BC-430 Red-Emitting Plastic Scintillators

BC-430 emits in the red region which makes it ideal for use with silicon photodiodes and red-enhanced photomultiplier tubes.

This premium plastic scintillator is available as sheets, rods and thin films in the same range of sizes as all other SGC organic scintillators.

Scintillation Properties	
Light Output, %Anthracene	45
Rise Time, ns	3.2
Decay Time, ns	16.8
Pulse Width, FWHM, ns	17.7
Wavelength of Maximum Emission, nm	580
Atomic Composition	
No. H Atoms per cc (x10 ²²)	5.23
No. C Atoms per cc (x10 ²²)	4.72
Ratio H:C Atoms	1.108
No. of Electrons per cc (x10 ²³)	3.37



General Technical Data –	
Base	Polyvinyltoluene
Density [g/cc]	1.032
Expansion Coefficient (per°C,<67°C)	7.8X10 ⁻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, alkalies and pure silicone fluids or grease.
Light Output	At +60°C = 95% of that at+20°C. Independent of temperature from -60°C to +20°C



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Emission Spectra 100 **Relative Light Output** 80 60 40 20 500 550 600 700 650 Wavelength, nm Photodiode **Application Example** BC-430 Plastic scintillator 25 mm square x 10 mm wide wrapped in reflective and light tight material 1CmX2.5CmX2.5Cm BC-430 (580nm) 1CmX2Cm PIN DIODE 4.50 4.00 3.50 COUNTS/CHANNEL (Thousands) 3.00 2.50 2.00 1.50 1.00 0.50 0.00 0 200 400 600



Saint-Gobain Crystals

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