

## EJ-212 PLASTIC SCINTILLATOR

This is the truly general purpose scintillator suitable for use in geometries ranging from very thin films to thick cast sheet, rods and ingots. EJ-212 is exactly identical to the well-known NE-102A referenced in numerous scientific articles of the past forty years. Applications include industrial and health physics measurement of alpha, beta, gamma and neutron radiation as well as in numerous medical instruments and scientific research ranging from low background shields in nuclear physics to space-borne astrophysics systems.

Since it is formulated for a very wide application range, it is best utilized in sizes up to 100 cm long. EJ-200 should be considered for longer pieces. The EJ-212 emission spectrum couples well with common blue-sensitive phototubes and also is sufficiently long to work well with standard acrylic light guides.

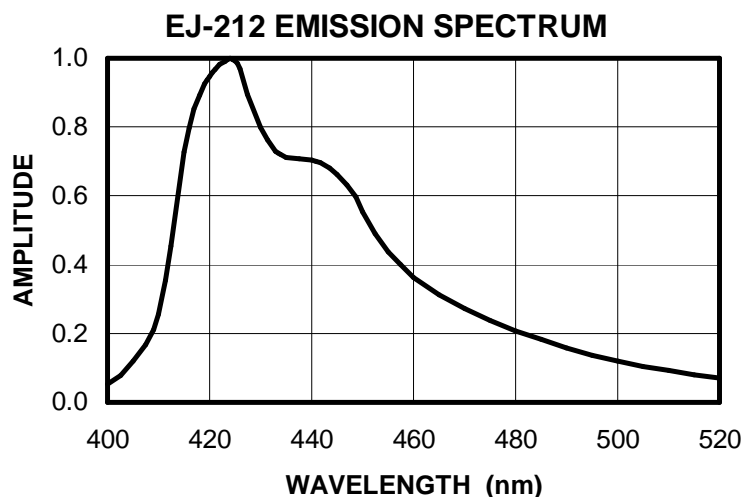
### Physical and Scintillation Constants:

Light Output, % Anthracene .....	65
Scintillation Efficiency, photons/1 MeV e <sup>-</sup> .....	10,000
Wavelength of Max. Emission, nm .....	423
Rise Time, ns .....	0.9
Decay Time, ns .....	2.4
Pulse Width, FWHM, ns .....	2.7
No. of H Atoms per cm <sup>3</sup> , x 10 <sup>22</sup> .....	5.17
No. of C Atoms per cm <sup>3</sup> , x 10 <sup>22</sup> .....	4.69
No. of Electrons per cm <sup>3</sup> , x 10 <sup>23</sup> .....	3.33
Density, g/cc: .....	1.023

**Polymer Base:** ..... Polyvinyltoluene  
**Refractive Index:** ..... 1.58  
**Vapor Pressure:** ..... Is vacuum-compatible  
**Coefficient of Linear Expansion:** ..... 7.8 x 10<sup>-5</sup> below 67°C.

**Light Output vs. Temperature:**  
At +60°C, L.O. = 95% of that at +20°C.  
No change from +20°C to -60°C.

**Chemical Compatibility:** Is attacked by aromatic solvents, chlorinated solvents, ketones, solvent bonding cements, etc. It is stable in water, dilute acids and alkalis, lower alcohols and silicone greases. It is safe to use most epoxies and "super glues" with EJ-212.



May, 2007



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