FIBERSTARS®

Fiber Optic Technology in Lighting™

focus: **ENERGY EFFICIENCY**

EFO®

contents

Fiberstars' products are manufactured under 40 patents and several more patents are pending.

contents:

EFO®

The Greenest Story Ever Told in Down Lighting

Fiberstars' EFO (Efficient Fiber Optics) is a breakthrough in fiber optic lighting technology that changes the relationship between lighting and energy in a dramatic way. EFO's unique non-imaging optics transfer light efficiently from the source to the new EFO Opticore® fiber.

One 68 watt EFO lamp delivers the center beam candlepower of eight 50 watt MR16 EXN Halogen lamps—replacing a total of 400 watts!

Fiberstars EFO is the most efficient fiber optic lighting system in the world. It's more efficient than halogen and other incandescent lighting, as well as compact fluorescent lamps.

focus: **Environment**
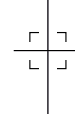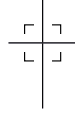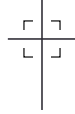
project: Trammel Crow retrofit
location: Houston, Texas

project: Cinemark
location: Grapevine, TX

after: Fiberstars EFO
1,140 watts
17 lamp changes per year

before: Traditional MR16 accent lighting
5,120 watts
222 lamp changes per year

EFO®

EFO can help customers achieve the light levels they require and still comply with new energy regulations: ASHRAE/IESNA 90.1.

Compliance without Compromise
- Saves up to 80% on energy consumption
- Saves on maintenance – one lamp to change for eight fixtures
- Can save one watt of HVAC in every three watts of lighting saved because there is no heat in the light
- $12.7 million in government R&D support to date assures continuous improvement in this state-of-the-art technology

The innovative technology, patented by Fiberstars, encompasses new CPC™ (compound parabolic collector) optics surrounding the core of a 68 watt HID lamp; new optics to connect the fiber to the illuminator, a proprietary, optically pure and flexible new fiber made in the U.S. by Fiberstars; and specially designed EFO fixtures which adjust to provide angles of 15º, 25º, 40º and 60º.

EFO is easy to specify. There are only three components – the illuminator, fiber and fixture. EFO fiber is custom cut at the factory and shipped to the job site ready to install in an easy "plug 'n play" manner. The fiber simply plugs into both the illuminator and the fixture like a phone jack into a wall outlet. We call this system FiberJacks™.

- At retail, EFO downlights provide excellent "power alley" merchandise spotlighting without heat and help reduce watts per square foot without reducing light
- Silent, compact, and fanless illuminator with easy lamp change feature
- Flexible, optically pure, and high quality fiber – the only continuously extruded large core fiber in the world
- Large core fiber fixtures satisfy a variety of installation needs
- EFO can also be used with stranded FiberSpots® fiber and all Fiberstars' stranded fiber fixtures. The EFO optics deliver light to the fiber so efficiently that a stranded fiber EFO system is also more efficient than incandescent lamps and any other fiber optic lighting system
- No heat, UV or IR emitted from the light fixture

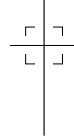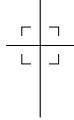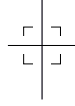*Available for the most popular fiber sizes.

EFO LIGHTING SYSTEM
efficient_reliable_flexible

The three components in EFO are the illuminator, the fiber, and the fixtures.

EFO 4+4 utilizes a 68 watt metal halide lamp that drives two output ports. Each port connects up to four 10mm large core fibers for a total of eight fixtures per illuminator.

project: Whole Foods
location: Colorado Springs, Colorado

68 watt metal halide

EFO-4+4 *ILLUMINATOR*

Description:

Excellent for commercial downlighting applications with large core fiber plug and play connectors.

Benefits:
- U.L. listed for damp locations
- Fanless and silent
- Extremely energy efficient with patented CPC reflectors
- Accommodates up to eight 12/10mm large core fibers through dual ports
- 68W metal halide lamp– average rated life 6,000 hours
- Easy access for lamp replacement
- Plug and play fiber connections

Dimensions:

14.93" (379мм)
6.17" (157мм)
13.38" (340мм)
5.4" (137мм)

Available 2005

68 watt metal halide

EFO-3+3 *ILLUMINATOR*

Description:

Excellent for commercial downlighting applications with large core fiber plug and play connectors.

Benefits:
- U.L. listed for damp locations
- Fanless and silent
- Extremely energy efficient with patented CPC reflectors
- Accommodates up to six 14/12mm large core fibers through dual ports
- 68W metal halide lamp– average rated life 6,000 hours
- Easy access for lamp replacement
- Plug and play fiber connections

Dimensions:

14.93" (379мм)
6.17" (157мм)
13.38" (340мм)
5.4" (137мм)
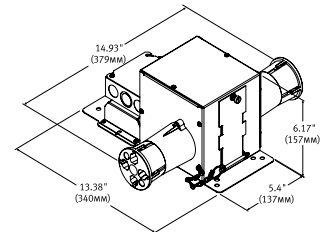
Available 2005
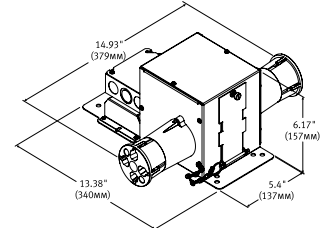
68 watt metal halide

EFO-2+2 *ILLUMINATOR*

Description:

Excellent for commercial downlighting applications with large core fiber plug and play connectors.

Benefits:
- U.L. listed for damp locations
- Fanless and silent
- Extremely energy efficient with patented CPC reflectors
- Accommodates up to four 17/15mm large core fibers through dual ports
- 68W metal halide lamp– average rated life 6,000 hours
- Easy access for lamp replacement
- Plug and play fiber connections

Dimensions:

14.93" (379мм)
6.17" (157мм)
13.38" (340мм)
5.4" (137мм)

68 watt metal halide

EFO-1+1 *ILLUMINATOR*

Description:
Excellent for commercial downlighting applications with both large core and stranded fiber.

Benefits:
- U.L. listed for damp locations
- Fanless and silent
- Extremely energy efficient with patented CPC reflectors
- Accommodates 1,000 stranded fibers and large core fiber harnesses through dual ports
- 68W metal halide lamp– average rated life 6,000 hours
- Easy access for lamp replacement

Dimensions:

10.96" (278мм)
6.17" (157мм)
13.38" (340мм)
5.4" (137мм)

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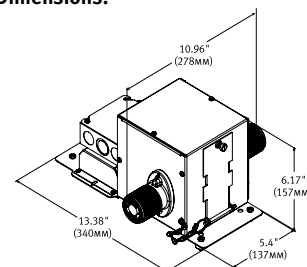
68 watt metal halide

EFO-AG *ILLUMINATOR*

Description:
Excellent for outdoor landscape lighting applications with both large core and stranded fiber.

Benefits:
- U.L. listed for wet locations
- Fanless, virtually silent & completely sealed
- Extremely energy efficient with patented CPC reflectors
- Accommodates 1,000 stranded fibers and large core fiber harnesses through dual ports
- 68W metal halide lamp – average rated life 6,000 hours

Dimensions:

11.33" (288мм)
12.53" (318мм)
6.31" (160мм)
7.48" (190мм)
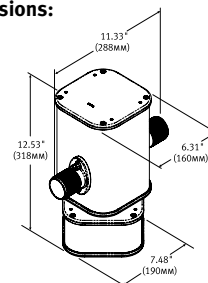
EFO-4+4 ILLUMINATOR
description_ordering guide_specifications

EFO-4+4 ILLUMINATOR

Description:

EFO–4+4 is fanless and U.L. listed for damp locations. One 68 watt lamp drives two output ports, each capable of connecting up to four 12/10mm FiberJacks large core fibers, for a total of eight fixtures per il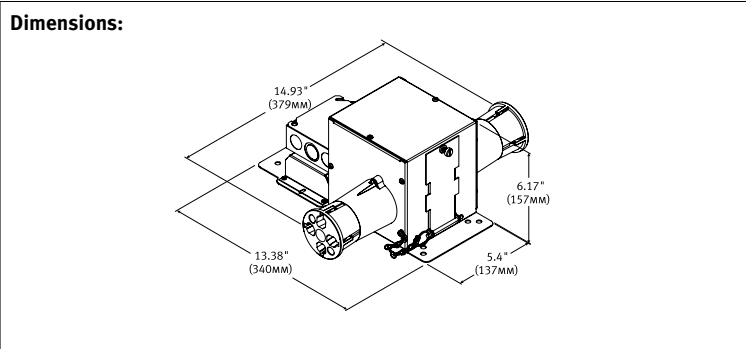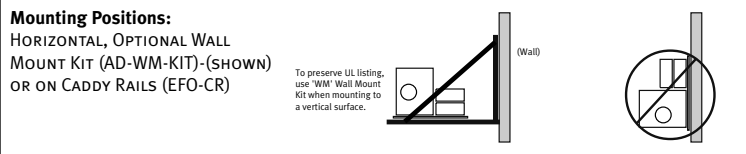luminator. This Illuminator provides the highest light output through EFO-12/10mm fiber. The EFO-4+4 is used for interior downlighting, accent lighting, cases, cabinets and other places where a small, silent, remote light source is preferred.

illuminator ordering guide

Model:
EFO-4+4

Voltage Options:
120 120V, 60 Hz
240 240V, 50/60 Hz

Color Wheel Options:
2NC 2 PORTS, WHITE LIGHT
2SC 2 PORTS, SINGLE COLOR*

* SINGLE COLOR MUST BE SPECIFIED AT TIME OF ORDER.

