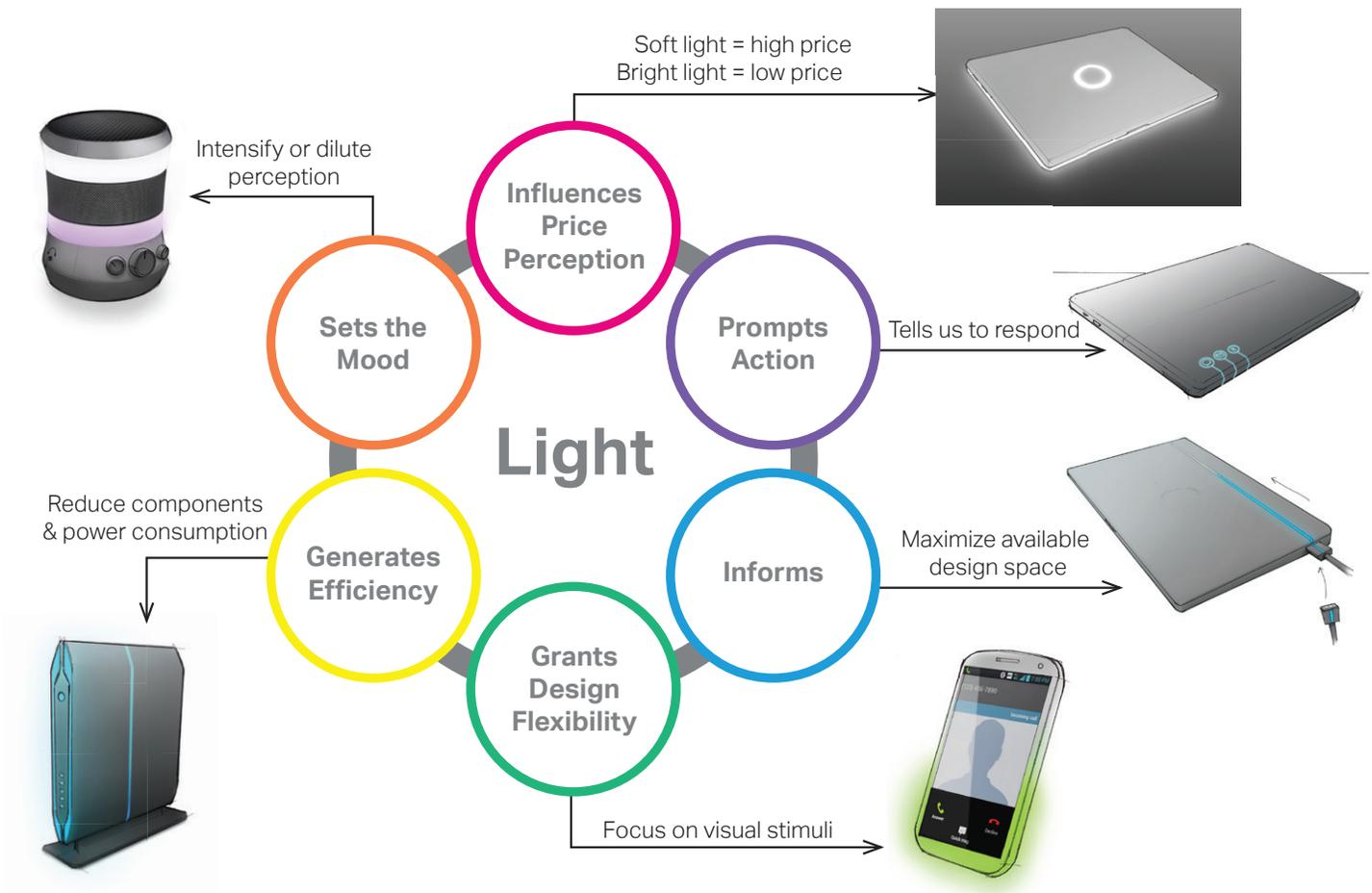
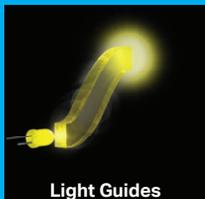


# Designing with Light: Consumer Electronics

For ways to use light to differentiate and innovate within consumer electronics, Covestro offers light guiding, diffusing, and reflecting polycarbonate solutions, allowing for design freedom and improved product efficiency to achieve brand-enhancing aesthetics.

