

For Flexible Imaging Applications

Leached Image Bundles



Leached Fiber Bundles are used primarily in endoscopes for medical, veterinary or industrial applications. Custom Leached Fiber Bundles are available on demand.

- Very flexible, coherent image guides
- They are built by multiple draws of a high index core glass, with a lower index clad glass and an acid-soluble second cladding.
- Bundle diameter from 0.53 mm to 1.93 mm that can be used in endoscopes for space limited medical and industrial imaging applications.
- Bundle length up to 2000 mm
- High resolution image transfer with fiber sizes from 7µm

For Flexible Imaging Applications

Leached Image Bundles

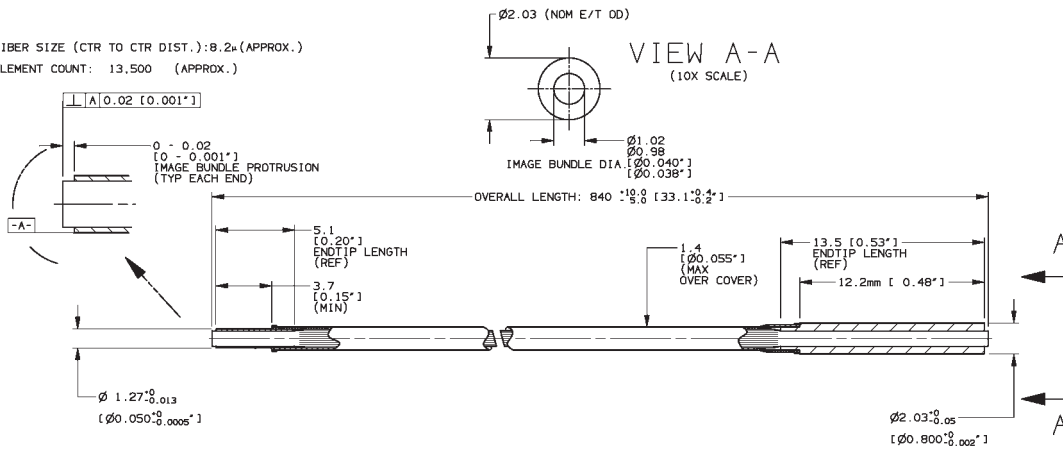
Part #	Bundle Diameter (mm)	Bundle Length (mm)	Quality Area A (mm)	Quality Area A Spec	Quality Area B (mm)	Quality Area B Spec	Pixel	Pixel Count	Distal	Proximal	Sheathing Internal Diameter / Wall Thickness mm
1233268	0.45	1000	0.38	6/2/1/0	0.19	2/0/0/0	7.4µ	3.5k	0.55 x 4.80	0.64 x 11.80	0.56/0.03
1248848	0.53	1000	0.43	6/2/1/1	0.22	2/0/0/0	7.5µ	4.5k	0.65 x 4.50	1.00 x 12.00	0.6/0.03
1249048	0.53	1050	0.43	6/2/1/1	0.22	2/0/0/0	7.5µ	4.5k	0.65 x 4.50	1.00 x 12.00	0.66/0.03
1249050	0.57	840	0.45	6/2/1/1	0.23	2/0/0/0	8.0µ	4.5k	0.77 x 5.00	1.05 x 15.00	0.9/0.1
1249180	0.57	1000	0.45	6/2/1/1	0.23	2/0/0/0	8.0µ	4.5k	0.77 x 5.00	1.05 x 15.00	0.76/0.1
1246781	0.70	535	0.58	6/2/1/1	0.29	2/0/0/0	7.5µ	8.2k	0.84 x 4.00	0.96 x 12.00	0.86/0.05
1245159	0.70	760	0.58	6/2/1/1	0.29	2/0/0/0	7.5µ	8.2k	0.88 x 5.00	1.56 x 12.50	0.86/0.03
