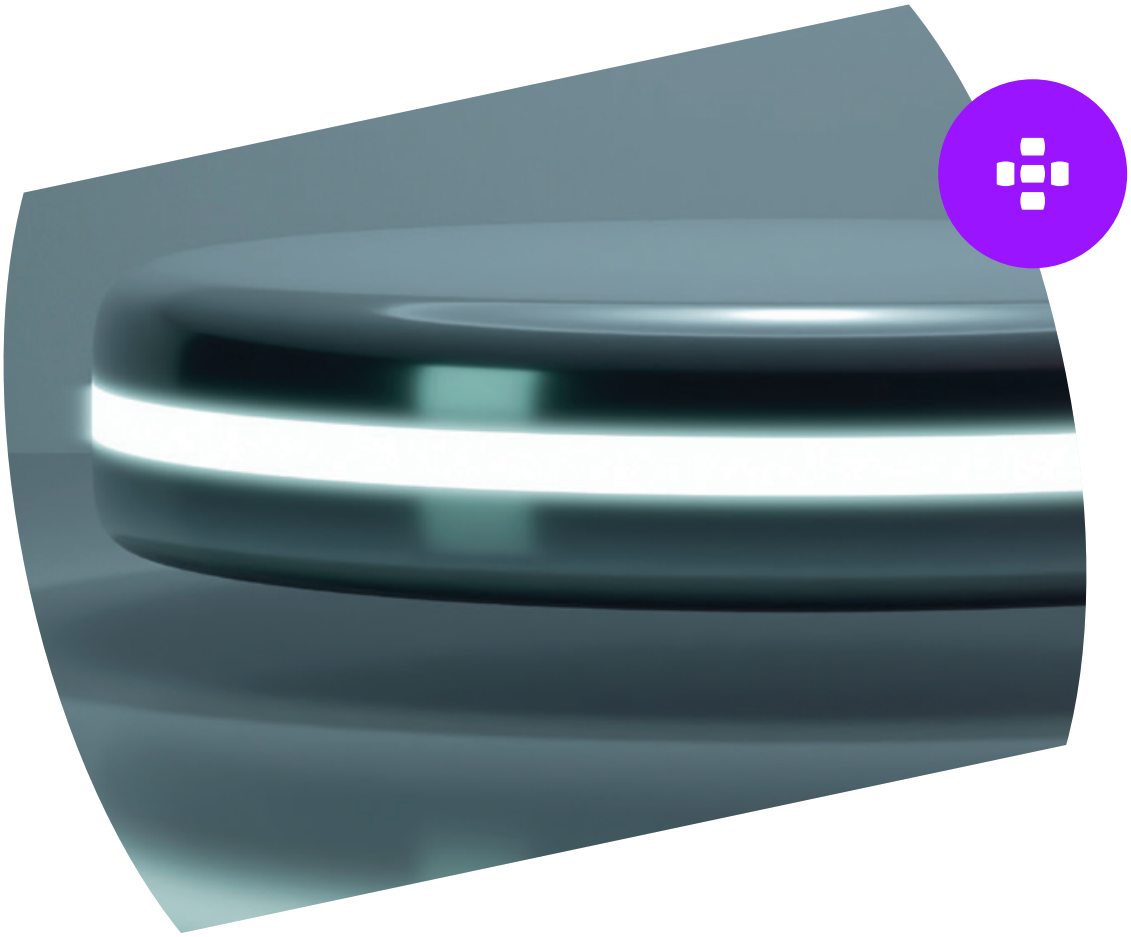

Alcom® LD
Light Diffusion
Customized polymer variety

Alcom® Light Diffusion products provide homogeneous and efficient light distribution not only on the basis of polycarbonate. The proven technology can be used flexibly in many different polymers and is adapted to the individual requirements in the lighting industry.

Alcom® LD refers to the optical technology for optimum light distribution. However, many compound properties are largely dependent on the base polymer. For example, if increased chemical resistance to disinfectants is required and PC is not the optimum solution, Alcom® LD based on a different polymer is used. Other areas of application for alternative polymers can be soft-touch functions, scratch-resistant surfaces, even without a coating, or high requirements for UV resistance in outdoor applications. If a solution is not yet available in the extensive Alcom® LD portfolio, the optical properties transmission, diffusion and color are adjusted in a polymer to suit the application.

Alcom® Light Diffusion: advantages at a glance

- Based on many different translucent polymers: PC, PMMA, Copolyester, MABS, PC+ABS, PP, TPS, TPU
- Homogeneous, almost loss-free light diffusion
- Excellent light output
- Avoidance of hot spots
- Contour sharpness of illuminated symbols independent of viewing angle
- Individual color variants

	PC	PMMA	HTC	MABS	PC+ABS	PP	TPU/TPS
Impact Strength	++	-	++	+	++	+	++
Heat Resistance	++	+	○	○	+	-	-
Chemical Resistance	-	○	++	++	-	++	+
Scratch Resistance	○	++	○	○	○	-	○
UV Resistance	+	++	○	-	-	○	+
Transmission	+	++	++	+	-	+	+
Clarity	+	++	+	○	-	○	○
Processing	+	○	+	+	+	+	○
Applications	Auto Interior / Exterior (coated)	Auto Exterior, Light Guides	Auto Interior, Food Contact	Medical	2K parts (films, decor), electro-plated parts	2K parts in bumpers, door panels	Soft Touch, 2K parts

Polymer	Material Name	Color	Total Transmission T(Y) (d=1.0 mm, A, 2°) ISO 13468	Haze T(Y) (d=1.0 mm, III. A, 2°) ISO 13468	Half Power Angle T(Y) (d=1.0 mm, A, 2°)	Application Examples
HTC	Alcom® LD2 HTC 1000 18160 CC1198-18	with scatterer	90	15	1	Lamp covers
HTC	Alcom® LD2 HTC 1000 UV CC1044-21	with scatterer	80	95	16	Ambient lighting, illuminated trim
MABS	Alcom® LD MABS 1000 17056 WT1044-17	white	78	92	3	Diffusing lenses for home appliances
PC+ABS	Alcom® LD2 PC+ABS 1000 WT1107-19	white	55	95	19	Electroplated illuminated trim
PC+ABS	Alcom® LD2 PC+ABS 1000 WT1135-19	white	58	95	16	Back-injection of decorative films
PMMA	Alcom® LDDC PMMA 1000 UV 18123 BK1016-11	black	35	11	1	Display covers
PMMA	Alcom® LDDC PMMA 1000 UV 18124 BK1074-11	black	42	3	1	Display covers
PMMA	Alcom® LDDC PMMA 1000 UV GY1196-20	gray	30	95	19	Diffusing lenses for illuminated
PMMA	Alcom® LDDC PMMA 1000 UV BK1075-21	black	31	7	1	Display covers
PP	Alcom® LDDC PP 1000 UV BK1132-22	black	32	77	1	Diffusing lenses, ambient lighting
PP	Alcom® LD2 PP 1000 UV RD1133-22	red	29	76	1	Rear light signal red, diffusing lenses
PP	Alcom® LD2 PP 1000 UV YL1134-22	yellow	80	72	1	Indicator lights amber, diffusing lenses
PP	Alcom® LD2 PP 1000 UV CC1135-22	with scatterer	83	95	10	Diffusing lenses, ambient lighting

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