Options:
00 STANDARD HARDWIRE CONNECTION
PC POWER CORD/PLUG OPTION
WM WALL MOUNT KIT
CR CADDY RAILS, SET OF 2

Specifications:
Maximum Exposure Rating:	DAMP LOCATION
Ventilation:	FANLESS
Thermal Output:	350 BTU/HR
Acoustic Rating (dB):	NOISELESS
Weight:	10 LBS
Rec. Mounting Clearance:	12"
Operating Temperature:	5° TO 45° C
Storage Temperature:	-20° TO 85° C
Continuous Load @ 120V:	0.7 AMPS
Startup Load @ 120V:	1.0 AMPS
Replacement Lamps:	EFO-068, EFO-068-D, EFO-068-SC, EFO-068-SC-D
Lamp Wattage:	68W
Lamp Type:	HID METAL HALIDE
Lamp Life:	6000 HOURS AVERAGE
Restrike Delay:	3 MINUTES
Color Temperature:	3500° K
CRI:	70
Materials:	POWDER COATED METAL, INJECTION MOLDED PLASTIC
Color Filter Options: (single color)	APPLE-GREEN, AMBER, AQUA, DARK BLUE, MAGENTA, INCANDESCENT, MEDIUM BLUE, GREEN, ORANGE, TEAL

Dimensions:

14.93" (379MM)
6.17" (157MM)
13.38" (340MM)
5.4" (137MM)

Technical Remarks:

Any one color from the Color Filter Options may be added to the lamp. The colors can be different if desired. Add 10" (250mm) to length dimension of stranded fiber and 20" (500mm) for large core fiber to accommodate the fiber bending radius. Port plugs available to block light leakage for unused FiberJacks.

Mounting Positions:
HORIZONTAL, OPTIONAL WALL MOUNT KIT (AD-WM-KIT)-(SHOWN) OR ON CADDY RAILS (EFO-CR)

To preserve UL listing, use 'WM' Wall Mount Kit when mounting to a vertical surface.

(Wall)

1 (800) 327-7877 / efoinfo@fiberstars.com

68 watt metal halide

EFO-3+3 illuminator

Description:

EFO–3+3 is fanless and U.L. listed for damp locations. One 68 watt lamp drives two output ports, each capable of connecting up to three 14/12mm FiberJacks large core fibers for a total of six fixtures per illuminator. This illuminator provides the highest light output through EFO-14/12mm fiber. The EFO-3+3 is used for interior downlighting, accent lighting, cases, cabinets and other places where a small, silent, remote light source is preferred.

illuminator ordering guide

Model:	Color Wheel Options:		Options:	
EFO-3+3	**2NC**	2 ports, white light	**00**	Standard hardwire connection
	2SC	2 ports, single color*	**PC**	Power cord/plug option
			WM	Wall mount kit
		* single color must be specified at time of order.	**CR**	Caddy Rails, set of 2

Voltage Options:
120 120V, 60 Hz
240 240V, 50/60 Hz

Specifications:

Maximum Exposure Rating:	Damp Location
Ventilation:	Fanless
Thermal Output:	350 BTU/hr
Acoustic Rating (dB):	Noiseless
Weight:	10 lbs
Rec. Mounting Clearance:	12"
Operating Temperature:	5° to 45° C
Storage Temperature:	-20° to 85° C
Continuous Load @ 120V:	0.7 Amps
Startup Load @ 120V:	1.0 Amps
Replacement Lamps:	EFO-068, EFO-068-D, EFO-068-SC, EFO-068-SC-D
Lamp Wattage:	68W
Lamp Type:	HID Metal Halide
Lamp Life:	6000 Hours Average
Restrike Delay:	3 Minutes
Color Temperature:	3500° K
CRI:	70
Materials:	Powder Coated Metal, Injection Molded Plastic
Color Filter Options: (single color)	Apple-Green, Amber, Aqua, Dark Blue, Magenta, Incandescent, Medium Blue, Green, Orange, Teal

Dimensions:

14.93" (379mm)
6.17" (157mm)
13.38" (340mm)
5.4" (137mm)

Technical Remarks:

Any one color from the Color Filter Options may be added to the lamp. The colors can be different if desired. Add 10" (250mm) to length dimension of stranded fiber and 20" (500mm) for large core fiber to accommodate the fiber bending radius. Port plugs available to block light leakage for unused FiberJacks.

Mounting Positions:

Horizontal, Optional Wall Mount Kit (AD-WM-KIT)-(shown) or on Caddy Rails (EFO-CR)

(Wall)

To preserve UL listing, use 'WM' Wall Mount Kit when mounting to a vertical surface.

EFO-2+2 ILLUMINATOR
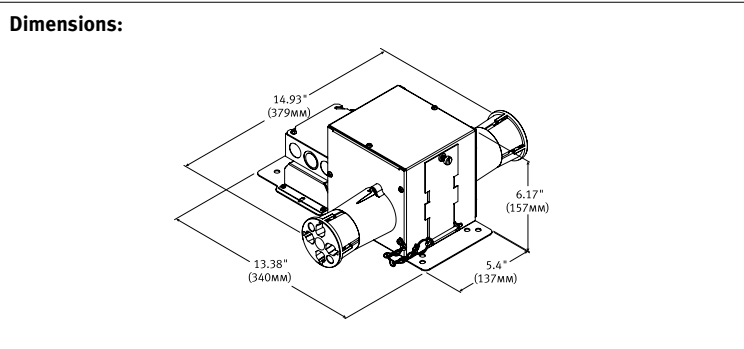## description_ordering guide_specifications

EFO-2+2 ILLUMINATOR
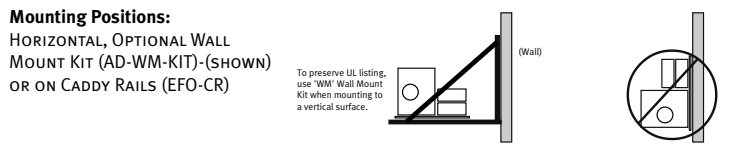
Description:

EFO–2+2 is fanless and U.L. listed for damp locations. One 68 watt lamp drives two output ports, each capable of connecting up to two 17/15mm FiberJacks large core fibers for a total of four fixtures per illuminator. This Illuminator provides the highest light output through EFO-17/15mm fiber. The EFO-2+2 is used for interior downlighting, accent lighting, cases, cabinets and other places where a small, silent, remote light source is preferred.

illuminator ordering guide

Model:
EFO-2+2

Voltage Options:
120 120V, 60 Hz
240 240V, 50/60 Hz

Color Wheel Options:
2NC 2 PORTS, WHITE LIGHT
2SC 2 PORTS, SINGLE COLOR*

* SINGLE COLOR MUST BE SPECIFIED AT TIME OF ORDER.

Options:
00 STANDARD HARDWIRE CONNECTION
PC POWER CORD/PLUG OPTION
WM WALL MOUNT KIT
CR CADDY RAILS, SET OF 2

Specifications:
Maximum Exposure Rating:	DAMP LOCATION
Ventilation:	FANLESS
Thermal Output:	350 BTU/HR
Acoustic Rating (dB):	NOISELESS
Weight:	10 LBS
Rec. Mounting Clearance:	12"
Operating Temperature:	5° TO 45° C
Storage Temperature:	-20° TO 85° C
Continuous Load @ 120V:	0.7 AMPS
Startup Load @ 120V:	1.0 AMPS
Replacement Lamps:	EFO-068, EFO-068-D, EFO-068-SC, EFO-068-SC-D
Lamp Wattage:	68W
Lamp Type:	HID METAL HALIDE
Lamp Life:	6000 HOURS AVERAGE
Restrike Delay:	3 MINUTES
Color Temperature:	3500° K
CRI:	70
Materials:	POWDER COATED METAL, INJECTION MOLDED PLASTIC
Color Filter Options: (single color)	APPLE-GREEN, AMBER, AQUA, DARK BLUE, MAGENTA, INCANDESCENT, MEDIUM BLUE, GREEN, ORANGE, TEAL

Dimensions:

14.93" (379mm), 6.17" (157mm), 13.38" (340mm), 5.4" (137mm)

Technical Remarks:
Any one color from the Color Filter Options may be added to the lamp. The colors can be different if desired. Add 10" (250mm) to length dimension of stranded fiber and 20" (500mm) for large core fiber to accommodate the fiber bending radius. Port plugs available to block light leakage for unused FiberJacks.

Mounting Positions:
HORIZONTAL, OPTIONAL WALL MOUNT KIT (AD-WM-KIT)-(SHOWN) OR ON CADDY RAILS (EFO-CR)

To preserve UL listing, use 'WM' Wall Mount Kit when mounting to a vertical surface. (Wall)

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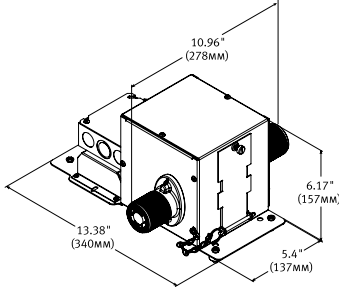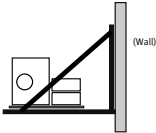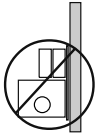## description_ordering guide_specifications

68 watt metal halide

EFO–1+1 ILLUMINATOR

Description:

The EFO-1+1 is fanless and is U.L. listed for damp locations. The award winning illuminator features a 68 watt metal halide lamp driving two output ports intended for use with up to 10 Opticore® large core fibers, but can also be used with 1,000 stranded FSPT fibers*. The 68 watt metal halide lamp is coupled with Fiberstars' patented CPC reflectors to create the most efficient fiber optic illuminator in the world. The EFO–1+1 is used for interior downlighting, accent lighting, cases, cabinets and other places where a small, silent, remote light source is preferred.
Previously known as "AD."