1230772	0.70	1000	0.58	6/2/1/1	0.29	2/0/0/0	7.5µ	8.2k	0.83 x 5.00	0.94 x 12.00	1.0/0.1
1249311	1.00	670	0.80	6/2/1/1	0.40	2/0/0/0	8.2µ	13.5k	1.27 x 5.10	2.03 x 13.50	1.3/0.1
1249600	1.00	840	0.80	6/2/1/1	0.40	2/0/0/0	8.2µ	13.5k	1.27 x 5.10	2.03 x 13.50	1.3/0.1
1249347	1.00	840	0.80	6/2/1/1	0.40	2/0/0/0	8.2µ	13.5k	1.16 x 5.10	1.60 x 10.00	1.3/0.1
1249605	1.00	890	0.80	6/2/1/1	0.40	2/0/0/0	8.2µ	13.5k	1.27 x 5.10	2.03 x 13.50	1.3/0.1
1249626	1.00	890	0.80	6/2/1/1	0.40	2/0/0/0	8.2µ	13.5k	1.16 x 5.10	1.60 x 10.00	1.3/0.1
1249753	1.00	1000	0.80	6/2/1/1	0.40	2/0/0/0	8.2µ	13.5k	1.27 x 5.10	2.03 x 13.50	1.3/0.1
1233216	1.05	540	0.90	6/2/1/1	0.45	2/0/0/0	7.6µ	18k	1.22 x 5.60	1.22 x 12.80	1.4/0.1
1250722	1.05	760	0.89	6/2/1/1	0.45	2/0/0/0	7.4µ	18k	1.22 x 5.60	1.22 x 12.80	1.4/0.1
1251172	1.10	670	0.90	6/2/1/1	0.45	2/0/0/0	8.0µ	18k	1.27 x 5.00	2.03 x 13.50	1.47/0.1
1251338	1.10	690	0.90	6/2/1/1	0.45	2/0/0/0	8.0µ	18k	1.27 x 7.00	2.03 x 13.50	1.47/0.1
1251343	1.10	840	0.90	6/2/1/1	0.45	2/0/0/0	8.0µ	18k	1.27 x 5.00	2.03 x 13.50	1.47/0.1
1251348	1.10	895	0.90	6/2/1/1	0.45	2/0/0/0	8.0µ	18k	1.27 x 5.00	2.03 x 13.50	1.47/0.1
1250875	1.2	520	1.05	6/2/1/1	0.53	2/0/0/0	8.4µ	18k	1.38 x 4.00	1.60 x 10.00	1.6/0.1
1233217	1.2	580	1.05	6/2/1/1	0.53	2/0/0/0	8.4µ	18k	1.38 x 4.00	1.38 x 10.00	1.6/0.1
1244311	1.3	545	1.15	6/2/1/1	0.575	2/0/0/0	9.1µ	18k	1.42 x 5.00	1.42 x 14.00	1.6/0.1
1251040	1.50	1350	1.30	6/2/1/1	0.65	2/0/0/0	10.6µ	18k	1.84 x 6.50	1.98 x 15.00	2.03/0.1
1251167	1.65	1350	1.45	6/2/1/1	0.73	2/0/0/0	11.6µ	18k	2.19 x 7.80	2.46 x 15.00	2.2/0.1

