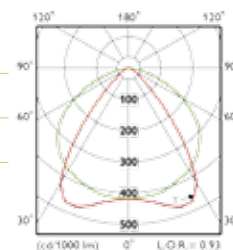
Length of light line (meter)	4 m sections 2 x 1 m light 2 x 1 m gap	3 m sections 2 x 1 m light 1 m gap	1 m section continuous light	ceiling mounting brackets	coupling pieces between trunking sections	end-of-line set (mains connector + 2 trunking end caps + 2 light line end pieces)
3		1		2	0	1
5	1		1	3	1	1
7	1	1		3	1	1
9	2		1	4	2	1
11	2	1		4	2	1
13	3		1	5	3	1
15	3	1		5	3	1
17	4		1	6	4	1
19	4	1		6	4	1
21	5		1	7	5	1
23	5	1		7	5	1
25	6		1	8	6	1

PREFERRED SELECTION

NARROW BEAM (NB)		FOR HIGH HALLS AND HIGH-RACK AREAS			
typical installation height	6-12m				
$I_{\max/2}$ (half peak) / UGR _{4h8h} (glare control)	2x20° (40°), UGR22 in the cross direction				
Continuous light, 4000 lm per meter	Luminous flux (lm)	Luminous efficacy Standard (lm/W)	Luminous efficacy High Efficiency (lm/W)	Order number (Standard)	
BRAGI 16000LM 840 STD NB 5x1.5 4m WH	16000	ca. 120	ca. 160	4250854167626	
BRAGI 12000LM 840 STD NB 5x1.5 3m WH	12000	ca. 120	ca. 160	4250854167701	
BRAGI 8000LM 840 STD NB 5x1.5 2m WH	8000	ca. 120	ca. 160	4250854167787	
BRAGI 4000LM 840 STD NB 5x1.5 1m WH	4000	ca. 120	ca. 160	4250854167862	
Continuous light, 3000 lm per meter					
BRAGI 12000LM 840 STD NB 5x1.5 4m WH	12000	ca. 125	ca. 165	4250854167947	
BRAGI 9000LM 840 STD NB 5x1.5 3m WH	9000	ca. 125	ca. 165	4250854168029	
BRAGI 6000LM 840 STD NB 5x1.5 2m WH	6000	ca. 125	ca. 165	4250854168104	
BRAGI 3000LM 840 STD NB 5x1.5 1m WH	3000	ca. 125	ca. 165	4250854168180	
Non continuous, 1m gaps (NC1)					
BRAGI 8000LM 840 STD NB 5x1.5 4mNC1 WH	8000	ca. 120	ca. 160	4250854168265	
BRAGI 8000LM 840 STD NB 5x1.5 3mNC1 WH	8000	ca. 120	ca. 160	4250854168340	

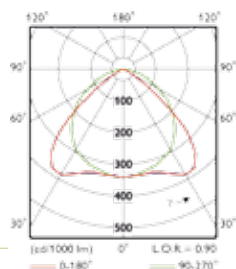


MEDIUM BEAM / DOUBLE ASYMMETRICAL (MB)		FOR GENERAL LIGHTING AT MID-HEIGHT			
typical installation height	5-7 m				
$I_{\max/2}$ (half peak) / UGR _{4h8h} (glare control)	2x40° (80°), UGR22 in the cross direction				
Continuous light, 4000 lm per meter	Luminous flux (lm)	Luminous efficacy Standard (lm/W)	Luminous efficacy High Efficiency (lm/W)	Order number (Standard)	
BRAGI 16000LM 840 STD MB 5x1.5 4m WH	16000	ca. 120	ca. 160	4250854167633	
BRAGI 12000LM 840 STD MB 5x1.5 3m WH	12000	ca. 120	ca. 160	4250854167718	
BRAGI 8000LM 840 STD MB 5x1.5 2m WH	8000	ca. 120	ca. 160	4250854167794	
BRAGI 4000LM 840 STD MB 5x1.5 1m WH	4000	ca. 120	ca. 160	4250854167879	
Continuous light, 3000 lm per meter					
BRAGI 12000LM 840 STD MB 5x1.5 4m WH	12000	ca. 125	ca. 165	4250854167954	
BRAGI 9000LM 840 STD MB 5x1.5 3mWH	9000	ca. 125	ca. 165	4250854168036	
BRAGI 6000LM 840 STD MB 5x1.5 2m WH	6000	ca. 125	ca. 165	4250854168111	
BRAGI 3000LM 840 STD MB 5x1.5 1m WH	3000	ca. 125	ca. 165	4250854168197	
Non continuous, 1m gaps (NC1)					
BRAGI 8000LM 840 STD MB 5x1.5 4m NC1 WH	8000	ca. 120	ca. 160	4250854168272	
BRAGI 8000LM 840 STD MB 5x1.5 L3m NC1 W	8000	ca. 120	ca. 160	4250854168357	