*For information on stranded fiber consult Fiberstars Commercial Products Catalog, Volume 1.

illuminator ordering guide

Model:
EFO-1+1

Voltage Options:
120 120V, 60 Hz
240 240V, 60 Hz/50Hz

Color Wheel Options:
2NC 2 PORTS, WHITE LIGHT
2SC 2 PORTS, SINGLE COLOR*

* SINGLE COLORS MUST BE SPECIFIED AT TIME OF ORDER.

Options:
00 STANDARD HARDWIRE CONNECTION
PC POWER CORD/PLUG OPTION
WM WALL MOUNT KIT
CR CADDY RAILS, SET OF 2

Specifications:

Maximum Exposure Rating:	DAMP LOCATION
Ventilation:	FANLESS
Thermal Output:	350 BTU/HR
Acoustic Rating (dB):	NOISELESS
Weight:	10 LBS
Rec. Mounting Clearance:	12"
Operating Temperature:	5° TO 45° C
Storage Temperature:	-20° TO 85° C
Continuous Load @ 120V:	0.7 AMPS
Startup Load @ 120V:	1.0 AMPS
Replacement Lamp:	EFO-068, EFO-068-D, EFO-068-SC, EFO-068-SC-D
Lamp Wattage:	68W
Lamp Type:	HID METAL HALIDE
Lamp Life:	6000 HOURS AVERAGE
Restrike Delay:	3 MINUTES
Color Temperature:	3500° K
CRI:	70
Materials:	POWDER COATED METAL, INJECTION MOLDED PLASTIC
Color Filter Options: (single color)	APPLE-GREEN, AMBER, AQUA, DARK BLUE, MAGENTA, INCANDESCENT, MEDIUM BLUE, GREEN, ORANGE, TEAL

Dimensions:

10.96" (278MM)
6.17" (157MM)
13.38" (340MM)
5.4" (137MM)

Technical Remarks:
Any one color from the Color Filter Options may be added to the lamp. The colors can be different if desired. Add 10" (250mm) to length dimension of stranded fiber and 20" (500mm) for large core fiber to accommodate the fiber bending radius. Zero port connectors available to block light leakage for unused ports.

Mounting Positions:
HORIZONTAL, OPTIONAL WALL MOUNT KIT (AD-WM-KIT)-(SHOWN) OR ON BAR HANGERS (EFO-CR)

To preserve UL listing, use 'WM' Wall Mount Kit when mounting to a vertical surface.

(Wall)

EFO AG ILLUMINATOR
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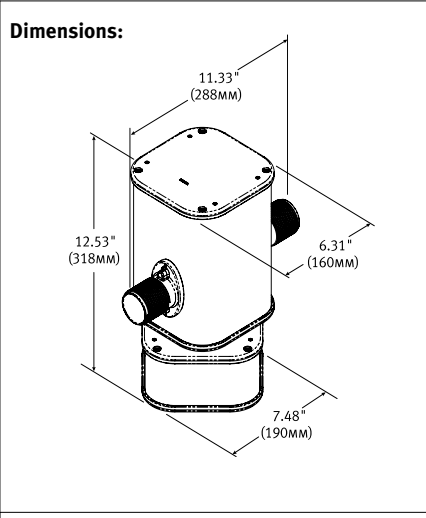
EFO-AG ILLUMINATOR

Description:

The EFO–AG is fanless, completely sealed and U.L. listed for wet locations. This award winning illuminator features a 68 watt metal halide lamp driving two output ports for a total capacity of 1,000 stranded fibers* and large core fiber harnesses. Utilizing CPC reflector technology, this unit delivers an unprecedented 45 port lumens per watt. The EFO–AG can be used in outdoor and indoor applications, such as accent lighting, fountains, signage, and building highlights.
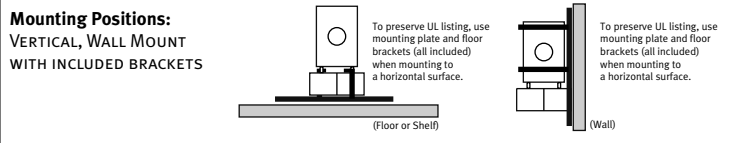
*For information on stranded fiber consult Fiberstars Commercial Products Catalog, Volume 1.

illuminator ordering guide

Model:
EFO-AG

Voltage Options:
120   120V, 60 Hz
240   240V, 50/60 Hz

Color Wheel Options:
WW   2 PORTS, WHITE LIGHT
2SC   2 PORTS, 2 SINGLE COLORS
CCS   2 PORTS, 2 FOUR-COLOR WHEELS (SYNCHRO-NIZED WITHIN THE ILLUMINATOR ONLY)

* COLORS AND SEQUENCES MUST BE SPECIFIED AT TIME OF ORDER.

Options:
005   STANDARD HARDWIRE CONNECTION
PC5   POWER CORD/PLUG OPTION

Specifications:

Maximum Exposure Rating:	WET LOCATION
Ventilation:	FANLESS
Thermal Output:	350 BTU/HR
Acoustic Rating (dB):	NOISELESS
Weight:	15 LBS
Rec. Mounting Clearance:	12"
Operating Temperature:	5˚ TO 35˚ C
Storage Temperature:	-20˚ TO 85˚ C
Continuous Load @ 120V:	0.7 AMPS
Startup Load @ 120V:	1.0 AMPS
Replacement Lamp:	EFO-068-AG, EFO-068-AG-SC
Lamp Wattage:	68W
Lamp Type:	HID METAL HALIDE
Lamp Life:	6000 HOURS AVERAGE
Restrike Delay:	3 MINUTES
Color Temperature:	3500˚ K
CRI:	70
Materials:	POWDER COATED CAST ALUMINUM, INJECTION MOLDED PLASTIC
Color Filter Options: (single color)	APPLE-GREEN, AMBER, AQUA, DARK BLUE, MAGENTA, INCANDESCENT, MEDIUM BLUE, GREEN, ORANGE, TEAL
Color Filter Options: (color wheel)	AQUA, MAGENTA, GREEN, YELLOW, NO COLOR

Dimensions:

11.33" (288MM)
12.53" (318MM)
6.31" (160MM)
7.48" (190MM)

Technical Remarks:

EFO–AG is available with two synchronized, 4-color wheels using the colors indicated. Both ports emit the same color simultaneously. Any one color from the Color Filter Options may be added to the lamp. The colors can be different if desired. Add 10" (250mm) to length dimension of stranded fiber and 20" (500mm) for large core fiber to accommodate the fiber bending radius. Add one inch to overall height for 240V EFO-AG.

Mounting Positions:
VERTICAL, WALL MOUNT WITH INCLUDED BRACKETS

To preserve UL listing, use mounting plate and floor brackets (all included) when mounting to a horizontal surface. (Floor or Shelf)

To preserve UL listing, use mounting plate and floor brackets (all included) when mounting to a horizontal surface. (Wall)

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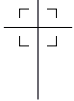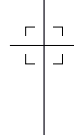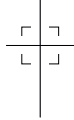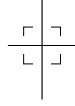
project: Office Building Entrance
location: Fuerth/Nuremburg, Germany

EFO LARGE CORE FIBER
### end_emitting_FiberJacks™

end lit

EFO FIBERJACKS *LARGE CORE FIBER*

Description:

For use with EFO-4+4, EFO-3+3 and EFO-2+2 illuminators. Each Opticore® fiber tail includes a FiberJack connector on one end and a fixture connector (bayonet) on the other end. This method of fiber connection provides the highest light output with an EFO-4+4, EFO-3+3 or EFO-2+2 illuminator. No cutting, harnessing, or ferruling required, just plug in and go. Available in standard lengths of 10' or in custom lengths from 5' to 25'. Minimum bend radius is 8x inner diameter.

The EFO-MBF-F-XX fixture requires a special FiberJacks tail that includes the flexible arm. Consult factory for details.
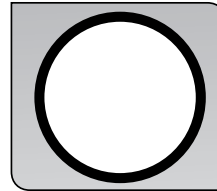
end lit
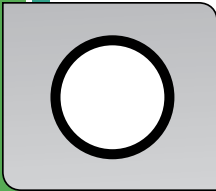
EFO-FJ-12/10MM-10 OR XX

Overall Diameter:	0.472" (12mm)
Inner Diameter:	0.394" (10mm)
Jacket Material:	Black PVC
Fiber Length:	(10) Standard 10' (XX) Custom Length up to 25'
Technical Remarks:	For use with EFO-4+4

EFO-FJ-17/15MM-10 OR XX

Overall Diameter:	0.669" (17mm)
Inner Diameter:	0.591" (15mm)
Jacket Material:	Black PVC
Fiber Length:	(10) Standard 10' (XX) Custom Length up to 25'
Technical Remarks:	For use with EFO-2+2

end lit

EFO-FJ-14/12MM-10 OR XX

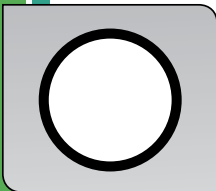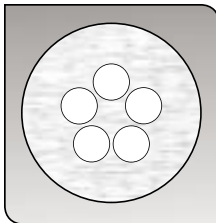|	
Overall Diameter:	0.551" (14mm)
Inner Diameter:	0.472" (12mm)
Jacket Material:	Black PVC
Fiber Length:	(10) Standard 10' (XX) Custom Length up to 25'
Technical Remarks:	For use with EFO-3+3

harnesses

FACTORY ASSEMBLED HARNESSES

Description:

For use with EFO-1+1 or EFO-AG illuminators. These large core, end emitting fiber harnesses are available in four configurations. EFO-HF5-9/8-10 has five tails of EFO-9/8mm at 10' coupled to an EFO optical port. EFO-HF4-12/10-10 has four tails of EFO-12/10mm at 10' coupled to an EFO optical port. EFO-HF3-14/12-10 has three tails of EFO-14/12mm at 10' coupled to an EFO optical port. EFO-HF1-22/19-10 has one tail of EFO-22/19mm at 10' coupled to an EFO optical port. The other end of the fiber tail has fixture bayonets attached. Minimum bend radius is 8x inner diameter. Harnesses easily screw onto illuminator port hubs. The EFO-MBF-F-XX fixture requires a special harness that includes the flexible arm. Consult factory for details.
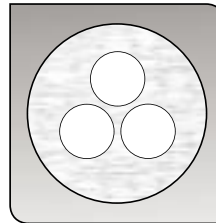
5-way

EFO-HF5-9/8-10 OR XX

Outer Diameter:	0.354" (9mm) EACH FIBER
Inner Diameter:	0.266" (8mm) EACH FIBER
Jacket Material:	BLACK PVC
Fiber Length:	(10) STANDARD, 10' (XX) CUSTOM LENGTH UP TO 25'

3-way

EFO-HF3-14/12-10 OR XX

Outer Diameter:	0.551" (14mm) EACH FIBER
Inner Diameter:	0.472" (12mm) EACH FIBER
Jacket Material:	BLACK PVC
Fiber Length:	(10) STANDARD, 10' (XX) CUSTOM LENGTH UP TO 25'

4-way

EFO-HF4-12/10-10 OR XX

Outer Diameter:	0.472" (12mm) EACH FIBER
Inner Diameter:	0.394" (10mm) EACH FIBER
Jacket Material:	BLACK PVC
Fiber Length:	(10) STANDARD, 10' (XX) CUSTOM LENGTH UP TO 25'

1-way

EFO-HF1-22/19-10 OR XX

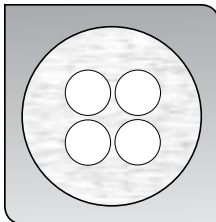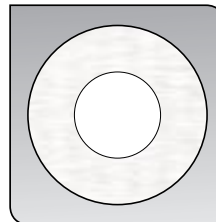|	
Outer Diameter:	0.866" (22mm) EACH FIBER
Inner Diameter:	0.748" (9mm) EACH FIBER
Jacket Material:	BLACK PVC
Fiber Length:	(10) STANDARD, 10' (XX) CUSTOM LENGTH UP TO 25'

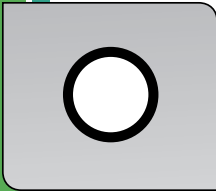# EFO LARGE CORE FIBER
end_emitting_special orders

end lit

OPTICORE® LARGE CORE FIBER

Description:

For use with EFO-1+1 and EFO-AG illuminators. Consult factory for custom lengths sold by the foot. Factory FiberJacks assemblies or harnesses are strongly recommended, see pages 18 and 19. Minimum bend radius is 8x inner diameter.

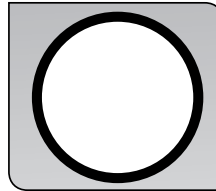*For information on stranded fiber, consult Fiberstars Commercial Products Catalog, Volume 1.

end lit

EFO-9/8мм

Overall Diameter:	0.354" (9мм)
Inner Diameter:	0.266" (8мм)
Jacket Material:	Black PVC
Fiber Length:	5' to 25' maximum

end lit

EFO-17/15мм

Overall Diameter:	0.669" (17мм)
Inner Diameter:	0.591" (15мм)
Jacket Material:	Black PVC
Fiber Length:	5' to 25' maximum
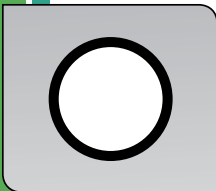
end lit

EFO-12/10мм

Overall Diameter:	0.472" (12мм)
Inner Diameter:	0.394" (10мм)
Jacket Material:	Black PVC
Fiber Length:	5' to 25' maximum
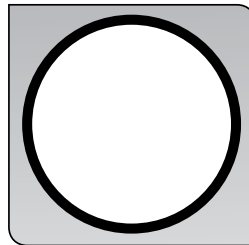
end lit

EFO-22/19мм

Overall Diameter:	0.866" (22мм)
Inner Diameter:	0.748" (19мм)
Jacket Material:	Black PVC
Fiber Length:	5' to 25' maximum

end lit

EFO-14/12мм

Overall Diameter:	0.551" (14мм)
Inner Diameter:	0.472" (12мм)
Jacket Material:	Black PVC
Fiber Length:	5' to 25' maximum

1 (800) 327-7877 / efoinfo@fiberstars.com

EFO LARGE CORE FIBER
side_emitting

side lit

EFO-BRIGHTCORE® & EFO-TT

Description:

For use with EFO-1+1 or EFO-AG illuminators. Side lit large core fiber is available in both interior and exterior versions. The EFO-TT fiber uses a new Titanium-based technology, allowing greater brightness than the EFO-BC fiber. Minimum bend radius is 8x inner diameter.

EFO-Britecore side light is beautifully transparent. EFO-TT side light offers a brighter "solid light" look.

side lit

EFO-BC1300

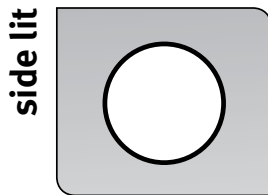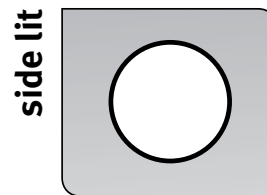|	
Overall Diameter:	0.508" (13mm)
Inner Diameter:	0.460" (12mm)
Jacket Material:	Clear
Fiber Length:	75' max. length
Technical Remarks:	For indoor installation.

side lit

EFO-TT1300

Overall Diameter:	0.508" (13mm)
Inner Diameter:	0.460" (12mm)
Jacket Material:	Clear
Fiber Length:	75' max. length
Technical Remarks:	For indoor installation. New Titanium-based technology.

side lit
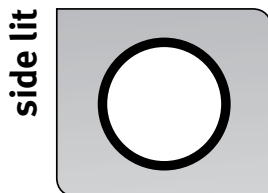
EFO-BC1400-E

Overall Diameter:	0.543" (14mm)
Inner Diameter:	0.460" (12mm)
Jacket Material:	Clear
Fiber Length:	75' max. length
Technical Remarks:	For outdoor installation.

side lit
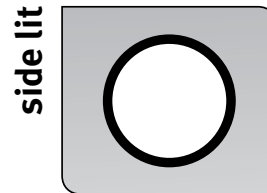
EFO-TT1400-E

Overall Diameter:	0.543" (14mm)
Inner Diameter:	0.460" (12mm)
Jacket Material:	Clear
Fiber Length:	75' max. length
Technical Remarks:	For outdoor installation. New Titanium-based technology.

ACCENT FIXTURES
interior_lensed_unlensed

EFO-MBF-XX *MULTIBEAM FIXTURE, FIXED*

Max. Overall Dimensions:	3.31" OD x 4.5" H (84mm OD x 114mm H)
Trim/Flange Dimensions:	3.31" OD x 0.25" H (84mm OD x 6mm H)
Aperture Dimensions:	2.0" OD (51mm OD)

Rough-in:	2.63" (67mm)	Beam Spread:	15°, 25°, 40°, and 60°*
Opticore Fibers:	EFO-14/12mm max.	Finish (XX):	(MB) Black,
Recess:	14.0" (356mm)		(WT) White,
Bayonet:	Attached to		(PB) Gold
	fiber tail	Weight:	1.7 lbs

Technical Remarks:
Fixtures mount to T-Bar ceiling grid with Erico 512HD Caddy Rails, Fiberstars EFO-CR rails or others.
Fixtures mount to hard ceiling using optional butterfly brackets, EFO-BFB.
*60° beam is achieved with no lens installed. Must request at time of order.

Prime Material:	Steel
Mounting:	T-Bar Ceiling Grid (shown), Hard Ceiling (optional)

EFO-MBF-F-XX *MULTIBEAM FIXTURE WITH FLEX ARM*

Max. Overall Dimensions:	3.31" OD x 18.5" H (84mm OD x 470mm H)
Trim/Flange Dimensions:	3.31" OD x 0.25" H (84mm OD x 6mm H)
Aperture Dimensions:	2" OD (51mm OD)

Rough-in:	2.63" (67mm)	Beam Spread:	15°, 25°, 40°, and 60°*
Opticore Fibers:	EFO-14/12mm max.	Rotation Angle:	360°
Recess:	14.0" (356mm)	Max. Tilt Angle:	+/− 90°
Bayonet:	Attached to	Finish (XX):	(MB) Black,
	fiber tail		(WT) White
		Weight:	2.3 lbs

Technical Remarks:
Same as EFO-MBF, but with an added flex arm gooseneck that allows aiming the fixture in any direction. Flex arm extends to a maximum of 14 inches from the ceiling. Mounting is the same as EFO-MBF. Consult Factory for custom fiber tail needed.
*60° beam is achieved with no lens installed. Must request at time of order.

Prime Material:	Steel
Mounting:	T-Bar Ceiling Grid Hard Ceiling (optional)

EFO-FAW-18-XX *FIXED AIM WALL WASHER*

Max. Overall Dimensions:	3.75" OD x 4.5" H (95mm OD x 114mm H)
Trim/Flange Dimensions:	3.75" OD x 1.19" H (95mm OD x 30mm H)
Aperture Dimensions:	2" OD (51mm OD)

Rough-in:	2.63" (67mm)	Beam Spread:	15°, 25°, 40°, and 60°*
Opticore Fibers:	EFO-14/12mm max.	Finish (XX):	(MB) Black,
Recess:	12.0" (305mm)		(WT) White
Bayonet:	Attached to	Weight:	2.0 lbs
	fiber tail		

Technical Remarks:
This fixture has a fixed 18° tilt to give consistent lighting on a vertical surface. Mounting is the same as EFO-MBF.
*60° beam is achieved with no lens installed. Must request at time of order.

