

IR 125

Synonym: 2-[7-[1,3-dihydro-1,1-dimethyl-3-(4-sulfobutyl)-2H-benz[e]indol-2-ylidene]-1,3,5-heptatrienyl]-1,1-dimethyl-3-(4-sulfobutyl)-1H-benz[e]indolium hydroxide, inner salt, sodium salt; Indocyanine Green, Cardiogreen, Foxgreen

Catalog No.: 09030

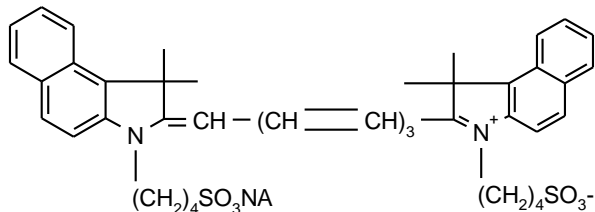
CAS No.: 3599-32-4

Chemical Formula: C₄₃H₄₇N₂O₆S₂.Na

MW: 774.97

Appearance: Dark green crystals

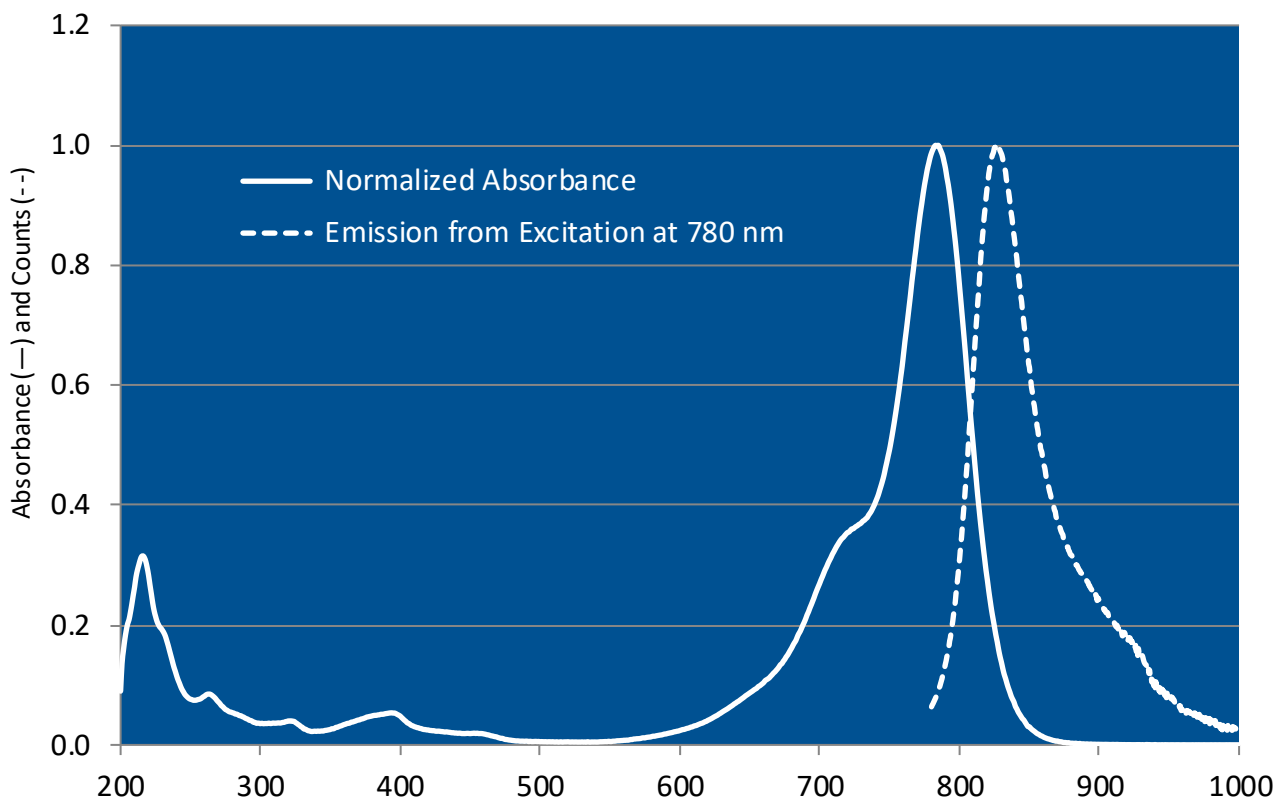
Structure:



Lasing Wavelength Max. (nm)	Range (nm)	Pump Source (nm)	Solvent	Concentration (molar)	Abs λ-max	FI λ-max
940		FL ⁹⁹	DMSO	1 x 10 ⁻⁴	795 ^s	833 ^s
863	846-907	Nd:YAG(532) ⁵³	DMSO		786 ^e	
903		Nd:YAG→C720(700) ⁶⁶	DMSO	2 x 10 ⁻⁴	778 ^w	
913	(bb)	Nd:YAG(532) ¹⁰¹	DMSO	5 x 10 ⁻⁴	800 ^{w/LO}	
887	872-935	N ₂ (337) ¹¹¹	DMSO	1.3 x 10 ⁻³ (IR-125), 1.3 x 10 ⁻³ (IR-144)		
908	884-930	N ₂ (337) ⁹⁰	DMSO			
910	884-947	N ₂ (337) ¹⁸³	DMSO	40mg/20ml		
915	879-943	N ₂ (337) ¹¹¹	DMSO	1.67 x 10 ⁻³		
915	885-947	N ₂ (337) ¹¹¹	DMSO	2.5 x 10 ⁻³		
870	833-937	Ruby(694) ¹³³	DMSO	1 x 10 ⁻⁴		

DMSO = Dimethylsulfoxide; e = ethanol; LO = Amonyx LO; s = DMSO; w = water;

IR 125 in Methanol



The information presented above is believed to be accurate but is not a specification. The customer is fully responsible for determining the suitability of this product for use in their application. Exciton, Inc. does not represent that the information is sufficient or complete for any specific application.

Quantum Yields and Lifetimes

Absorbance (nm)	Emission (nm)	Quantum Yield (max = 1.0)	Solvent	Lifetime (ns)	References, Notes
795	835	0.13	Dimethylsulfoxide		CD-3
	820-935	0.132	Ethanol		S-4

REFERENCES:

53. Continuum, 3150 Central Expressway, Santa Clara, CA 95051, formerly, Quantel International
66. Near Infrared Dye Laser Pumped by a Carbazine 122 Dye Laser, K. Kato, *IEEE J. Quantum Electron.*, QE12, 442 (1976)
90. Jobin Yvon, 16-18 rue du Canal B.P. 118, 91163 Longjumeau Cedex France
99. Sixteen New Infrared Laser Dyes Excited by a Simple, Linear Flashlamp, J.P. Webb, F.G. Webster and B.E. Plourd e, *IEEE J. Quantum Electron.*, QE11, 114 (1975)
101. Excited State Absorption and Laser Emission from Infrared Dyes Optically Pumped at 532 nm, C.D. Decker, *Appl. Phys. Lett.*, 27(11), 607 (1975)
111. Lasing Properties of Several Near-IR Dyes for a Nitrogen Laser-Pumped Dye Laser with an Optical Amplifier, B.M. Pierce and R.R. Birge, *IEEE J. Quantum Electron.*, QE18, 1164 (1982)



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133. Operation of a High-Power, Broadly-Tunable Infrared Dye Laser, E.J. Seibert and L.G. Johnson, *Optics Commun.*, 39(3), 186 (1981)
183. Thermo Laser Science, 26 Landsdowne Street, Cambridge, MA 02139
- CD-3. Absorption and Fluorescence Properties of Cyanine Dyes, R.C. Benson and H.A. Kues, *J. of Chem. & Engr. Data* 22(4), 379 (1977), <https://doi.org/10.1021/je60075a020>
- S-4. Fluorescence Quantum Yields of a Series of Red and Near-Infrared Dyes Emitting at 600-1000nm, K. Rurack and M. Spieles, *Anal. Chem.*, 83, 1232 (2011), <https://doi.org/10.1021/ac101329h>

For a current list of biology, biological stain, or biochemistry references for IR 125 from PubMed, click on the following link:

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