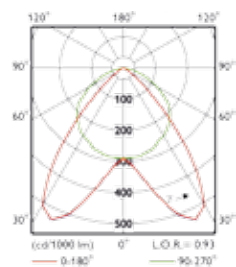


PREFERRED SELECTION

WIDE BEAM (WB)	FOR LOW INSTALLATION HEIGHT			
typical installation height	3-5 m			
$I_{max/2}$ (half peak) / UGR _{4h8h} (glare control)	2x50° (100°), UGR26			
Continuous light, 4000 lm per meter	Luminous flux (lm)	Luminous efficacy Standard (lm/W)	Luminous efficacy High Efficiency (lm/W)	Order number (Standard)
BRAGI 16000LM 840 STD WB 5x1.5 4m WH	16000	ca. 120	ca. 160	4250854167640
BRAGI 12000LM 840 STD WB 5x1.5 3mWH	12000	ca. 120	ca. 160	4250854167725
BRAGI 8000LM 840 STD WB 5x1.5 2m WH	8000	ca. 120	ca. 160	4250854167800
BRAGI 4000LM 840 STD WB 5x1.5 1m WH	4000	ca. 120	ca. 160	4250854167886
Continuous light, 3000 lm per meter				
BRAGI 12000LM 840 STD WB 5x1.5 4mWH	12000	ca. 125	ca. 165	4250854167961
BRAGI 9000LM 840 STD WB 5x1.5 3m WH	9000	ca. 125	ca. 165	4250854168043
BRAGI 6000LM 840 STD WB 5x1.5 2m WH	6000	ca. 125	ca. 165	4250854168128
BRAGI 3000LM 840 STD WB 5x1.5 1m WH	3000	ca. 125	ca. 165	4250854168203
Non continuous, 1m gaps (NC1)				
BRAGI 8000LM 840 STD WB 5x1.5 4m NC1 WH	8000	ca. 120	ca. 160	4250854168289
BRAGI 8000LM 840 STD WB 5x1.5 3m NC1 WH	8000	ca. 120	ca. 160	4250854168364

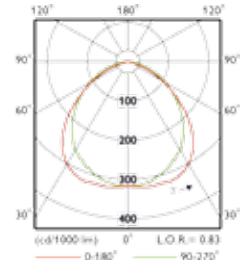


DOUBLE ASYMMETRICAL (DA)	FOR SHELF LIGHTING IN RETAIL			
typical installation height	Aisle lighting: 3-3.5 m height at about 2 m aisle width			
I_{max} (half peak) / UGR _{4h8h} (glare control)	I_{max} at 2x24° , UGR22 in the cross direction			
Continuous light, 4000 lm per meter	Luminous flux (lm)	Luminous efficacy Standard (lm/W)	Luminous efficacy High Efficiency (lm/W)	Order number (Standard)
BRAGI 16000LM 840 STD DA 5x1.5 4m WH	16000	ca. 120	ca. 160	4250854172194
BRAGI 12000LM 840 STD DA 5x1.5 3m WH	12000	ca. 120	ca. 160	4250854172200
BRAGI 8000LM 840 STD DA 5x1.5 2m WH	8000	ca. 120	ca. 160	4250854172217
BRAGI 4000LM 840 STD DA 5x1.5 1m WH	4000	ca. 120	ca. 160	4250854172224
Continuous light, 3000 lm per meter				
BRAGI 12000LM 840 STD DA 5x1.5 4m WH	12000	ca. 125	ca. 165	4250854172231
BRAGI 9000LM 840 STD DA 5x1.5 3m WH	9000	ca. 125	ca. 165	4250854172248
BRAGI 6000LM 840 STD DA 5x1.5 2m WH	6000	ca. 125	ca. 165	4250854172255
BRAGI 3000LM 840 STD DA 5x1.5 1m WH	3000	ca. 125	ca. 165	4250854172262
Non continuous, 1m gaps (NC1)				
BRAGI 8000LM 840 STD DA 5x1.5 4m NC1 WH	8000	ca. 120	ca. 160	4250854172279
BRAGI 8000LM 840 STD DA 5x1.5 3m NC1 WH	8000	ca. 120	ca. 160	4250854172286



