BC-482A and BC-484
Wavelength Shifter Bars

Wavelength shifter bars are made of solid organic materials (polymers) which absorb light of one wavelength and emit light of a different wavelength. This characteristic makes them useful as light collecting elements (similar in function to light pipes) in calorimeter detectors. Their use reduces the overall size and complexity of the detector.

In the calorimeter, thin, plastic scintillators are stacked in layers to form the detector. The scintillator ends are coupled to a wavelength shifter bar. Light from the scintillators is absorbed and re-emitted by the wavelength shifter material. This has the effect of bending the scintillator light 90° and allows one PMT to view the stack of scintillators.

Scintillation Properties –

	BC-482A Green	BC-484 Blue
Decay Time, ns	12	3
Light Attenuation Length, cm	400	350
Absorption Peak, nm	420	375
Wavelength of Max. Emission, nm	494	430
Use with	BC-408 & 412	BC-414

General Technical Data –

Base ..... Polyvinyltoluene

Density ..... 1.03 g/cc

Refractive Index 1.59

Coefficient of Linear Expansion ..... 7.8×10^{-5} below 67°C

Vapor Pressure . May be used in a vacuum

Solubility ..... Soluble in aromatic solvents, chlorine, acetone, etc. Insoluble in water, dilute acids, lower alcohols, silicone fluid, grease and alkalis.

Softening Point ..... 70°C

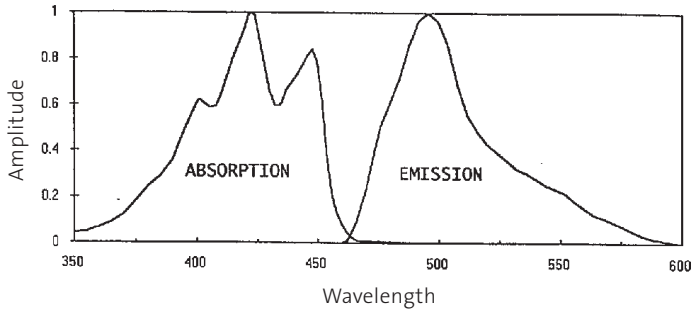
SAINT-GOBAIN
CRYSTALS

Scintillation Products
Organic Scintillators

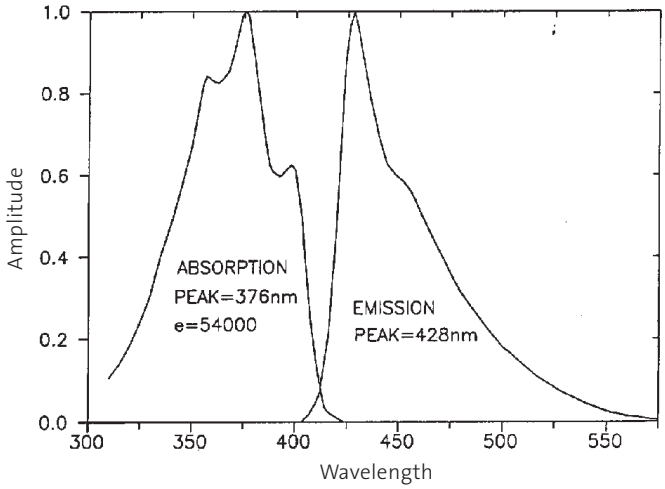
SAINT-GOBAIN
CRYSTALS

BC-482A and BC-484
Wavelength Shfiter Bars

Emission Spectra –



BC-482A Optical Spectra



BC-484 Optical Spectra