

STA-FLEX® "SEL" END LIGHT OPTICAL FIBER

Project:

Type:

Catalog Number: **SEL**

System Component: **Optical Fiber**



- ◆ **STA-FLEX® Large Core**
- ◆ **Indoor/Outdoor Applications**
- ◆ **UV Inhibitors**
- ◆ **Algicides and Fungicides**
- ◆ **Black, Flexible, Bondable Jacket**
- ◆ **Wide 80° Acceptance Angle**
- ◆ **Wide 80° Beam Spread**
- ◆ **UL94VO Fire Rated**
- ◆ **Long Life Flexibility**

DESCRIPTION: LUMENYTE® STA-FLEX® "SEL" end light optical fiber consists of a light transmitting solid large core, a Teflon® clad and a black bondable outer jacket. The fiber transmits light from the light source to the output end for use as a point source, spotlight or lead fiber to splice to another fiber. This fiber has been used as point light signage viewed up to 12 miles away. The fiber has a wide 80 degree acceptance angle and 80 degree beam spread, allowing the light to be viewed from more oblique angles. The light transmitting core is solid, has no light diminishing packing fraction losses and can be easily spliced. The jacket is bondable. Custom jackets are available for more flexibility and color options.



NOTE: Images are not to scale - Refer to next page for dimensions

SPECIFICATIONS:

Transmission Loss (attenuation)
Bend Radius

Less than 1.5% per foot (SEL500)
Physical Minimum: 6 x fiber diameter
Recommended: 12 x fiber diameter or larger

Temperature Stability
Spectral Transmission Range
Acceptance Angle
Refractive Index

Up to 90° C (194° F)
350-800 nm
80°
Core: 1.48 or greater
Cladding: 1.34 or less
0.63

Numerical Aperture

Teflon® is a registered trademark of DuPont.

LUMENYTE INTERNATIONAL CORPORATION

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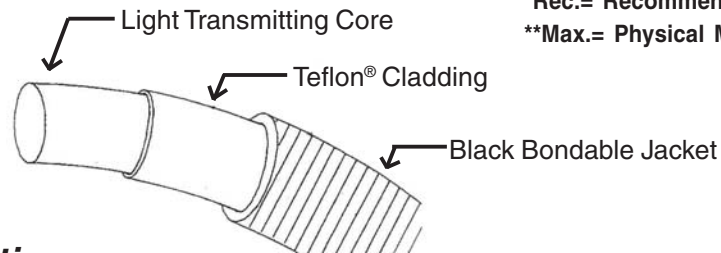
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DCN 650013

STA-FLEX® “SEL” END LIGHT OPTICAL FIBER

Dimensions: (ALL DIMENSIONS ARE NOMINAL)					Recommended/Maximum # of fibers that fit into illuminators:			
Model Number	Core Diameter		Outer Diameter		Econo	PH Non-Harn	PH Harn	LimoLyte 12V
	in.	mm	in.	mm				
SEL100	.120"	3.0mm	.215"	5.5mm	16/24	24/30	24/40	16/21
SEL200	.190"	4.8mm	.300"	7.6mm	8/12	12/17	12/19	8/12
SEL300	.240"	6.1mm	.365"	9.3mm	3/4	7/11	7/12	5/7
SEL400	.360"	9.1mm	.515"	13.1mm	1/1	3/4	3/5	1/3
SEL500	.490"	12.4mm	.707"	17.8mm	1/1	2/2	2/3	1/1
SEL700	.740"	18.8mm	1.005"	25.5mm	1/1	1/1	1/1	1/1

*Rec.= Recommended Maximum
 **Max.= Physical Maximum



Ordering Information

EXAMPLE:
SEL200 - 20'
 MODEL # LENGTH (in feet)

MODEL #	LENGTH (in feet)
SEL100	
SEL200	
SEL300	
SEL400	
SEL500	
SEL700	

Maximum Manufactured Length

- 100 feet (30.5m) continuous in 100 through 500 sizes; 45' (13.7m) in 700 size.

Maximum Distance for Effective Brightness

The effective light output of optical fiber is based upon several variables such as:

- Intensity of light source
- Fiber length and attenuation
- Color of light
- Quantity of fibers in illuminator
- Background color contrast
- Number and radius of bends
- Diameter of fiber
- Viewing angle
- Ambient light level

Splicing and Cutting

- Splicing can be achieved in the field using Lumenyte Splice Kits and carefully following the instructions. Factory splicing is available. Lumenyte's Optic Cutter is advised for straight, clean, 90° fiber cuts.

Environment

- Avoid allowing liquids between the core and cladding. Use end seals bonded with SC2081 glue.
- Avoid dirt and abrasions on the core ends of fiber.
- Fibers are more easily installed at temperatures of 10°C (50°F) or higher.

Installation into the Non-Harness Illuminator

- Remove 4 inches (10cm) of the outer jacket (not the fluoropolymer cladding) before inserting fiber into the illuminator.
- Fiber end should be near, **but not touching** the illuminator glass to achieve maximum brightness.

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