

SCINTILLATING / FLUORESCENT FIBERS

Scintillating and fluorescent fibers appear visually the same, but they act differently when exposed to high energy particles. Scintillating fibers are made with a fiber core material to produce photons in the visible range when high-energy particles pass through the core material.

Applications for scintillating fibers include:

- Calorimeters
- Cosmic ray telescopes
- Flow cells
- Neutron imaging
- Particle discrimination

Although fluorescent fiber looks the same to the human eye, it does not absorb high energy particles such as gamma rays. It obtains its energy to fluoresce from UV or blue light.

These fibers are sometimes called “wavelength shifters” because they absorb short wavelength energy, and emit it in a longer wavelength region. The optical energy (light) emitted is narrow-wavelength, vivid and bright.

All fiber listed on this page is fluorescent fiber.

Applications for these fibers include:

- Sights for rifles, shotguns and bows
- Decorative displays

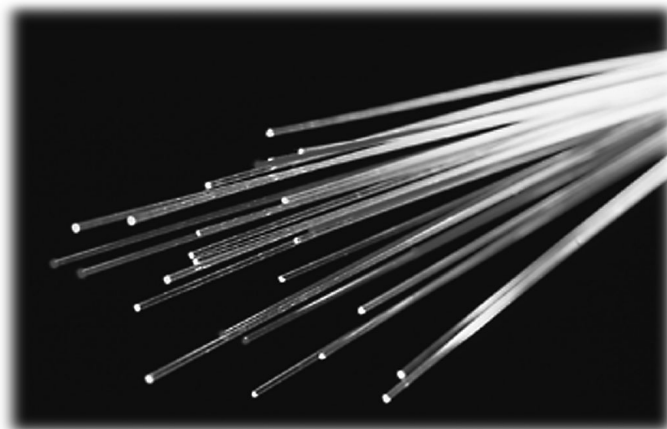
The optical core of this fiber can be either polystyrene (which is lower cost) or acrylic (higher cost but with more resistance to UV light for outdoor applications).

This optical fiber is easily cut and can be finished like other plastic fiber. Most common items are listed to the right – available in red, green, amber and blue fluorescent colors.

(Other fiber colors and diameters such as orange, yellow, purple, 1.0, 1.25, 1.5, 2, 2.5, 3 and 4 mm diameter are available upon special request.)

Sample kit of 1 meter (minimum) of red, green, orange, amber, yellow, blue and purple fluorescent fiber 1 mm in diameter.

Stock Number IF-585



POLYSTYRENE

COLOR	DIAMETER	INVENTORY [†]	nm ¹	MIN. ORDER (m)	WAVELENGTH STOCK NUMBER
Red	.5 mm	stock	635	6	IF-810065
Green	.5 mm	stock	490	6	IF-810070
Blue	.5 mm	spec. order	435	50	IF-810075
Amber	.5 mm	stock	540 ²	6	IF-810076
Red	.75 mm	stock	635	3	IF-810091
Green	.75 mm	stock	490	3	IF-810092
Amber	.75 mm	stock	540 ²	3	IF-810098
Red	1 mm	stock	635	3	IF-810087
Green	1 mm	stock	490	3	IF-810082
Amber	1 mm	stock	540 ²	3	IF-810083
Blue	1 mm	stock	435	3	IF-810084
Purple	1 mm	stock	N/A	3	IF-810081
Orange	1 mm	stock	616	3	IF-810079
Yellow	1 mm	stock	487	3	IF-810078
Red	1.5 mm	stock	635	3	IF-810088
Green	1.5 mm	stock	490	3	IF-810089
Amber	1.5 mm	spec. order	540 ²	50	IF-810090
Red	2 mm	stock	635	3	IF-810093
Green	2 mm	stock	490	3	IF-810094
Amber	2 mm	spec. order	540 ²	50	IF-810095
Red	2.5 mm	spec. order	635	50	IF-810096
Green	2.5 mm	spec. order	490	50	IF-810097

ACRYLIC

COLOR	DIAMETER	INVENTORY [†]	nm ¹	MIN. ORDER (m)	WAVELENGTH STOCK NUMBER
Red	.75 mm	stock	615	30	IF-810066
Green	.75 mm	stock	515	30	IF-810067
Red	1 mm	stock	615	30	IF-810085
Green	1 mm	stock	515	30	IF-810080

¹ Emission peak

² Two spectral peaks.
540 & 575 nm

[†] Standard lengths are either 1.0 or 1.5 m pieces. All orders will be rounded to nearest complete length. Continuous lengths available by special order may have different minimum orders.