

BC-422Q Ultra-fast Timing Plastic Scintillator

BC-422Q premium plastic scintillator is intended for use in ultra-fast timing and ultra-fast counting applications. It is quenched with various weight percentages of benzophenone (specified at time of order) to improve timing properties. The faster timing comes at the expense of total light output, however.

Scintillation Properties –

	None*	Weight % Benzophenone				
		0.5	1.0	2.0	3.0	5.0
Light Output, %Anthracene	55	19	11	5	4	3
Rise Time, ps	350	110	105	100	100	100
Decay Time, ns	1.6	0.7	0.7	0.7	0.7	0.7
Pulse Width, FWHM, ps	1300	360	290	260	240	220

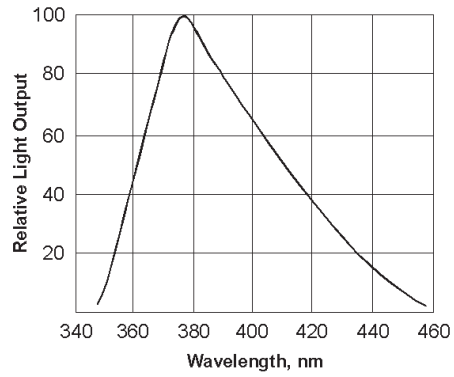
*BC-422

General Technical Data –

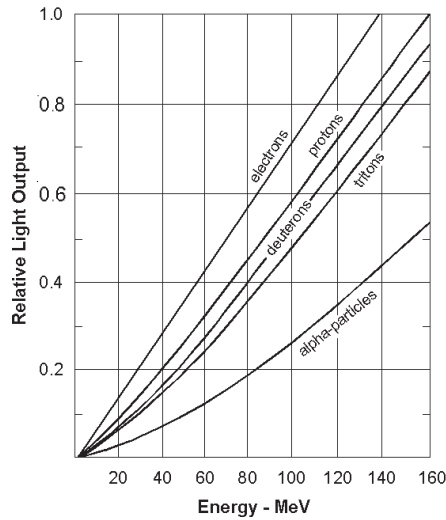
Base	Polyvinyltoluene
Density	1.032 g/cc
Refractive Index	1.58
Ratio H:C Atoms	~1.1
Coefficient of Linear Expansion 7.8x10 ⁻⁵ below 67°C
Light Output Temperature Dependence	at +60°C = 95% of that at +20°C; independent of temperature from -60°C to +20°C
Vapor Pressure	May be used in a vacuum
Solubility	Soluble in aromatic solvents, chlorine, acetone, etc. Insoluble in water, dilute acids, lower alcohols, silicone fluid, grease and alkalis.
Softening Point	70°C

BC-422Q Ultra-fast Timing Plastic Scintillator

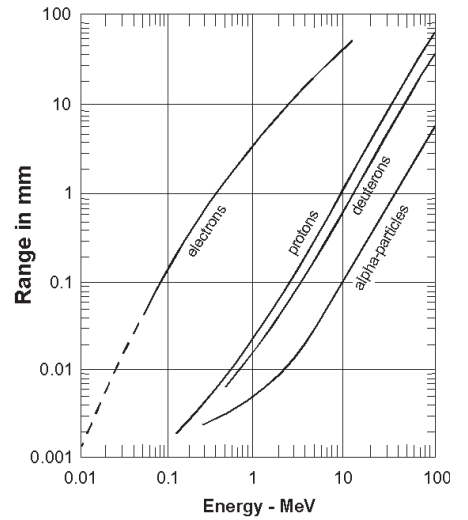
Emission Spectra –



Atomic Particles Response –



Premium Plastic Scintillators
Response to Atomic Particles



Range of Atomic Particles in
Premium Plastic Scintillators