Leached Fiber Bundle

Dimensions: in (mm); not to scale

Leached Fiber Bundle, 1249600

FIBER SIZE (CTR TO CTR DIST.): 8.2μ (APPROX.)
ELEMENT COUNT: 13,500 (APPROX.)



For Ruggedized Flexible Imaging Applications

Wound Fiber Bundles

Wound Fiber Bundles are used in a wide range of applications, including industrial remote vision systems, ordered array detectors, hazardous environment imaging, defense and research. Custom Wound Fiber Bundles are available on demand.



- Coherent, flexible fiber optic bundle used in applications where images must be transmitted from remote locations
- They are composed of individual multi fibers, wound one layer at a time on a drum, bound only at the ends and flexible in the middle.
- Bundle formats from 2 mm x 2 mm up to 40 mm x 35 mm. May be divided into - or made up of - multiple branches transmitting to a single output, or input.
- Their numerical aperture is typically 0.60 and standard lengths range from 610 mm to 4500 mm.
- We can also produce custom image guide assemblies in any vertical or horizontal format required to meet nonstandard Wound Fiber Bundles imaging applications.



Wound Fiber Bundles

Wound Fiber Bundles Typical Specifications:

Glass Type	SCHOTT 75 Glass
Quality Area	1.8 mm x 1.8 mm - 38 x 33 mm with custom capabilities
Format Size	2 mm x 2 mm up to 40 mm x 35 mm
Single Fiber Size	10µm elements 6 x 6 array
Numerical Aperture	0.60
Resolution	45 lp/mm
Transmission	40% @ 500 nm - 1200 nm
Bending Radius	Determined by bundle diameter and sheathing
Temperature Resistance	- 40 °C to +125 °C (-40 °F to + 257 °F) up to 150 °C (302 °F) with alternative jacketing
Chemical Resistance	Select sheathing resistant against oil, grease, bases acid, fuel, water and PVC

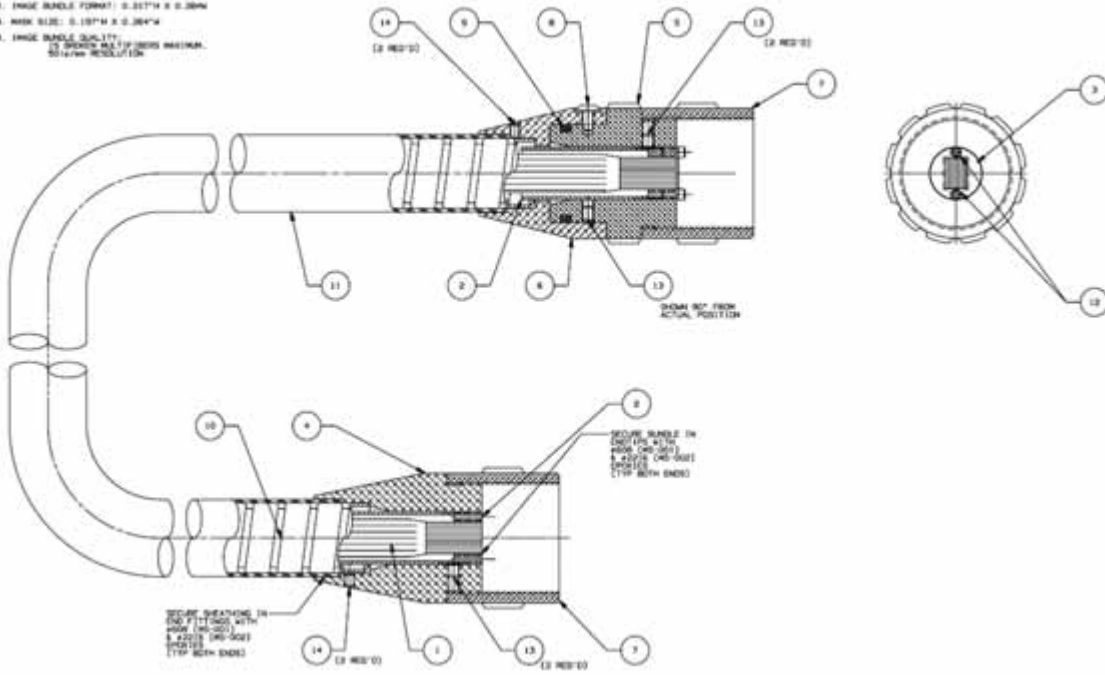
Wound Fiber Bundles

Dimensions: in (mm); not to scale

WoundFiber Bundle 1119683

NOTES:

1. FIBER GEOMETRY: 16x ELEMENTS, 80x MULTIFIBER, 60x SQUARE (1)
2. IMAGE BUNDLE FORMAT: 0.317x x 0.384x
3. MAX. SIZE: 0.157x x 0.384x
4. IMAGE BUNDLE QUALITY: (2) SPECIFIC MULTIFIBER MAXIMUM RELATIVE RESOLUTION



For Ruggedized Flexible Imaging Applications

Wound Fiber Bundles

Wound Fiber Bundles 4 mm x 4 mm Format

Description	Part No.	Length (mm)	Flexible length (mm)
Flexible .500" diameter cable 4 mm x 4 mm Format +/- .2mm	1119691	606	530
	1119690	906	830
	1119689	1216	1140
	1119688	1826	1750
	1119687	2756	2680
	1119693	3806	3730
	1119692	4566	4490

Wound Fiber Bundles 5 mm x 6.7 mm Format

Description	Part No.	Length (mm)	Flexible length (mm)
Flexible 1.300" diameter cable 5 mm x 6.7 mm Format +/- .2 mm	1119683	886	810
	1119682	1116	1040
	1119681	1796	1720
	1119680	2716	2640
	1119686	3776	3700
	1119685	4536	4460
	1119692	4566	4490

Wound Fiber Bundles 8 mm x 10 mm Format

Description	Part No.	Length (mm)	Flexible length (mm)
Flexible 1.300" diameter cable 8 mm x 10 mm Format +/- .2 mm	1119148	886	810
	1119147	1216	1140
	1119145	1796	1720
	1119144	2716	2640
	1119150	3776	3700
	1119149	4536	4460
	1119692	4566	4490