DESIGN BRILLIANCE MEETS VISUAL INTELLIGENCE<sup>™</sup>



# BrightGuide-Flex<sup>™</sup> Light Guide Plates

BRIGHTVIEW

TECHNOLOGIES

#### For Edge-Lit Luminaires

BrightGuide-Flex<sup>™</sup> Light Guide Plates (LGPs) provide a commercially available off-the-shelf flexible solution for edgelit luminaires. BrightGuide-Flex<sup>™</sup> LGPs are made from BrightView's Micro Lens Arrays (MLAs) and can be cut to fit a wide range of lighting applications with quick turnaround and no tooling charges.

Using its proprietary MLA technology, BrightView has designed the BrightGuide-Flex<sup>™</sup> LGP product family to eliminate the need for custom tooling and the associated expenses of long design cycles. Each BrightGuide-Flex<sup>™</sup> LGP product uses fixed-density microstructures and is useful over a specified range of widths.



When combined with BrightWhite reflectors and angle-management products, a wide range of possibilities emerge for managing light. This provides ideal up/down, batwing and delta, Lambertian, and cove/wall wash distributions.

Within the prescribed range of widths (specifically, distance between opposing LEDs) BrightView can provide a specific solution that maximizes efficiency and uniformity on the surface of the LGP. Efficiency may decrease if the light launched into one end of the light guide ends up traveling through the entire plate to the opposite side, causing absorption when the light hits the LEDs and PCB. Conversely, Uniformity may suffer if too much light is extracted before traveling the optimum distance causing the center of the LGP becomes less luminous.

The information on the next few pages assists the luminaire designer in choosing an optimum BrightGuide-Flex<sup>™</sup> LGP product for the desired luminaire dimensions which can be used with the appropriate reflectors and/ or diffusers to achieve the desired performance.

To request samples, please contact sales@brightviewtech.com. Application engineers are ready to help select the right materials to give you the performance your design demands.



#### For Edge-Lit Luminaires

#### **Linear LGP Size Selection**

BrightGuide-Flex<sup>™</sup> Light Guide Plates (LGPs) provide an off-the-shelf flexible solution for edge-lit luminaires.

<u>To choose a BrightGuide-Flex</u><sup>™</sup> LGP, follow these steps:

- Choose one of three plots below based on the desired LGP thickness of 3,4, or 6mm
- 2 Look up desired width of the LGP (between LEDs) on the horizontal axis
- To emphasize high efficiency, choose a part number at the upper end of the green bar; To emphasize visual uniformity, choose a part number at the lower end of the green bar
- 4 Also consider available light distribution curves on the following pages
- 6 Request a sample cut to size from sales@brightviewtech.com



### BrightGuide-Flex™ Light Guide Plates



For Edge-Lit Luminaires

# Downlighting

Linear (Rectangular / Square)



		L-F02A	L-F04A	L-F07A	L-F12A	L-F18E	
		Optimal LGP width range					
LGP Thickness	3 mm	30 - 55 mm	45 - 80 mm	90 - 160 mm	190 - 305 mm	235 - 400 mm	
	4 mm	40 - 70 mm	60 - 100 mm	120 - 205 mm	240 - 400 mm	300 - 505 mm	
	6 mm	50 - 90 mm	75 - 130 mm	150 - 260 mm	305 - 490 mm	380 - 645 mm	
Bri R	LGP + ghtWhite eflector	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 1.34	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 1.86	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 2.50	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 2.44	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 1.93	
Bri R (	LGP + ghtWhite teflector + G-Series Diffuser	Efficiency 70 – 88% Uniformity 94 – 77% IES Spacing 1.22 <i>Glare using 70x1220 mm:</i> UGR<19 up to 1280 lm VDT Normal up to 3850 lm	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 1.39 <i>Glare using 100x1220 mm:</i> UGR<19 up to 1750 lm VDT Normal up to 3020 lm	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 1.62 <i>Glare using 205x1220 mm:</i> UGR<19 up to 3270 lm VDT Normal up to 2760 lm	Data coming soon Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing <u>Glare using 400x1220 mm</u> :	Efficiency 72 – 90% Uniformity 90 – 75% IES Spacing 1.66 <i>Glare using 505x1220 mm:</i> UGR<19 up to 7300 lm VDT Normal up to 3620 lm	

All data are typical and will vary with design parameters such as shape/size, mechanical design, bezel size, choice of optic and materials, etc. Further data including sample IES files may be available upon request. Please call a BrightView applications engineer for further details.



For Edge-Lit Luminaires

### **Up + Down Lighting**

Direct / Indirect Pendant Linear (Rectangular / Square)