Prime Material:	Steel
Mounting:	T-Bar Ceiling Grid (shown), Hard Ceiling (optional)

EFO-LPS-25-XX OR 60-XX *LOW PROFILE, SIDE ENTRY*

Max. Overall Dimensions:	5.5" OD x 3.0" H (140mm OD x 76mm H)
Trim/Flange Dimensions:	5.5" OD x 0.06" H (140mm OD x 2mm H)
Aperture Dimensions:	4.13" OD (105mm OD)

Rough-in:	4.5" (114mm)	Beam Spread:	25° or 60°
Opticore Fibers:	EFO-17/15mm max.	Finish (XX):	(MB) Black,
Recess:	3.0" (76mm)		(WT) White
Bayonet:	Attached to	Weight:	3.0 lbs
	fiber tail		

Technical Remarks:
T-Bar Ceiling Grid Mount
EFO-LPS-25-XX = 25° Lensed Fixture
EFO-LPS-60-XX = 60° Unlensed Fixture with mirror
Since the fiber connects on the side, the low profile, side entry fixture requires less than 3.5"(89mm) of clearance above the ceiling plane for installation.

| Prime Material:	Steel
Mounting:	T-Bar Ceiling Grid

### EFO-LPS-25-HC-XX OR 60-HC-XX *LOW PROFILE, SIDE ENTRY*

Max. Overall Dimensions:	5.5" OD x 3.0" H (140mm OD x 76mm H)
Trim/Flange Dimensions:	5.5" OD x 0.06" H (140mm OD x 2mm H)
Aperture Dimensions:	4.13" OD (105mm OD)

Rough-in:	4.88" (124mm)	Beam Spread:	25° or 60°
Opticore Fibers:	EFO-17/15mm max.	Finish (XX):	(MB) Black,
Recess:	3.0" (76mm)		(WT) White
Bayonet:	Attached to	Weight:	1.7 lbs
	fiber tail		

Technical Remarks:
Hard Ceiling Mount
EFO-LPS-25-HC-XX = 25° Lensed Fixture
EFO-LPS-60-HC-XX = 60° Unlensed Fixture with mirror
Since the fiber connects on the side, the low profile, side entry fixture requires less than 3.5"(89mm) of clearance above the ceiling plane for installation.

Prime Material:	Steel
Mounting:	Hard Ceiling (HC)

1 (800) 327-7877 / efoinfo@fiberstars.com
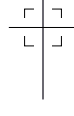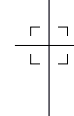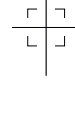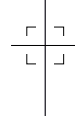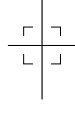
project: Cinemark
location: Grapevine, Texas

ACCENT FIXTURES
interior_lensed_beam softeners & effect filters

4-spot adjustable

EFO-AAL-4R-XX *ADJUSTABLE ACCENT LIGHT 4-SPOT*

Max. Overall Dimensions:	21.38"L x 6.25"W x 4.63"H (543mm L x 159mm W x 118mm H)
Trim/Flange Dimensions:	21.38"L x 6.25"W x 0.13"H (543mm L x 159mm W x 3mm H)
Aperture Dimensions:	2.0"OD (51mm OD) Per Lens

Rough-in:	20.3" x 5.5" (516mm x 140mm)	**Beam Spread:**	15°, 25°, 40°, and 60°*
		Rotation Angle:	360°
Opticore Fibers:	EFO-14/12mm max.	**Max. Tilt Angle:**	+/– 31°
Recess:	14.0" (356mm)	**Finish (XX):**	(MB)Black, (WT)White
Bayonet:	Attached to fiber tail	**Weight:**	9.7 lbs

Technical Remarks:
(4R) Four Spots, recessed
*60° beam is achieved with no lens installed. Must request at time of order.

Prime Material: **Mounting:**	Steel/Aluminum T-Bar Ceiling Grid Hard ceiling versions available, consult factory

---

3-spot adjustable

EFO-AAL-3R-XX *ADJUSTABLE ACCENT LIGHT 3-SPOT*

Max. Overall Dimensions:	16.38"L x 6.25"W x 4.63"H (416mm L x 159mm W x 118mm H)
Trim/Flange Dimensions:	16.38"L x 6.25"W x 0.13"H (416mm L x 159mm W x 3mm H)
Aperture Dimensions:	2.0"OD (51mm OD) Per Lens

Rough-in:	15.63" x 5.5" (397mm x 140mm)	**Beam Spread:**	15°, 25°, 40°, and 60°*
		Rotation Angle:	360°
Opticore Fibers:	EFO-14/12mm max.	**Max. Tilt Angle:**	+/– 31°
Recess:	14.0" (356mm)	**Finish (XX):**	(MB)Black, (WT)White
Bayonet:	Attached to fiber tail	**Weight:**	7.5 lbs

Technical Remarks:
(3R) Three Spots, recessed
*60° beam is achieved with no lens installed. Must request at time of order.

Prime Material: **Mounting:**	Steel/Aluminum T-Bar Ceiling Grid Hard ceiling versions available, consult factory

---

2-spot adjustable

EFO-AAL-2R-XX *ADJUSTABLE ACCENT LIGHT 2-SPOT*

Max. Overall Dimensions:	11.38"L x 6.25"W x 4.63"H (289mm L x 159mm W x 118mm H)
Trim/Flange Dimensions:	11.38"L x 6.25"W x 0.13"H (289mm L x 159mm W x 3mm H)
Aperture Dimensions:	2.0"OD (51mm OD) Per Lens

Rough-in:	10.63" x 5.25" (270mm x 133mm)	**Beam Spread:**	15°, 25°, 40°, and 60°*
		Rotation Angle:	360°
Opticore Fibers:	EFO-14/12mm max.	**Max. Tilt Angle:**	+/– 31°
Recess:	14.0" (356mm)	**Finish (XX):**	(MB)Black, (WT)White
Bayonet:	Attached to fiber tail	**Weight:**	5.7 lbs

Technical Remarks:
(2R) Two Spots, recessed
*60° beam is achieved with no lens installed. Must request at time of order.
2R picture shown with optional face plate, available 2005.

Prime Material: **Mounting:**	Steel/Aluminum T-Bar Ceiling Grid Hard ceiling versions available, consult factory

---

1-spot adjustable

EFO-AAL-1R-XX *ADJUSTABLE ACCENT LIGHT SINGLE SPOT*

|	
Max. Overall Dimensions:	6.38"L x 6.25"W x 4.63"H (162mm L x 159mm W x 118mm H)
Trim/Flange Dimensions:	6.38"L x 6.25"W x 0.13"H (162mm L x 159mm W x 3mm H)
Aperture Dimensions:	2.0"OD (51mm OD) Per Lens

Rough-in:	5.63" x 5.5" (143mm x 140mm)	**Beam Spread:**	15°, 25°, 40°, and 60°*
		Rotation Angle:	360°
Opticore Fibers:	EFO-14/12mm max.	**Max. Tilt Angle:**	+/– 31°
Recess:	14.0" (356mm)	**Finish (XX):**	(MB)Black, (WT)White
Bayonet:	Attached to fiber tail	**Weight:**	4.0 lbs

Technical Remarks:
(1R) One Spot, recessed
*60° beam is achieved with no lens installed. Must request at time of order.

Prime Material: **Mounting:**	Steel/Aluminum T-Bar Ceiling Grid Hard ceiling versions available, consult factory

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effect filters
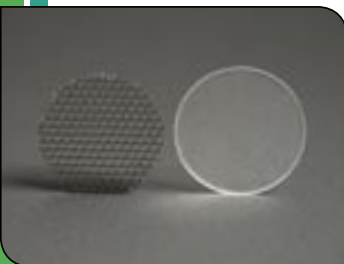
MBF-SOL & MBF-HEX *BEAM EFFECTS FILTERS*

MBF-SOL Diameter:	2.0"(51mm)
MBF-SOL Thickness:	0.125"(3.1mm)
For use with:	EFO-MBF, EFO-MBF-F, EFO-FAW and EFO-AAL fixtures
MBF-HEX Diameter:	2.0"(51mm)
MBF-HEX Thickness:	0.128"(3.25mm)
For use with:	EFO-MBF, EFO-MBF-F, EFO-FAW and EFO-AAL fixtures

Technical Remarks:
MBF-SOL-Lens:
Solite softening filter
MBF-HEX-Louver:
Hexagon filter
Beam effect filters must be ordered with fixtures.
For EFO-AAL fixtures, filters require mounting clips, EFO-AAL-FC.
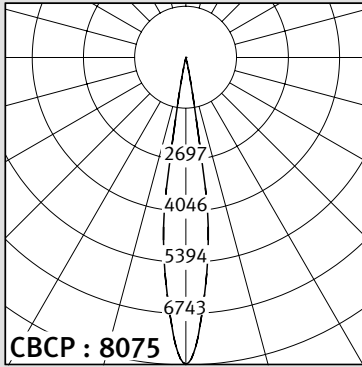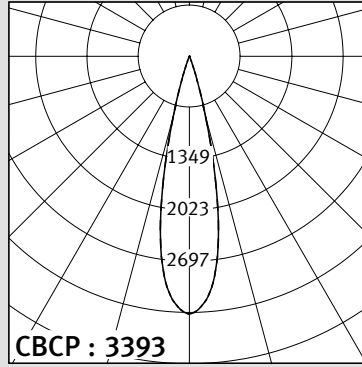Additional filters available, consult factory.