PREFERRED SELECTION

OPAL (O)		MORE HOMOGENEOUS LIGHT SURFACE DUE TO LESS VISIBLE LED		
typical installation height	3-5 m			
$I_{max/2}$ (half peak) / UGR _{4h8h} (glare control)	2x52° (104°), UGR27			
Continuous light, 4000 lm per meter	Luminous flux (lm)	Luminous efficacy Standard (lm/W)	Luminous efficacy High Efficiency (lm/W)	Order number (Standard)
BRAGI 16000LM 840 STD O 5x1.5 4m WH	16000	ca. 110	ca. 150	4250854167657
BRAGI 12000LM 840 STD O 5x1.5 3mWH	12000	ca. 110	ca. 150	4250854167732
BRAGI 8000LM 840 STD O 5x1.5 2m WH	8000	ca. 110	ca. 150	4250854167817
BRAGI 4000LM 840 STD O 5x1.5 1m WH	4000	ca. 110	ca. 150	4250854167893
Continuous light, 3000 lm per meter				
BRAGI 12000LM 840 STD O 5x1.5 4m WH	12000	ca. 115	ca. 155	4250854167978
BRAGI 9000LM 840 STD O 5x1.5 3m WH	9000	ca. 115	ca. 155	4250854168050
BRAGI 6000LM 840 STD O 5x1.5 2m WH	6000	ca. 115	ca. 155	4250854168135
BRAGI 3000LM 840 STD O 5x1.5 1m WH	3000	ca. 115	ca. 155	4250854168210
Non continuous, (1m gaps (NC1))				
BRAGI 8000LM 840 STD O 5x1.5 4m NC1 WH	8000	ca. 110	ca. 150	4250854168296
BRAGI 8000LM 840 STD O 5x1.5 3m NC1 WH	8000	ca. 110	ca. 150	4250854168371



BRAGI ACCESSORIES

Type	Order number
BRAGI CP / Coupling piece between trunking sections	4250854172484
BRAGI EP-SET WH / End-of line set trunking mains connector + 2 white plastic trunking end caps + 2 light line end pieces	4250854172484

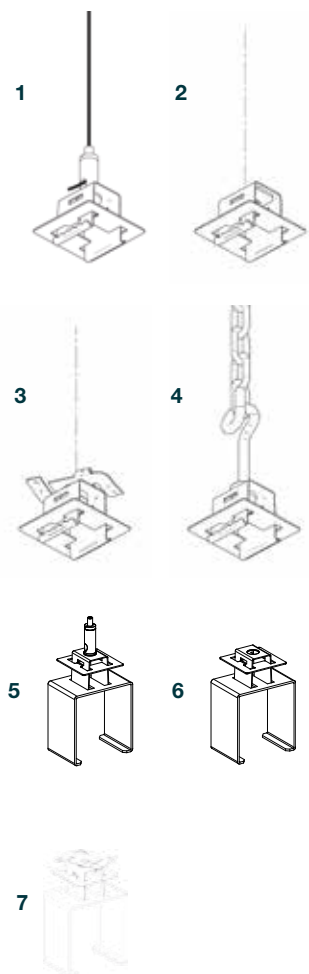
FIX MOUNTING BRACKETS

for attachment to coupling pieces and light line end pieces

Type	Order number	Index
BRAGI MB SWA mounting bracket, fix, for steel wire suspension	4250854140100	1
BRAGI MB SFM mounting bracket, fix, for direct ceiling fixation	4250854140087	2
BRAGI MB TPR mounting bracket, fix, for T-profile ceilings	4250854140094	3
BRAGI MB RT mounting bracket, fix, ring tail for chain suspension	4250854140117	4

FLEXIBLE MOUNTING BRACKETS (ALTERNATIVE)

Type	Order number	Index
BRAGI MB-FLEX WH SWA mounting bracket, flexible, for steel wire suspension	4250854172446	5
BRAGI MB-FLEX WH SFM mounting bracket, flexible, for direct ceiling fixation	4250854172453	6
BRAGI MB-FLEX WH TPR mounting bracket, flexible, for T-profile ceilings	4250854172460	7
BRAGI MB-FLEX WH RT mounting bracket, flexible, ring tail for chain suspension	4250854172439	-



LINE EXTENSIONS

Trunking sections without light source between continuous light sections

Type	Order number
BRAGI EXTENSION 5x1.5 2M WH	4250854172521
BRAGI EXTENSION 5x1.5 3M WH	4250854172538
BRAGI EXTENSION 5x1.5 4M WH	4250854172545
BRAGI EXTENSION 7x1.5 2M WH	4250854172552
BRAGI EXTENSION 7x1.5 3M WH	4250854172569
BRAGI EXTENSION 7x1.5 4M WH	4250854172576