

Bright solutions for you.



Lighting solutions

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Modern lighting applications can no longer do without modern polymers.

The requirements placed on engineering materials have changed drastically in recent years – also driven by LED technology development. Everything is possible now: thermal stability, thermal conductivity, smart light control, very high light transmission ... or would you prefer diffuse light?

With decades of expertise and strong partners, ALBIS has one of the world's leading lighting portfolios. The solutions it contains are used in a wide variety of applications by well-known brand manufacturers and have proven themselves in the face of the most diverse and challenging applications.

At the same time, ALBIS and its experienced partners are constantly driving the development of new, innovative solutions and formulating new answers in the process.

ALBIS lighting products won't leave you in the dark and will bring bright solutions for you and your customers.

Application/ Partner	Product Name	Polymer	Selected grades (further grades available upon request)	Properties				Additional Information
Light diffusion				Transmission @ 2 mm [%]	Haze * @ 2 mm [%]	HPA ** @ 2 mm [Degree]	MVR @ (300°C/ 1.2 kg) [cm³/10 min]	
BASF	Ultramid Vision® DLT	PA	Ultramid Vision® B3K DLT	61	100	46	150 (275/5)	superior chemical resistance
Covestro	Makrolon® DQ	PC	Makrolon® DQ5122 029900	85	100	19	34	for luminaires with superior lumen output
			Makrolon® DQ5142 029900	65	100	43	34	
	Makrolon® DQ5162 029900		57	100	56	34		
	Makrolon® DQ ET (extrusion types)		Makrolon® DQ5662 ET 029900	54	100	54	6	V-0 (@ 0.8 mm), 5VA (@ 3 mm)
	Makrolon® DQ FR (flame retardant)		Makrolon® DQ5922 FR 029900	78	-	21	6	
			Makrolon® DQ5942 FR 029900	63	-	42	6	
			Makrolon® DQ5962 FR 029900	54	-	56	6	
MOCOM	Alcom® LD/LD2	PC (other polymers and colors possible upon request)	ALCOM LD2 PC 1000 15054 GY1096-15	6	95.5	53	25	grey
			ALCOM PC 740/4 GY1177-05LD	29.5	95	40	17	grey
			ALCOM LD2 PC 1000 UV 16032 WT1030-16	45	95.5	61	17	white
			ALCOM PC 740/4 UV WT1368-04LD	57.5	95.5	47	20	white
			ALCOM PC 740/4 RD1123-05LD	16	95	13	17	red
	Alcom® LDX/LDM (extrusion types)		ALCOM PC 730/3.1 UV WT1283-09LDM	58 (@ 3 mm)	95 (@ 3mm)	34 (@ 3 mm)	8	matt surface
			ALCOM LDX PC 1000 UV 14062 WT1140-14	55	95	50	10	
	Alcom® LG (homogeneous output along the light path)		ALCOM PC 740/4 UV CC1323-08LG	86	94.5	19	20	
			ALCOM PC 740/4 UV CC1320-08LG	88.5	90	7	20	
	Alcom® LDDC (hidden-until-lit designs)		ALCOM LDDC PC 1000 UV 17184 BK1189-17	14 (@ 3 mm)	18 (@ 3 mm)	1 (@ 3 mm)	20	black; low diffusion; optimized for 3 mm thicknesses
			ALCOM LDDC PC 1000 UV 17187 BK1192-17	12 (@ 3 mm)	95 (@ 3 mm)	7 (@ 3 mm)	20	black; high diffusion; optimized for 3 mm thicknesses
			ALCOM LDDC PC 1000 UV 18045 WT1048-18	11	95	59	35	white; high diffusion; optimized for 2 mm thicknesses

Application/ Partner	Product Name	Polymer	Selected grades (further grades available upon request)	Properties				Additional Information
Clear applications				Transmission @ 2 mm [%]	Impact resistance (notched Izod) [kJ/m²]	Vicat B50 [°C]	Yellowness Index	
BASF	Ultramid Vision®	PA	Ultramid Vision® B3K	70	5 dry/35 cond. (Charpy)	-	+++	superior chemical resistance
Covestro	Makrolon® LED	PC	Makrolon® LED5102 000000	90	55	143	+++	exceptional purity for optimized light flux and life-time
			Makrolon® LED5202 000000	90	69	146	+++	
			Makrolon® LED5302 000000	90	72	147	+++	
	Makrolon® LED FR (flame retardant)		Makrolon® LED5902 FR 550030	≥89	50	142	+++	non-brominated (UL: V-0@1 mm, 5VA@3mm), excellent optical properties

