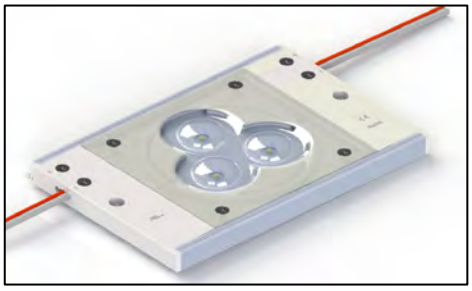
Product Selector Guide - Back Lighting

	TriOptix™	Optix170™	Optix170M™	Optix170M™ 36"	Light Bars	LBT Flex Arrays
Applications-						
Back-lit	✔	✔	✔	✔		✔
Perimeter					✔	
Specifications-						
Voltage	12V	24V	24V	24V	24V	24V
Circuit Length	1 module	6"	6"	6"	19.5" or 11.75"	9.5" or 11.75"
Advantages-						
Easy Installation	✔	✔	✔	✔	✔	✔
Ultra Bright		✔	✔	✔	✔	✔
Easy to Vary Intensity	✔					
Shallow box (2.25")		✔	✔	✔		
Variable Depth Box					✔	✔
Optimal even lighting		✔	✔	✔		✔
Outdoor rating	✔		✔	✔		
Disadvantages-						
Need deep light box (4")	✔				✔	✔
Wire management	✔					
Power hungry		✔	✔	✔	✔	
Fixed spacing		✔	✔	✔		

★★★★ FourStar LED
A LIGHTBOARD TECHNOLOGIES Company

LIGHTBOARD TECHNOLOGIES
Innovations in LED Illumination

Tri-Optix™ LED Modules



Brightness	Ease of use	Cost
★★☆☆	★★★★	★☆☆☆

Availability	Color Temp	Voltage
Stock	6500K	12V DC

Power	Width	Circuit
7W ea.	3.35” x 4.88”	Module

What it is used for

Back-lighting displays and signs with a minimum depth of 4”. Lights up to 4 sq. ft. per module.

How to use it

TriOptix’s are individual modules designed for back lighting both signs and displays. Simple installation via mechanical means (such as screws) or double-back tape, and connect power (12V). Powerful LEDs can effectively light a square meter light box with only 4 modules. Best if placed on a white reflective surface. Add more modules to increase brightness.

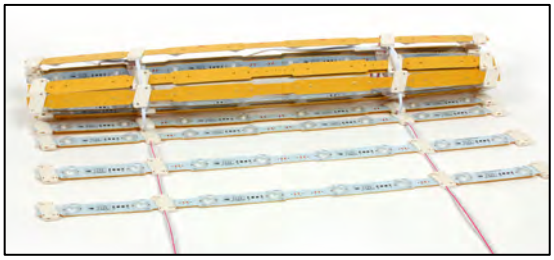
Specifications per application

Pitch – spacing between modules	Varies	Modules have standard pitch of 18” and can be installed at shorter pitch to achieve higher light output
Minimum Distance – LED to Face/ Graphic	4” Standard	Decreased distance equates to decreased pitch – more modules needed
Standard Color	6500 K	Additional CCT can be produced depending on LED availability
Standard Lengths/Power	3.35” x 4.88”	7 watts per module

Pros & Cons

Pros	*Cons*
• Uniform illumination • Easy installation • 700 Lumen output per module • No heat sink needed	• Only available in 12V DC • Wire management

Optix170™ LED Strips



Brightness	Ease of use	Cost
★★★☆	★★★☆	★★★☆
Availability	**Color Temp**	**Voltage**
Stock	6500K	24V DC
Power	**Length**	**Circuit**
4.5W ea.	23.65”	6” Length

What it is used for

Back-lighting displays with a minimum depth of 2.25”

How to use it

Optix170’s are configured in rolls for back of displays. Standard rolls can illuminate 2’ x 4’ area. Each Optix170 can be cut into quarters. During install, unroll the strips, position, attach via mechanical means (such as screws) or double-back tape, and connect power (24V). Best if placed on a white reflective surface.