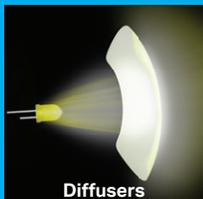


## OUR LIGHTING SOLUTIONS



**Light Guides**

Direct light to usable spaces



**Diffusers**

Create "glow"



**Reflectors**

Generate equal luminance from all directions

### When used in combination:

- Distribute light and color through complex geometries
- Create glowing effects around corners & edges
- Minimize hot-spotting
- Maintain excellent surface quality
- Allow for adjustable range of colors
- High transmission
- Enable gradients of light
- Provide sharp color and crisp lines



## Consider these valuable services in your next innovation:

- Idea / concept / product development
- New material development
- Mold design and filling simulation
- Part consolidation, assembly advice
- Field service + troubleshooting
- Feasibility analysis and cost modeling

Let's Talk

[plastics@covestro.com](mailto:plastics@covestro.com)

LIGHT GUIDING	Product Family	Grade	Description	Melt Flow Rate (cm <sup>3</sup> /10 min) ISO 1133	Transmittance	Izod Notched Impact (kJ/m <sup>2</sup> ) b.o. ISO 180-A	Vicat Softening Temp (50 N, 120°C/h) ISO 306	Tensile Modulus (MPa) ISO 527-1,-2	UL 94 Rating
	Makrolon®	LED2045	Highest Transmission	61	90.50%	50	146	2350	V-2 @ 0.71mm
	Makrolon®	LED2245	Very High Transmission	34	90%	60	146	2350	V-2 @ 0.75mm
	Makrolon®	FR7067	Flame Retardant; Clear Tint	23	88%	12	110	2600	V-0 @ 1.5mm

LIGHT DIFFUSING	Product Family	Grade	Color	Description	Melt Flow Rate (cm <sup>3</sup> /10 min) ISO 1133	Transmittance	Izod Notched Impact (kJ/m <sup>2</sup> ) b.o. ISO 180-A	Vicat Softening Temp (50 N, 120°C/h) ISO 306	Tensile Modulus (MPa) ISO 527-1,-2	UL 94 Rating
	Makrolon®	2407	21531	Low Diffusion	20	84%	75	145	2400	V-2 @ 0.75mm
	Makrolon®	2407	21532	Medium Diffusion	20	77%	75	145	2400	V-2 @ 0.75mm
	Makrolon®	2407	21533	High Diffusion	20	67%	75	145	2400	V-2 @ 0.75mm

LIGHT REFLECTING	Product Family	Grade	Description	Melt Flow Rate (cm <sup>3</sup> /10 min) ISO 1133	Reflectance	Izod Notched Impact (kJ/m <sup>2</sup> ) b.o. ISO 180-A	Vicat Softening Temp (50 N, 120°C/h) ISO 306	Tensile Modulus (MPa) ISO 527-1,-2	UL 94 Rating
	Makrolon®	RW2407	General Purpose	19	Up to 96.5%	15	144	2500-2700	V-2 @ 0.75mm
	Makrolon®	RW6267X	Flame Retardant	19	Up to 96%	15	140-143	2500-2700	V-0 @ 1.5mm
	Apec®	RW2097	High Heat	12	Up to 94%	5	199	2600	HB @ 1.5mm



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The manner in which you use, and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of product evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine, to your own satisfaction and requirements, whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoints. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.