

# BC-480 Blue Wavelength Shifter

BC-480 consists of polyvinyltoluene plastic containing waveshifting fluorescent dopants. The material provides significant improvement over standard UVT acrylic as a Cerenkov radiating medium for the following reasons:

1) The more intense Cerenkov light produced at shorter wavelengths is absorbed and re-emitted in the 425nm spectral region. This corresponds to the sensitive region of most standard glass photomultiplier tubes. In addition, the light transmission is greatly improved as plastics absorb the shorter wavelength light much more strongly.

2) The Cerenkov light emitting by BC-480 is isotropic rather than directional. This permits more efficient light collection with the use of internal reflection and the light piping techniques used for plastic scintillators.

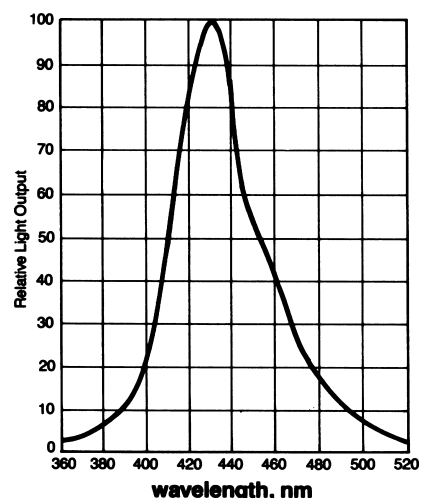
Scintillation Properties	
Decay Time (ns)	5
Pulse Width, FWHM, ns	5
Wavelength of Max. Emission, nm	425
Minimum Detectable Cerenkov Wavelength, nm	260
Atomic Composition	
Ratio H:C Atoms	1.1
No. of Electrons per cc ( $\times 10^{23}$ )	3.37

## General Technical Data -

Base	Polyvinyltoluene
Density [g/cc]	1.03
Expansion Coefficient (per°C, <67°C)	$-7.8 \times 10^{-5}$
Refractive index	1.58
Softening Point	70°C
Vapor Pressure	May be used in vacuum
Solubility	Soluble in aromatic solvents, chlorinated solvents, acetone, etc. Unaffected by water, dilute acids, lower alcohols, alkalis and pure silicone fluids or grease.

## BC-480 Blue Wavelength Shifter

### Emission Spectra



**Saint-Gobain Crystals**

[www.crystals.saint-gobain.com](http://www.crystals.saint-gobain.com)

*Manufacturer reserves the right to alter specifications.*

*©2005-2016 Saint-Gobain Ceramics & Plastics, Inc. All rights reserved.*

(08-16)