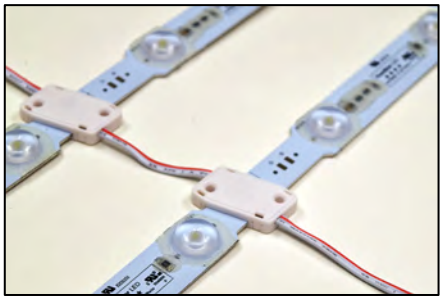
Specifications per application

Pitch – spacing between strips	3” Standard	Customizable based on depth of light box
Distance – LED to Face/Graphic	2.25” Standard	Decreased distance equates to decreased pitch – more strips needed
Standard Color	6500 K	Additional CCT can be produced depending on LED availability
Standard Lengths/Power	23.625”	4.5 watts per strip (can be cut into 6” sections)

Pros & Cons

Pros	*Cons*
• Uniform illumination • Easy installation • Thinner light boxes (as thin as 2.25”) • Custom sizes and configurations available • No heat sink needed	• High power consumption • Only available in 24V DC • Field repair is labor intense

Optix170M™ LED Strips (metal boards)



Brightness	Ease of use	Cost
★★★☆	★★★★☆	★★★★☆

Availability	Color Temp	Voltage
Stock	6500K	24V DC

Power	Length	Circuit
4.5W ea.	23.65”	6” Length

What it is used for

Back-lighting displays with a minimum depth of 2.25”

How to use it

Optix170’s are configured in rolls for back of displays. Standard rolls can illuminate 2’ x 4’ area. Each Optix170M can be cut into quarters. During install, unroll the strips, position, attach via mechanical means (such as screws) or double-back tape, and connect power (24V). Optix170M have a IP65 rating for dry & damp applications (outdoor use). Best if placed on a white reflective surface.

Specifications per application

Pitch – spacing between strips	3” Standard	Customizable based on depth of light box
Distance – LED to Face/Graphic	2.25” Standard	Decreased distance equates to decreased pitch – more strips needed
Standard Color	6500 K	Additional CCT can be produced depending on LED availability
Standard Lengths/Power	23.625”	4.5 watts per strip (can be cut into 6” sections)

Pros & Cons

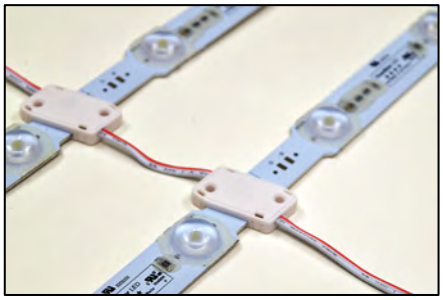
Pros

- Uniform illumination
- Easy installation
- Outdoor use (IP65 – dry & damp)
- Thinner light boxes (as thin as 2.25”)
- Custom sizes and configurations available
- No heat sink needed

Cons

- High power consumption
- Only available in 24V DC
- Field repair is labor intense

Optix170M™ Long (35.4”) LED Strips (metal boards)



Brightness	Ease of use	Cost
★★★☆	★★★★☆	★★★★☆

Availability	Color Temp	Voltage
Stock	6500K	24V DC

Power	Length	Circuit
7.2W ea.	35.4”	5.9” Length

What it is used for

Back-lighting displays with a minimum depth of 2.25”

How to use it

Optix170’s are configured in rolls for back of displays. Standard rolls can illuminate 3’ x 4’ area. Each Optix170M can be cut into 5.9” sections. During install, unroll the strips, position, attach via mechanical means (such as screws) or double-back tape, and connect power (24V). Optix170M have a IP65 rating for dry & damp applications (outdoor use). Best if placed on a white reflective surface.

