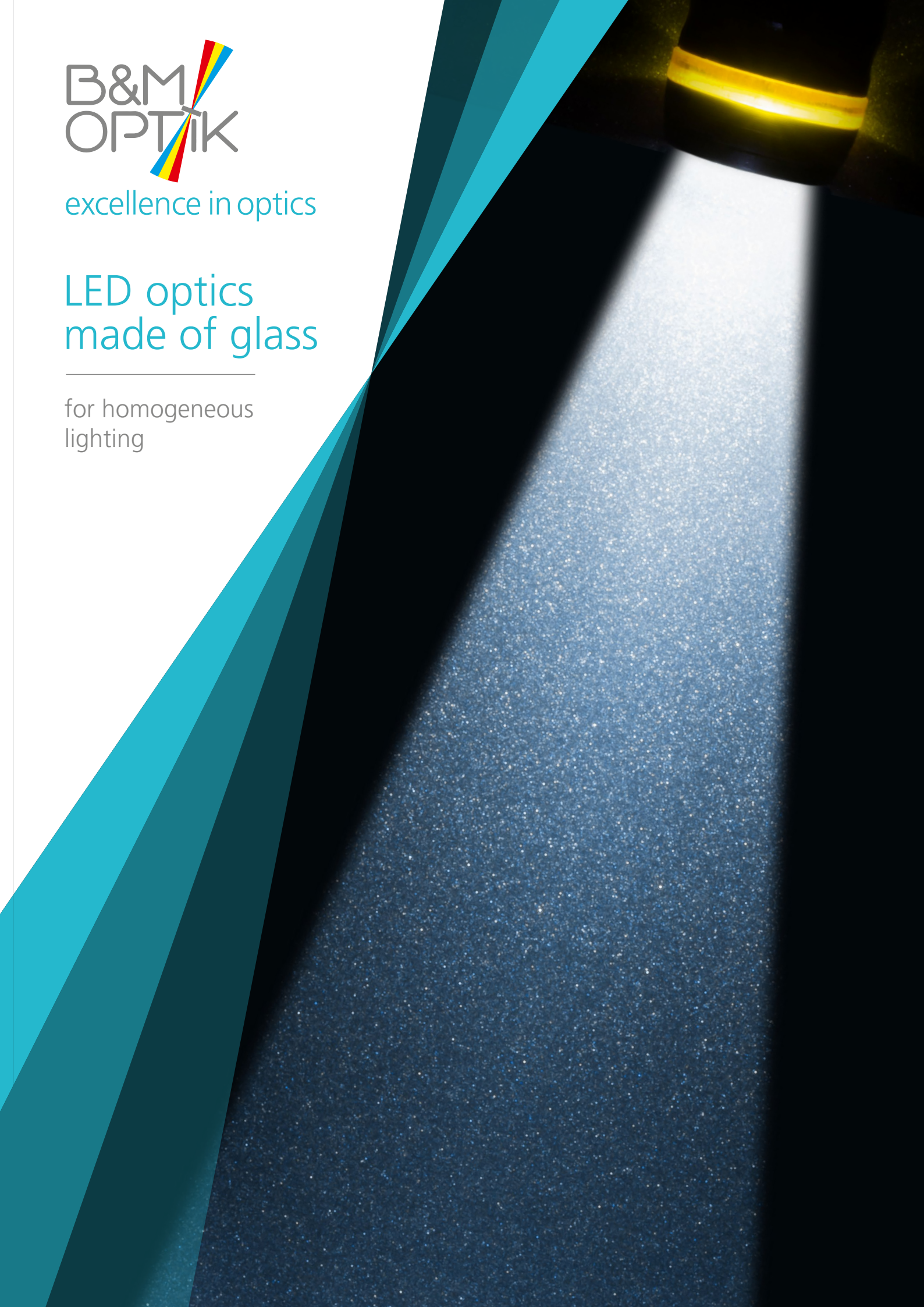




excellence in optics

LED optics made of glass

for homogeneous
lighting





For a video with all the details, please refer to our website <https://www.bm-optik.de/en/products/led-optics>

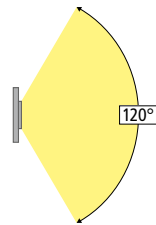
LED optics made of glass

B&M Optik GmbH offers standard optics for all LED types

LEDs in comparison

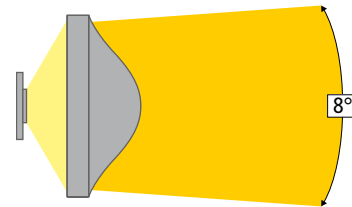
LED without optics

120° beam angle



LED with B&M glass optics

Reduction of the beam angle to 8° and up to 20 times the intensity with homogeneous illumination