Light blocking/reflecting				Transmission @ 2 mm [%]	Total Light Reflection @ 2 mm [%]	Vicat B50 [°C]	MVR @ (°C/kg) [cm³/10 min]	
Covestro	Makrolon® RW	PC	Makrolon® RW2407 012363	0.2 (@1 mm)	96	144	19 (300/1.2)	
			Makrolon® RW2407 012612	<0.01 (@1 mm)	86	144	19 (300/1.2)	
			Makrolon® RW6267X 012363	0.2 (@1 mm)	96	143	19 (300/1.2)	flame retardant
MOCOM	Alcom® LB	ABS (high heat)	ALCOM AWL 10 WT1308-05LB	0.2	85	110	6.5 (220/10)	
			ALCOM AWL 15/1 WT1471-04LB	0.5	94	110	7.0 (220/10)	
		ABS, PC modified	ALCOM AWL 109/15 UV WT1217-11LB	0.4	92	110	15 (220/10)	UV-stabilized
			ALCOM PC+AWL 750/20.1 WT1407-04LB	0.1	92	120	23 (260/5)	
		PC + ABS	ALCOM PC+AWL 750/15.1 WT1378-04LB	0.4	93	120	22 (260/5)	
			ALCOM PWL 10/1.1 WT1302-05LB	0.4	92	140	15 (300/1.2)	UL listed
		PC	ALCOM LB PC 1000 14073 WT1164-14	3	95	137	35 (300/1.2)	for Al plated reflectors
			ALCOM PWL 10/1 WT 41-913LB	1.4	97	142	8 (300/1.2)	UL listed
		POM	ALCOM LB POM 1000 18008 WT1005-18	1	90	149	22 (190/2.16)	
		PP	ALCOM PP 620/1 WT1433-05LB	0.3	87	100	25 (230/2.16)	
			ALCOM PP 620/1 WT1034-05LB	0.4	92	101	25 (230/2.16)	

Thermal conductivity				Thermal conductivity in plane [W/mK]	Electrical conductive/ insulating	Vicat B50 / HDT A [°C]	UL 94 Classification	
Covestro	Makrolon® TC	PC	Makrolon® TC110	1	insulating	145/-	HB	white, high impact strength, long-term thermal resistance
			Makrolon® TC110 FR	0.8	insulating	146/132	V-0 (@ 1.5 mm) 5VA (@ 2 mm)	white, high impact strength, long-term thermal resistance
			Makrolon® TC210	1.4	insulating	145/136	HB	white, high impact strength
			Makrolon® TC621	16	conductive	136/-	V-0	black
			Makrolon® TC629	15	conductive	144/137	V-0	black
MOCOM	Alcom® TCE	PA66	ALCOM PA66 910/32.1 GF8 TCE8 BK0002-00	15.5	conductive	246/-	V-0 (@ 3 mm)	TCE only in black
		PC	ALCOM TCE PC 5020 15011 BK0002-00	1.1	conductive	-/-		for profile and co-extrusion; TCE only in black
	Alcom® TCD	PA6	ALCOM TCD PA6 5075 18057 BK0003-00	3.2	insulating	-/165		TCD available in multiple colors
		PA66	ALCOM TCD PA66 5050 14016 BK0002-00	5	insulating	-/230	HB (@1.5 mm)	TCD available in multiple colors
	Alcom® TCD FR (flame retardant)	PA6	ALCOM TCD PA6 5060 FR 16089 WT1106-16	1.8	insulating	210/155	V-2 (@0.75 mm) / V-0 (@ 1.5 & 3 mm)	UL listed; TCD available in multiple colors

Infrared (IR) transmission				Transmission at 800 nm	Transmission at 950 nm	Impact resistance (notched Izod) [kJ/m²]	MVR @ (300°C/ 1.2 kg) [cm³/10 min]	
Covestro	Makrolon® Ai ST (automotive interior)	PC	Makrolon® Ai2695 ST 978001	>90 %	>90 %	70	12	high transmittance applications in the near-infrared range (NIR)
			Makrolon® Ai2497 ST 971064	-	>90 %	60	19	
	Makrolon® AX ST (automotive exterior)		Makrolon® AX2675 ST 978001	>90 %	>90 %	70	12	
MOCOM	Alcom® LIR	PC	ALCOM LIR PC 1000 UV 14099 BK1203-14	>90 %	>90 %	10 (Charpy)	16	UV-stabilized
			ALCOM LIR PC 1000 UV BK1226-19	-	>90 %	11 (Charpy)	13	UV-stabilized

Annotations:

* Partners follow different measurement norms: Covestro-ISO14782; MOCOM-ISO13468; BASF-ASTM D1003

** Half power angle determination without specific norm. Please consider when comparing partners.



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