Specifications per application

Pitch – spacing between strips	3” Standard	Customizable based on depth of light box (recommend box depth > pitch)
Distance – LED to Face/Graphic	2.25” Standard	Decreased distance equates to decreased pitch – more strips needed
Standard Color	6500 K	Additional CCT can be produced depending on LED availability
Standard Lengths/Power	35.4”	7.2 watts per strip (can be cut into 5.9” sections)

Pros & Cons

Pros	*Cons*
• Uniform illumination • Easy installation • Outdoor use (IP65 – dry & damp) • Thinner light boxes (as thin as 2.25”) • Custom sizes and configurations available • No heat sink needed	• High power consumption • Only available in 24V DC • Not able to repair in field

LBT Flex Array LED Strips (19”)

Brightness	Ease of use	Cost
★★☆☆	★★★☆	★★★☆

Availability	Color Temp	Voltage
Custom	6500K	24V DC

Power	Width	Circuit
2.75W ea.	.41” Wide	9.5” Length

What it is used for

Back-lighting displays with a minimum depth of 4”

How to use it

Flex Arrays are configured in rolls for back of displays. Each Flex Array can be cut in half. During install, unroll the strips, position, attach via mechanical means (such as screws) or double-back tape, and connect power (24V). Best if placed on a white reflective surface.

Specifications per application

Pitch – spacing between strips	3” Standard	Customizable based on depth of light box
Distance – LED to Face/Graphic	4” Standard	Decreased distance equates to decreased pitch – more strips needed
Standard Color	6500 K	Additional CCT can be produced depending in LED availability
Standard Lengths/Power	19”	2.75 watts per strip (strips can be cut in half)

Pros & Cons

Pros	*Cons*
• Uniform illumination • Easy installation • Custom sizes and configurations available • Simple field repairs and replacements • No heat sink needed	• High power consumption • Unable to light thin light boxes (i.e., less than 3”) • Only available in 24V DC • Built to order

LBT Flex Array LED Strips (23.5”)

Brightness	Ease of use	Cost
★★☆☆	★★★☆	★★★☆

Availability	Color Temp	Voltage
Custom	6500K	24V DC

Power	Width	Circuit
4W ea.	.41” Wide	11.75” Length

What it is used for

Back-lighting displays with a minimum depth of 4”

How to use it

Flex Arrays are configured in rolls for back of displays. Each Flex Array can be cut in half. During install, unroll the strips, position, attach via mechanical means (such as screws) or double-back tape, and connect power (24V). Best if placed on a white reflective surface.

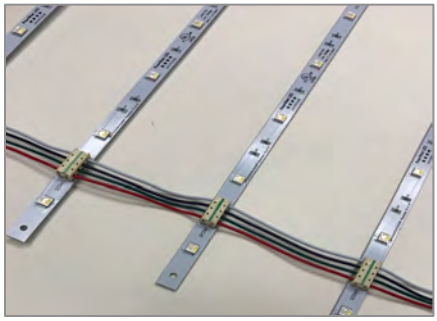
Specifications per application

Pitch – spacing between strips	3” Standard	Customizable based on depth of light box
Distance – LED to Face/Graphic	4” Standard	Decreased distance equates to decreased pitch – more strips needed
Standard Color	6500 K	Additional CCT can be produced depending in LED availability
Standard Lengths/Power	23.5”	4 watts per strip (strips can be cut in half)

Pros & Cons

Pros	*Cons*
• Uniform illumination • Easy installation • Custom sizes and configurations available • Simple field repairs and replacements • No heat sink needed	• High power consumptions • Unable to light thin light boxes (i.e., less than 3”) • Only available in 24V DC • Built to order

RGBW Flex Array LED Strips (23.5”)



Brightness	Ease of use	Cost
★★☆☆	★★☆☆	★★☆☆

Availability	Color Temp	Voltage
Custom	RBG-W	24V DC

Power	Width	Circuit
5W ea.	.41” Wide	23.5” Length

What it is used for

Color or tunable white back-lighting of displays with a minimum depth of 4”

How to use it

RGBW Flex Arrays are configured in rolls for back of displays. During install, unroll the strips, position, attach via mechanical means (such as screws) or double-back tape, and connect power (24V). Best if placed on a white reflective surface. Requires RGB controller or DMX system.

