

EJ-208 PLASTIC SCINTILLATOR

This plastic scintillator embodies the formula dating from the early 1970s for achieving long optical attenuation length. It is intended specifically for use in large sizes where timing is of secondary importance and uniformity of light collection is paramount. Typical measurements of 4 meter optical attenuation length are achieved in strips of cast sheet in which a representative size is 2 cm x 20 cm x 300 cm.

EJ-208 possesses the longest wavelength emission of the commonly available blue scintillators and hence should be considered for applications requiring complex or extended light guides. Additionally, the long emission spectrum provides additional resistance to radiation damage of which the most common symptom is increased optical attenuation at short wavelengths.

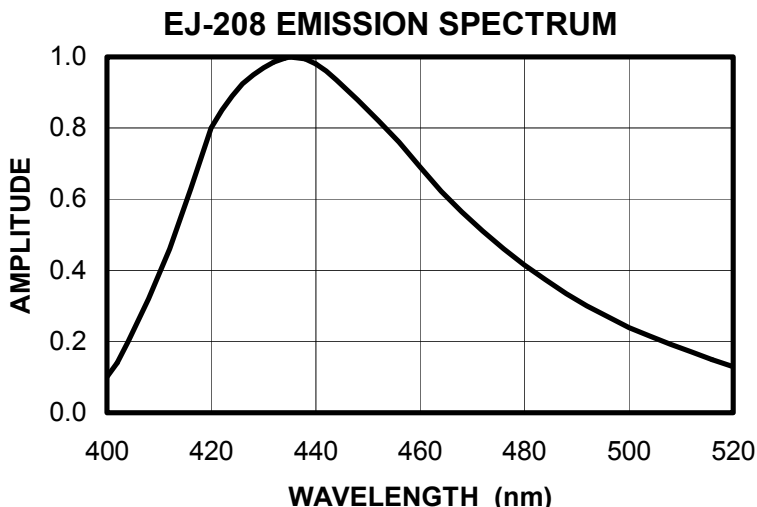
Physical and Scintillation Constants:

Light Output, % Anthracene	60
Scintillation Efficiency, photons/1 MeV e ⁻	9,200
Wavelength of Max. Emission, nm	435
Rise Time, ns	1.0
Decay Time, ns	3.3
Pulse Width, FWHM, ns	4.2
No. of H Atoms per cm ³ , x 10 ²²	5.17
No. of C Atoms per cm ³ , x 10 ²²	4.69
No. of Electrons per cm ³ , x 10 ²³	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 10⁻⁵ 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-208.



ELJEN TECHNOLOGY
 PO Box 870, 300 Crane Street
 Sweetwater TX 79556 USA

Tel: (915) 235-4276 or (888) 800-8771
Fax: (915) 235-0701
Website: www.eljentechnology.com