Our advantages for you

- Any change to the beam angle only with an optic (8°–60°)
- Homogeneous illumination with no colour effects
- Avoidance of dice formation through special surface textures
- Standard aspherical lenses for all LEDs available on the market
- Longevity of the optics even with negative external influences
- No heat generation problems with high-power LEDs
- Attractive, high-quality glass materials
- Easy to adapt for customerspecific applications
- Low tooling costs for moulded glass lenses to customer specifications

Lenses with texture

The lenses with textured surfaces replace any diffusing lenses which may be installed and prevent the associated light loss. We offer these textures in three versions:

smooth



medium



rough



Beam focusing (secondary optics)

Our moulded glass spheres are suitable for all types of LEDs (e.g. high-power LEDs with extensive dice or normal LEDs with just one dice). The natural 120° beam angle of an LED can readily be reduced to less than 8° with one of our op-

tics (with high efficiency and homogeneous illumination). Of course, the angle can be determined by changing the distance between the lens and the LED.

Line management

Streaks of light can be generated with our cylindrical lenses.

We have a wide range of standard lenses.

RGB-LED light mixing

For all RGB LEDs, we offer the perfect lenses for achieving dynamic light colour changes. Just like common 4-chip LEDs, large-scale

RGB applications can also be homogeneously mixed.

Cylindrical lenses for LEDs

e.g. in focal lengths of 8.0 mm, 10.0 mm, 14.0 mm, 20.0 mm, 25.0 mm. Here, the width always corresponds to the focal length.

The length can be freely chosen up to max. 250 mm. We look forward to receiving your enquiry (see page 17).

Lens arrays

Our arrays are used to combine several LEDs into one light beam.

For us, all designs are possible - according to customer requirements.