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EFO-3+3, 15-Degree

2697
4046
5394
6743

CBCP : 8075

3'	0.8'	897 FC
6'	1.7'	224 FC
9'	2.5'	100 FC
12'	3.4'	56 FC

EFO-3+3, 25-Degree

1349
2023
2697

CBCP : 3393

3'	1.2'	377 FC
6'	2.5'	94 FC
9'	3.7'	42 FC
12'	5.0'	24 FC

EFO-3+3, 40-Degree

539
809
1079

CBCP : 1305
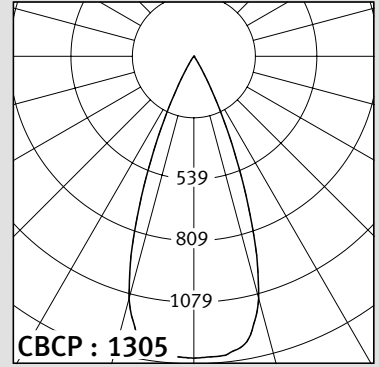
3'	2.1'	145 FC
6'	4.2'	36 FC
9'	6.3'	16 FC
12'	8.5'	9 FC

EFO-4+4, 15-Degree

2541
3811
5082
6352

CBCP : 6758
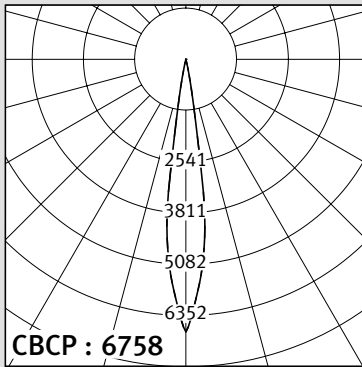
3'	0.8'	751 FC
6'	1.6'	188 FC
9'	2.3'	83 FC
12'	3.1'	47 FC

EFO-4+4, 25-Degree

1270
1906

CBCP : 2481
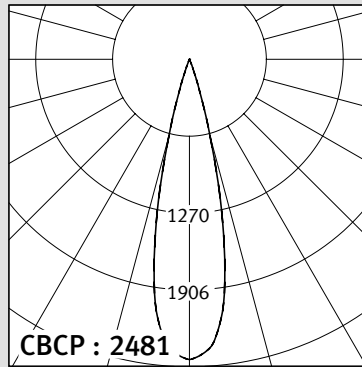
3'	1.3'	276 FC
6'	2.6'	69 FC
9'	3.9'	31 FC
12'	5.1'	17 FC

EFO-4+4, 40-Degree

381
572
762

CBCP : 936
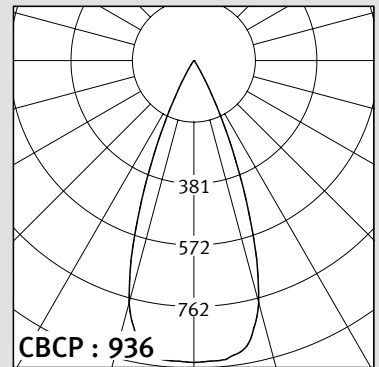
3'	2.2'	104 FC
6'	4.5'	26 FC
9'	6.7'	12 FC
12'	8.9'	7 FC

*Please refer to our web site for more information and ITL data.

EFO LIGHT BARS
description_ordering guide_specifications

LIGHTBEAM

Description:

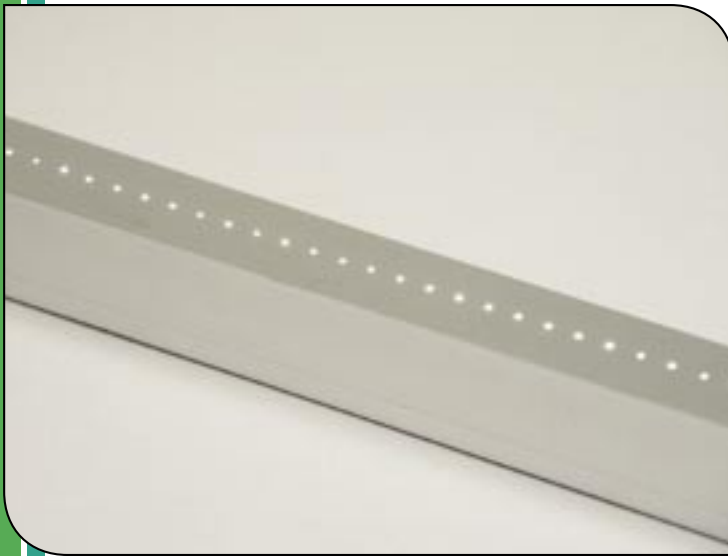LightBeam by Fiberstars makes it possible to illuminate along a linear path with the light aimed exactly where it is needed and at exactly the right intensity. The light that is directed has no electrical hazard, no ultraviolet rays, and is virtually infrared free.

Low profile, linear light fixture. Square shape available in standard and compact frames, as well as medium and high wash intensities. Quality aluminum extrusion of rugged construction.

Used with EFO-1+1 or EFO-AG illuminators.

EFO-LB						
ordering guide	**Lit Length:** ( ) SPECIFY INCHES	**Tail Length:** ( ) SPECIFY FEET	**Wash Intensity:** **H** HIGH (10 FIBERS/INCH) **M** MEDIUM (6 FIBERS/INCH)	**Base Size:** **S** STANDARD (1") **C** COMPACT (5/8")	**Finishes:** **S** STANDARD CLEAR ANODIZED **B** BLACK ANODIZED	**Tail Exit:** **L** LEFT **R** RIGHT **C** CUSTOM

Specifications:

Beam Spread: 60°

Max Lit Lengths: STANDARD SIZE: HIGH INTENSITY 50" (1270MM), MEDIUM INTENSITY 83" (2108MM)
COMPACT SIZE: HIGH INTENSITY 16" (406MM), MEDIUM INTENSITY 28" (711MM)

Base Sizes: STANDARD SIZE: 1" (25.4MM) SQUARE
COMPACT SIZE: 0.65" (16.5MM) SQUARE

Mounting: LB-MB (SEE PAGE 30) OR SIMILAR SURFACE MOUNT.

Technical Remarks: EMITS A WASH OF LIGHT ALONG AN AXIS. WASH INTENSITY INCREASES WHEN FIBER SPACING DECREASES.

Cable Diameters: STANDARD SIZE: 7/8" MAX
COMPACT SIZE: 9/16" MAX

Max Fiber Capacity: 500 FIBERS PER PORT

Compact Base Configuration:

Standard Base Configuration:

Isometric Key:
H BASE SIZE
L LENGTH UP TO 83"
S FIBER SPACING
T TAIL LENGTH

Isometric:

Cross Section:

SECTION A-A

EFO light bars

Description:

LightBeam Quarter Round by Fiberstars makes it possible to illuminate along a linear path with the light aimed exactly where it is needed and at exactly the right intensity. The light that is directed has no electrical hazard, no ultraviolet rays, and is virtually infrared free.

Low profile, linear light fixture. Quarter round shape allows angular light distribution in a standard or compact frame as well as medium or high wash intensities. Quality aluminum extrusion of rugged construction.

Used with EFO-1+1 or EFO-AG illuminators.

ordering guide

EFO-LBQR						
Lit Length: () Specify Inches	**Tail Length:** () Specify feet	**Wash Intensity:** H High (10 Fibers/Inch) M Medium (6 Fibers/Inch)	**Base Size:** S Standard (1 1/4") C Compact (3/4")	**Finishes:** S Standard Clear Anodized B Black Anodized	**Tail Exit:** L Left R Right C Custom	

Specifications:

Beam Spread: 60°

Max Lit Lengths: Standard size: High intensity 50" (1270mm), Medium intensity 83" (2108mm). Compact size: High intensity 16" (406mm), Medium intensity 28" (711mm)

Base Sizes: Standard size: 1 1/4" QR (31.75mm) Compact size: 3/4" QR (19.05mm)

Mounting: LB-MB (see page 30) or similar surface mount.

Technical Remarks: Light emits 45 degrees from right-angle side; other aims possible by special order.

Cable Diameters: Standard size: 7/8" Max Compact size: 9/16" Max

Max Fiber Capacity: 500 fibers per port

Compact Base Configuration:

0.75"

0.75"

Standard Base Configuration:

1.25"

1.25"

Isometric Key:

H Base size
L Length Up to 83"
S Fiber Spacing
T Tail Length

Isometric:

Cross Section:

45°

Section A-A

EFO LIGHT BARS
description_ordering guide_specifications

LIGHTFRAME

Description:

LightFrame is specially designed for edge illumination of etched and deep carved transparent panels. LightFrame provides a receiving channel to align fibers to the edge of the panel while offering all the benefits of LightBeam. LightFrame is not intended to be used as a structural support for transparent panels. These panels must be anchored independently of the LightFrame bar.

Panel must be monolithic, acrylic, or high-clarity glass (not laminated, float glass, etc.) and surface etched no more than 25%. Light penetration is 12"–24".