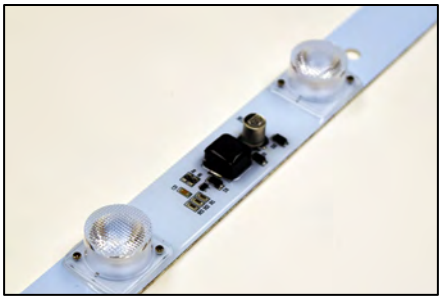
Specifications per application

Pitch – spacing between strips	3” Standard	Customizable based on depth of light box
Distance – LED to Face/Graphic	4” Standard	Decreased distance equates to decreased pitch – more strips needed
Standard Color	RGBW	Can be used in either RGB or tunable white applications
Standard Lengths/Power	23.5”	5 watts per strip

Pros & Cons

Pros	*Cons*
• Uniform illumination • Easy installation • Color or tunable white • Compatible with DMX system • Custom configurations available • No heat sink required	• High power consumption • Unable to light thin light boxes (i.e., less than 3”) • Only available in 24V DC • Must use RGB controller or DMX system • Only available in 23.5” length • Built to order

LED Light Bar with Lens (6 Lights)



Brightness	Ease of use	Cost
★★★★	★★★★	★★★☆

Availability	Color Temp	Voltage
Stock	6500K	24V DC

Power	Width	Circuit
15W ea.	1.14” Wide	19” Length

What it is used for

Perimeter-lighting for large format fabric graphic displays

How to use it

Light Bars are designed with a 15° x 45° lens for use to illuminate displays via installation on inside perimeter wall of light box. Powerful LEDs can effectively illuminate larger light boxes. Best if used in conjunction with white reflective backing within box.

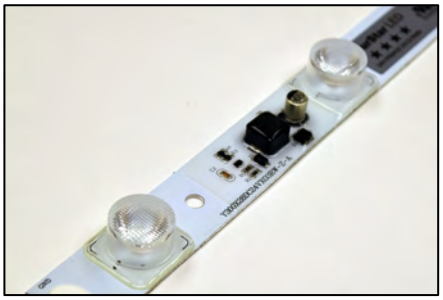
Specifications per application

Assembly	Varies	Screw mount to metal frame around perimeter of display – lights shine inward
Depth of light box	4” Standard	Narrower boxes may experience hot spots – can be utilized in deeper light boxes
Standard Color	6500 K	Additional CCT can be produced depending on LED availability
Standard Lengths/Power	19”	15 watts per bar

Pros & Cons

Pros	*Cons*
• Uniform illumination • Ultra bright • Easy installation • 1500 Lumens per bar	• High power consumption • Only available in 24V DC • Need deep light box (>4”)

LED Light Bar with Lens (3 Lights)



Brightness	Ease of use	Cost
★★★★	★★★★	★★★☆

Availability	Color Temp	Voltage
Stock	6500K	24V DC

Power	Width	Circuit
9W ea.	1.14” Wide	11.75” Length

What it is used for

Perimeter-lighting for large format fabric graphic displays

How to use it

Light Bars are designed with a 15° x 45° lens for use to illuminate displays via installation on inside perimeter wall of light box. Powerful LEDs can effectively illuminate larger light boxes. Best if used in conjunction with white reflective backing within box.

Specifications per application

Assembly	Varies	Screw mount to metal frame around perimeter of display – lights shine inward
Depth of light box	4” Standard	Narrower boxes may experience hot spots – can be utilized in deeper light boxes
Standard Color	6500 K	Additional CCT can be produced depending on LED availability
Standard Lengths/Power	11.75”	9 watts per bar

Pros & Cons

Pros	*Cons*
• Uniform illumination • Ultra bright • Easy installation • 750 Lumens per bar	• High power consumption • Only available in 24V DC • Need deep light box (>4”)