All values in mm

Ø	EFL	asp.Ø	ct.	Glass	R2	FFL	BFL	Texture	Item no.
5,00	3,70	5,00	2,00	LIBA2000+	flat	3,70	2,40	blank	A.2856.0501Li
5,00	3,30	5,00	2,00	K10P	flat	3,30	2,00	blank	A.2856.0501K10P
7,90	6,00	6,50	2,40	K10P	flat	6,00	4,50	blank	A.0499.0791K10P
9,90	7,80	9,90	4,00	LIBA2000+	flat	7,80	5,20	blank	A.2791.0991Li
16,00	11,40	16,00	8,00	K10P	flat	11,40	6,40	blank	A.1839.1601K10P
16,00	15,00	16,00	6,00	LIBA2000+	flat	15,00	11,06	blank	A.2831.1601Li
18,00	13,50	18,00	7,40	LIBA2000+	flat	13,50	8,64	blank	A.2873.1801Li
20,00	11,00	19,80	10,90	LIBA2000+	17,70	8,68	4,86	rough	A.3829.2001Li
24,00	15,40	24,00	8,90	F4GT	flat	15,40	9,91	blank	A.4889.2401F4GT
24,00	18,00	24,00	10,40	LIBA2000+	flat	18,00	11,20	blank	A.2869.2401Li
24,00	18,00	24,00	11,70	LIBA2000+	flat	18,00	10,44	medium	A.4569.2401Li
26,00	27,50	26,00	8,50	LIBA2000+	flat	27,50	21,91	blank	A.2984.2601Li
26,00	27,50	26,00	9,00	LIBA2000+	flat	27,50	21,59	medium	A.4559.2601Li
26,50	18,00	24,00	11,40	LIBA2000+	flat	18,00	10,50	smooth	A.6499.2651LI
26,50	18,00	24,00	11,40	LIBA2000+	flat	18,00	10,50	medium	A.6509.2651LI
26,50	18,00	24,00	11,40	LIBA2000+	flat	18,00	10,50	rough	A.6519.2651LI
30,00	11,80	30,00	8,00	LIBA2000+	-40,00	11,09	6,79	fresnel	Y.3939.3001
35,00	27,50	31,60	15,00	LIBA2000+	flat	27,50	17,64	blank	A.2841.3501Li
35,00	27,50	31,60	16,20	LIBA2000+	300,00	27,50	17,60	smooth	A.4389.3501
35,00	27,50	31,60	13,70	LIBA2000+	flat	27,50	18,50	medium	A.6699.3501LI
40,00	28,50	36,00	15,00	LIBA2000+	flat	28,50	18,60	blank	A.1999.4002Li
40,00	28,50	36,00	17,70	LIBA2000+	flat	28,50	16,90	smooth	A.1999.4003Li
40,00	28,50	36,00	17,70	LIBA2000+	flat	28,50	16,90	medium	A.4819.4001Li
40,00	28,50	36,00	17,70	LIBA2000+	flat	28,50	16,90	rough	A.4809.4001Li
45,00	37,00	45,00	16,50	LIBA2000+	flat	37,00	26,20	rough	A.3599.4501Li
50,00	37,00	46,00	15,40	LIBA2000+	flat	37,00	26,90	smooth	A.5769.5001Li
50,00	40,00	49,55	20,00	LIBA2000+	flat	40,00	27,10	smooth	A.6349.5001Li
50,00	40,00	50,00	19,00	TRITAN	flat	40,00	27,51	blank	A.1559.5001TR
51,90	34,00	49,00	23,70	TRITAN	flat	34,00	18,42	blank	A.7039.5191TR
51,90	30,20	48,00	24,20	K10P	flat	30,20	14,90	medium	A.5389.5191K10P
51,90	34,00	48,00	24,20	TRITAN	flat	34,00	18,10	smooth	A.4609.5191Tr
51,90	34,00	48,00	24,20	TRITAN	flat	34,00	18,10	medium	A.5389.5191Tr
51,90	34,00	48,00	24,20	TRITAN	flat	34,00	18,10	rough	A.4789.5191Tr
51,90	76,50	49,80	11,70	LIBA2000+	flat	76,50	68,60	smooth	P.5019.5191Li
51,90	76,50	49,80	11,70	LIBA2000+	flat	76,50	68,60	medium	P.5419.5191Li
51,90	76,50	49,80	11,70	LIBA2000+	flat	76,50	68,60	rough	P.4859.5191Li
60,00	48,00	56,00	22,00	TRITAN	flat	48,00	33,50	smooth	A.6659.6001TR
60,00	48,00	56,00	22,00	TRITAN	flat	48,00	33,50	medium	A.6679.6001TR
62,00	76,50	58,00	11,70	TRITAN	flat	76,50	66,30	medium	P.6719.6201TR
65,00	65,00	48,00	19,90	LIBA2000+	flat	48,00	34,90	blank	A.4489.6501LI
65,00	53,00	63,00	23,50	TRITAN	flat	53,00	37,50	medium	A.5149.6501TR
68,00	51,50	68,00	27,25	TRITAN	flat	51,50	33,60	blank	A.6259.6801Tr
70,00	51,50	68,00	30,00	TRITAN	flat	51,50	31,80	smooth	A.4629.7002Tr
70,00	51,50	68,00	30,00	TRITAN	flat	51,50	31,80	medium	A.5209.7001Tr
70,00	51,50	68,00	30,00	TRITAN	flat	51,50	31,80	rough	A.6529.7001TR
73,00	53,00	70,50	32,40	TRITAN	flat	53,00	31,7	blank	A.4709.7301Tr

Special lenses
for homogeneous
imaging and
prevention of
dice formation



LED
case

Request free individual sample optics or check our range of offers in well-arranged cases. We would be pleased to assist you in innovative approaches and new developments.



For a video with all the details, please refer to our website <https://www.bm-optik.de/en/products/led-optics>

We also offer plastic optics for special applications according to individual specifications or calculations.



excellence in optics

DimToWarm (D2W), Tunable White

DimToWarm / Tunable White means that the light temperature (specified in Kelvin) of the light source can be changed. LEDs from this category consist of a combination of LES with

cold and warm white components, which are controlled according to the desired color temperature.

All specifications in mm

∅	EFL	ca	ct.	material	R2	FFL	BFL	texture	type	item-no.
24,00	18,10	24,00	11,50	LIBA2000+	flat	18,10	10,40	medium	a	A.6709.2401LI
52,00	34,60	52,00	32,20	TRITAN	flat	34,60	19,40	medium	a	A.6739.5201TR

LED optics
specially developed
for DimToWarm /
Tunable White LEDs

We are happy to present our developments to you in person, on site or invite you to visit our business premises.

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