Used with EFO-1+1 or EFO-AG illuminators.

ordering guide

EFO-LF							
	Lit Length: ( ) SPECIFY INCHES	**Tail Length:** ( ) SPECIFY FEET	**Wash Intensity:** **H** HIGH (10 FIBERS/INCH) **M** MEDIUM (6 FIBERS/INCH)	**Base Size:** **S** STANDARD (1") **C** COMPACT (5/8")	**Panel Thickness:** **A** 0.25" THICKNESS **B** 0.375" THICKNESS **C** 0.5" THICKNESS **D** 0.75" THICKNESS (STANDARD BASE ONLY)	**Finishes:** **S** STANDARD CLEAR ANODIZED **B** BLACK ANODIZED	**Tail Exit:** **L** LEFT **R** RIGHT **C** CUSTOM

Specifications:

Beam Spread:	60° UNTIL ENTERING PANEL, INTERNALLY REFLECTED
Max Lit Lengths:	STANDARD SIZE: HIGH INTENSITY 50" (1270MM), MEDIUM INTENSITY 83" (2108MM) COMPACT SIZE: HIGH INTENSITY 16" (406MM) MEDIUM INTENSITY 28" (711MM)
Base Sizes:	STANDARD SIZE: 1.01" W x 1.54" H (25.44MM x 39.1MM). PANEL THICKNESS: 0.25", 0.375", 0.5" OR 0.75" (6.35MM, 9.5MM, 12.7MM, 19MM) COMPACT SIZE: 0.65" W x 1.175 H (16.5MM x 29.8MM). PANEL THICKNESS: 0.25", 0.375" OR 0.5" (6.35MM, 9.5MM, 12.7MM)
Mounting:	PANEL HOLDS FIXTURE; FIXTURE SHOULD NOT SUPPORT PANEL. ADHERE TO PANEL WITH CLEAR SILICONE.
Cable Diameters:	STANDARD SIZE: 7/8" MAX COMPACT SIZE: 9/16" MAX
Max Fiber Capacity:	500 FIBERS PER PORT

Compact Base Configurations:

0.27" 0.44" 1.18" 0.67" 0.65"
1/4" RECEIVING CHANNEL

0.39" 0.44" 1.18" 0.67" 0.65"
3/8" RECEIVING CHANNEL

0.52" 0.44" 1.18" 0.65"
1/2" RECEIVING CHANNEL

Standard Base Configurations:

0.39" 0.44" 1.54" 0.44" 1.01"
3/8" RECEIVING CHANNEL

0.52" 0.44" 0.5" 1.03" 1.01"
1/2" RECEIVING CHANNEL

0.77" 0.5" 0.5" 1.57" 1.03" 1.01"
3/4" RECEIVING CHANNEL

Isometric Key:

H BASE SIZE
L LENGTH UP TO 83"
S FIBER SPACING
T TAIL LENGTH
P PANEL THICKNESS

Isometric:

T, S, P, L, H

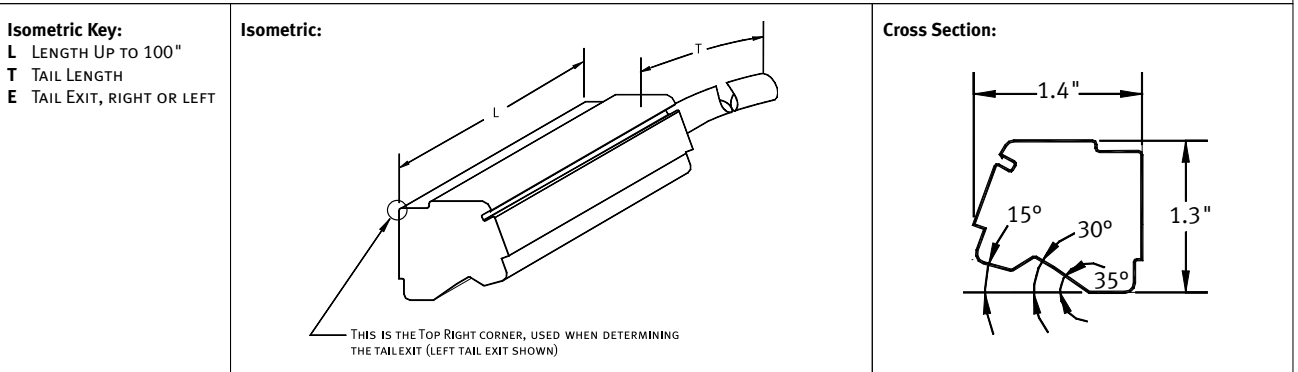**EFO light bars**

TRIAXIS

Description:
Similar to LightBeam, asymmetrical distribution.
The unique design of this light bar has 3 different angles of distribution: 15˚, 30˚ and 35˚. This allows a broader wash of light into a display case or similar application.

Case Lighting Recommendations:
(22") recommended for 24" cases
(34") recommended for 36" cases
(46") recommended for 48" cases
(58") recommended for 60" cases
(70") recommended for 72" cases

ordering guide

EFO-TRX			
Lit Length: ( ) SPECIFY INCHES	**Tail Length:** ( ) SPECIFY FEET	**Finishes:** S STANDARD CLEAR ANODIZED	**Tail Exit:** L LEFT R RIGHT C CUSTOM

Specifications:
Beam Spread: 80˚ (ASYMMETRIC)
Max Lit Lengths: 100" (2540M)
Base Sizes: 1.4" x 1.3" (35.56MM x 33MM)
Mounting: LB-MB (SEE PAGE 30) OR SIMILAR SURFACE MOUNT
Technical Remarks: INTENDED FOR CASE AND CABINET LIGHTING BUT USEFUL WHEREVER A WIDE-DISPERSION, ASYMMETRICAL WASH IS REQUIRED.
Cable Diameters: STANDARD SIZE: 7/8" MAX
Max Fiber Capacity: 500 FIBERS PER PORT
Fiber Wash: 5 FIBERS PER INCH

Isometric Key:
L LENGTH UP TO 100"
T TAIL LENGTH
E TAIL EXIT, RIGHT OR LEFT

Isometric:

THIS IS THE TOP RIGHT CORNER, USED WHEN DETERMINING THE TAIL EXIT (LEFT TAIL EXIT SHOWN)

Cross Section:

1.4"
1.3"
15º
30º
35º

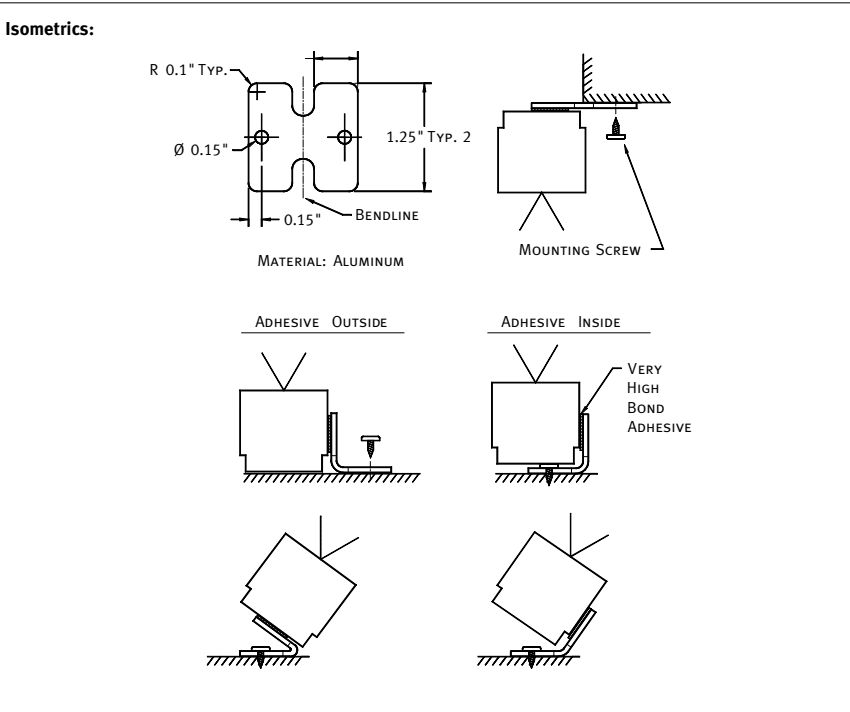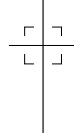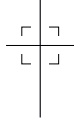# EFO LIGHT BARS
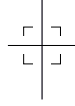## description_ordering guide_specifications

MOUNTING BRACKET

Description:
Used to mount linear extrusion fixture (EFO-LB, EFO-LBQR, EFO-LF and EFO-TRX). Adhere LB-MB to fixture with adhesive included, then attach LB-MB to structure with appropriate fasteners. Use one LB-MB every 12" (300mm) and one at each end of fixture.

LB-MB		

ordering guide

Finishes:
S STANDARD CLEAR ANODIZED
B BLACK ANODIZED

Specifications:
Sizes: 1.25" (31.75MM) SQUARE
Mounting: ADHESIVE STRIP INCLUDED

Isometrics:

R 0.1" TYP.

Ø 0.15"

1.25" TYP. 2

0.15"   BENDLINE

MATERIAL: ALUMINUM

MOUNTING SCREW

ADHESIVE OUTSIDE

ADHESIVE INSIDE

VERY HIGH BOND ADHESIVE

1 (800) 327-7877 / efoinfo@fiberstars.com

project: Il Chiostro Monastery
location: Naples, Italy

EFO ILLUMINATOR LAMPS
metal halide_efficient

EFO-068

Lamp Wattage:	68 WATTS
Type:	METAL HALIDE
Color Temperature:	3500˚ K
Lamp Life:	6,000 HOURS AVERAGE
Illuminator Type:	EFO-1+1-NC
	EFO-2+2-NC
	EFO-3+3-NC
	EFO-4+4-NC

Technical Remarks:
EFO-068 replacement lamp is assembled into the metal cage making lamp changes easy.

EFO-068-D

Lamp Wattage:	68 WATTS
Type:	METAL HALIDE
Color Temperature:	3500˚ K
Lamp Life:	6,000 HOURS AVERAGE
Illuminator Type:	EFO-1+1-NC
	EFO-2+2-NC
	EFO-3+3-NC
	EFO-4+4-NC

Technical Remarks:
Lamp is supplied with the removable door pre-attached, simplifying lamp replacement in the field.