		L-F02A	L-F04A	L-F07A	L-F12A	L-F18E	
		Optimal LGP width range					
LGP Thickness	3 mm	30 - 55 mm	45 - 80 mm	90 - 160 mm	190 - 305 mm	235 - 400 mm	
	4 mm	40 - 70 mm	60 - 100 mm	120 - 205 mm	240 - 400 mm	300 - 505 mm	
	6 mm	50 - 90 mm	75 - 130 mm	150 - 260 mm	305 - 490 mm	380 - 645 mm	
	LGP	Efficiency 86 - 94% Uniformity 85 - 70% IES Spacing (up) 3.93 IES Spacing (dn) 1.37 Up/down ratio 55/45%	Efficiency 86 - 94% Uniformity 85 - 70% IES Spacing (up) 5.96 IES Spacing (dn) 2.90 Up/down ratio 50/50%	Efficiency 86 - 94% Uniformity 85 - 70% IES Spacing (up) 7.07 IES Spacing (dn) 5.15 Up/down ratio 45/55%	Efficiency 86 - 94% Uniformity 85 - 70% IES Spacing (up) 6.56 IES Spacing (dn) 7.78 Up/down 45/55%	Efficiency 86 - 94% Uniformity 85 - 70% IES Spacing (up) 5.48 IES Spacing (dn) 6.92 Up/down ratio 50/50%	
G	LGP + G-Series Diffuser	Efficiency 85 - 93% Uniformity 87 - 72% IES Spacing (up) 2.22 IES Spacing (dn) 1.27 Up/down ratio 70/30%	Efficiency 85 - 93% Uniformity 87 - 72% IES Spacing (up) 2.86 IES Spacing (dn) 1.71 Up/down ratio 60/40%	Efficiency 85 - 93% Uniformity 87 - 72% IES Spacing (up) 4.21 IES Spacing (dn) 2.36 Up/down ratio 60/40%	Efficiency 85 - 93% Uniformity 87 - 72% IES Spacing (up) 2.93 IES Spacing (dn) 1.95 Up/down ratio 60/40%	Efficiency 85 - 93% Uniformity 87 - 72% IES Spacing (up) 3.56 IES Spacing (dn) 2.28 Up/down ratio 60/40%	

All data are typical and will vary with design parameters such as shape/size, mechanical design, bezel size, choice of optic and materials, etc. Further data including sample IES files may be available upon request. Please call a BrightView applications engineer for further details.



For Edge-Lit Luminaires

# 100% Uplight

Pendant Linear (Rectangular / Square)



		L-F02A	L-F04A	L-F07A	L-F12A	L-F18E
	Optimal LGP width range					
LGP Thickness	3 mm	> 55 mm	> 80 mm	> 160 mm	> 305 mm	> 400 mm
	4 mm	> 70 mm	> 100 mm	> 205 mm	> 400 mm	> 505 mm
	6 mm	> 90 mm	> 130 mm	> 260 mm	> 490 mm	> 645 mm
LGP + BrightWhite Reflector					Data coming soon	
		Efficiency up to 93% IES Spacing 1.34	Efficiency up to 93% IES Spacing 1.86	Efficiency up to 93% IES Spacing 2.50	Efficiency up to 93% IES Spacing	Efficiency up to 93% IES Spacing 1.93

All data are typical and will vary with design parameters such as shape/size, mechanical design, bezel size, choice of optic and materials, etc. Further data including sample IES files may be available upon request. Please call a BrightView applications engineer for further details.







BRIGHTVIEW technologies

Web: www.brightviewtech.com Email: sales@brightviewtech.com Tel: +1-919-228-4370



For Edge-Lit Luminaires

#### **Circular LGP Size Selection**

BrightGuide-Flex<sup>™</sup> Light Guide Plates (LGPs) provide an off-the-shelf flexible solution for edge-lit luminaires.

To choose a BrightGuide-Flex<sup>™</sup> LGP, follow these steps:

- Choose one of three plots below based on the desired LGP thickness of 3,4, or 6mm
- 2 Look up desired width of the LGP (between LEDs) on the horizontal axis
- To emphasize high efficiency, choose a part number at the upper end of the green bar; To emphasize visual uniformity, choose a part number at the lower end of the green bar
- 4 Also consider available light distribution curves on the following pages
- **5** Request a sample cut to size from sales@brightviewtech.com





For Edge-Lit Luminaires

# Downlighting

Circular



		L-F02A	L-F04B	L-F05A	L-F07M	L-F12A
		Optimal LGP width range				
Thickness	3 mm	40 – 70 mm	55 - 95 mm	95 - 150 mm	120 - 210 mm	250 - 400 mm
	4 mm	50 - 90 mm	75 - 120 mm	120 - 190 mm	150 - 265 mm	313 - 400 mm
LGP	6 mm	65 - 115 mm	95 - 160 mm	150 - 240 mm	195 - 335 mm	NA
LGP + BrightWhite Reflector		Data coming soon Efficiency 80 – 93% Uniformity 90 - 75% IES Spacing	Efficiency 80 – 93% Uniformity 90 – 75% IES Spacing 1.49	Efficiency 80 – 93% Uniformity 90 – 75% IES Spacing 1.99	Efficiency 80 – 93% Uniformity 90 – 75% IES Spacing 2.26	Efficiency 80 – 93% Uniformity 90 – 75% IES Spacing 1.83
Brig Re G- Di	LGP + htWhite flector + Series ffuser	Data coming soon Efficiency 76 – 90% Uniformity 90 – 75% IES Spacing <u>Glare using 90 mm dia</u> :	Efficiency 76 – 90% Uniformity 90 – 75% IES Spacing 1.27 <u>Glare using 120 mm dia</u> : UGR<19 up to 560 lm VDT Normal up to 3040 lm VDT Intens. up to 2280 lm	Efficiency 76 – 90% Uniformity 90 – 75% IES Spacing 1.43 <u>Glare using 190 mm dia:</u> UGR<19 up to 1640 lm VDT Normal up to 3460 lm VDT Intens. up to 2230 lm	Efficiency 76 – 90% Uniformity 90 – 75% IES Spacing 1.56 <u>Glare using 265 mm dia</u> : UGR<19 up to 3050 lm VDT Normal up to 3940 lm VDT Intens. up to 2230 lm	Efficiency 76 – 90% Uniformity 90 – 75% IES Spacing <i>Glare using 400 mm dia:</i> UGR<19 up to 6550 lm VDT Normal up to 3810 lm VDT Intens. up to 2120 lm

All data are typical and will vary with design parameters such as shape/size, mechanical design, bezel size, choice of optic and materials, etc. Further data including sample IES files may be available upon request. Please call a BrightView applications engineer for further details.



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