EFO-068-SC

Lamp Wattage:	68 WATTS
Type:	METAL HALIDE
Color Temperature:	3500˚ K
Lamp Life:	6,000 HOURS AVERAGE
Illuminator Type:	EFO-1+1-SC
	EFO-2+2-SC
	EFO-3+3-SC
	EFO-4+4-SC

Technical Remarks:
Includes a static color filter over the lamp output of each side, allowing all fibers attached to each port to show the same color. Specify color at time of order. For relamping, color can be found on label attached to door.
Note: Color temperature may vary depending on filter used.

EFO-068-SC-D

Lamp Wattage:	68 WATTS
Type:	METAL HALIDE
Color Temperature:	3500˚ K
Lamp Life:	6,000 HOURS AVERAGE
Illuminator Type:	EFO-1+1-SC
	EFO-2+2-SC
	EFO-3+3-SC
	EFO-4+4-SC

Technical Remarks:
Lamp is supplied with the removable door pre-attached, simplifying lamp replacement in the field. Includes a static color filter over the lamp output of each side, allowing all fibers attached to each port to show the same color. Specify color at time of order. For relamping, color can be found on label attached to door.
Note: Color temperature may vary depending on filter used.

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EFO ILLUMINATOR LAMPS
metal halide_efficient

68 watts

Lamp Wattage:	68 WATTS
Type:	METAL HALIDE
Color Temperature:	3500˚ K
Lamp Life:	6,000 HOURS AVERAGE
Illuminator Type:	EFO-AG

Technical Remarks:
EFO-68W replacement lamp is assembled into metal cage complete with pull tabs and simple connector cable making lamp changes easy.

68 watts

EFO-068-AG-SC

Lamp Wattage:	68 WATTS
Type:	METAL HALIDE
Color Temperature:	3500˚ K
Lamp Life:	6,000 HOURS AVERAGE
Illuminator Type:	EFO-AG-2SC

Technical Remarks:
Includes a static color filter over the lamp output of each side, allowing all fibers attached to each port to show the same color. Specify color at time of order. For relamping, color can be found on label attached to door.
Note: Color temperature may vary depending on filter used.

light duty

FSOC

Description: OPTICUTTER FIBER CUTTING TOOL

Technical Remarks:
LIGHT DUTY TOOL FOR MAKING ROUGH OR SIZING CUTS OF LARGE CORE FIBERS UP TO 14MM. ONLY CUTTER FOR 15MM AND 19MM FIBERS.

heavy duty

A

FSFC

Description: FLEXICUT FIBER CUTTING TOOL

Technical Remarks:
PRECISION TOOL FOR HIGH EFFICIENCY CUTS OF LARGE CORE FIBERS UP TO 14MM.
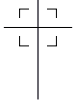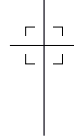**(A)** FSFCB- REPLACEMENT BLADES FOR FSFC
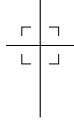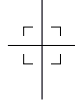
4 color wheel

AG-04C

Description: 4 COLOR
Dimensions: 3.625" OCTAGON
Illuminator Type: EFO-AG-CCS

EFO port kit

AG-1PK

Description: PORT KIT
Illuminator Type: EFO-AG AND EFO-1+1
(OLD ILLUMINATORS UI, AG, AD)
FOR STRANDED FIBER ONLY, UP TO 500 FIBERS MAX. PER PORT

1 (800) 327-7877 / efoinfo@fiberstars.com

project: Whole Foods
location: Fort Collins, Colorado

ILLUMINATOR MOUNTING ACCESSORIES
description

EFO caddy rails

EFO-CR

Description: T-bar Ceiling Caddy Rails - set of 2
Technical Remarks: Used to mount EFO-1+1, EFO-2+2, EFO-3+3 and EFO-4+4 Illuminators and EFO-MBF, EFO-MBF-F and EFO-FAW fixtures in T-Bar grid ceilings.

EFO wall mount

AD-WM-KIT

Description: EFO Wall Mount Kit
Technical Remarks: For mounting EFO-1+1, EFO-2+2, EFO-3+3 and EFO-4+4 illuminators to a vertical surface.

EFO butterfly clip

EFO-BFB

Description: Butterfly Type Mounting Bracket
Technical Remarks: Used to mount EFO fixtures in place of EFO-CR for hard ceiling installations.

1 (800) 327-7877 / efoinfo@fiberstars.com

project: Whole Foods
location: Colorado Springs, Colorado

DIAL**ux**

What Is It?

DIALux is a rich design/calculation/rendering software package available for free from Dial Gmbh. The Fiberstars plug-in for DIALux allows users to generate an accurate photometric file of virtually every Fiberstars system, and then use that file in the fully-functional software to layout projects. This software and plug-in combination will demonstrate how you can use Fiberstars systems to enhance your projects.

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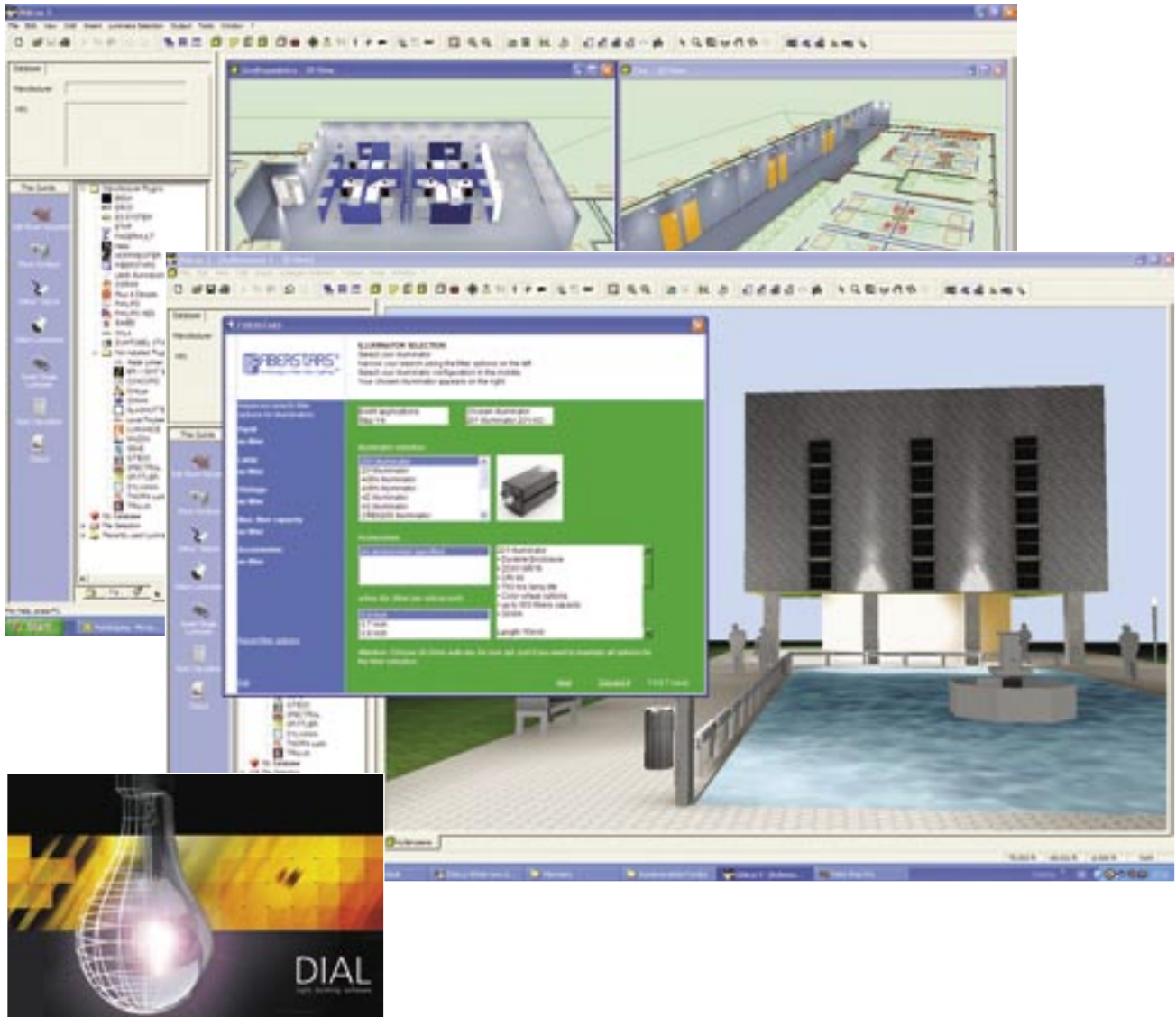
Why Do We Support It?

Unlike a traditional lighting fixture, fiber optic systems contain two or more separate components that dictate the performance of the resulting system. The illuminator, fiber optic cable, length of that cable, and fixture each contribute to the overall output of the system. With so many possible combinations of products—tens of thousands in our case—traditional laboratory testing of every combination is not practical.

Instead of trying to test every combination, DIAL determines each component's influence on a system. Later, when a user packages that component in a system, DIALux calculates that component's influence, along with that of the other components, and generates an accurate collective output for the entire system.

By eliminating the arithmetic formerly involved with designing a fiber optic system, the DIALux software greatly improves the speed and accuracy of your design effort. Predicting the performance of a system is no longer a tedious effort. We believe that you will use more of our products when you know what they will deliver.

Supermarket Counter   Board Room   Theater Snack Bar

Where Do I Get It?

DIALux, and the Fiberstars plug-in, are available for free from our web site: www.fiberstars.com

DIALux is also available directly from the manufacturer, Dial Gmbh: www.dial.de

For information on the latest ITL data and photometry information, please go to www.fiberstars.com.

Fiberstars: *The Number One Fiber Optic Lighting Company In The World*