

IR 140

Synonym: 5-chloro-2-[2-[3-[(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)ethylidene]-2-(diphenylamino)-1-cyclopenten-1-yl]ethenyl]-3-ethyl benzothiazolium perchlorate
Benzothiazolium, 5-chloro-2-[2-[3-[2-(5-chloro-3-ethyl-2(3H)-benzothiazolylidene)ethylidene]-2-(diphenylamino)-1-cyclopenten-1-yl]ethenyl]-3-ethyl-, perchlorate (1:1)

Catalog No.: 09500 (perchlorate), 09510 (tosylate)

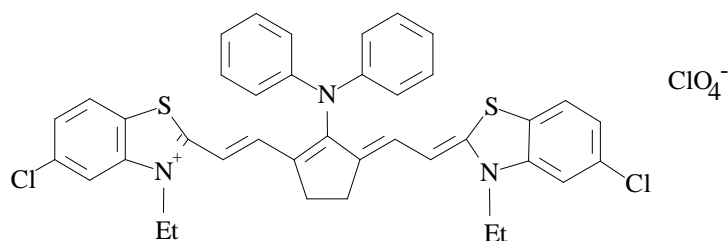
CAS No.: 53655-17-7 (perchlorate); none (tosylate)

Chemical Formula: C₃₉H₃₄Cl₂N₃S₂.ClO₄; C₃₉H₃₄Cl₂N₃S₂.C₇H₇O₃S

MW: 779.20 (09500), 850.96 (09510)

Appearance: Brown crystalline powder

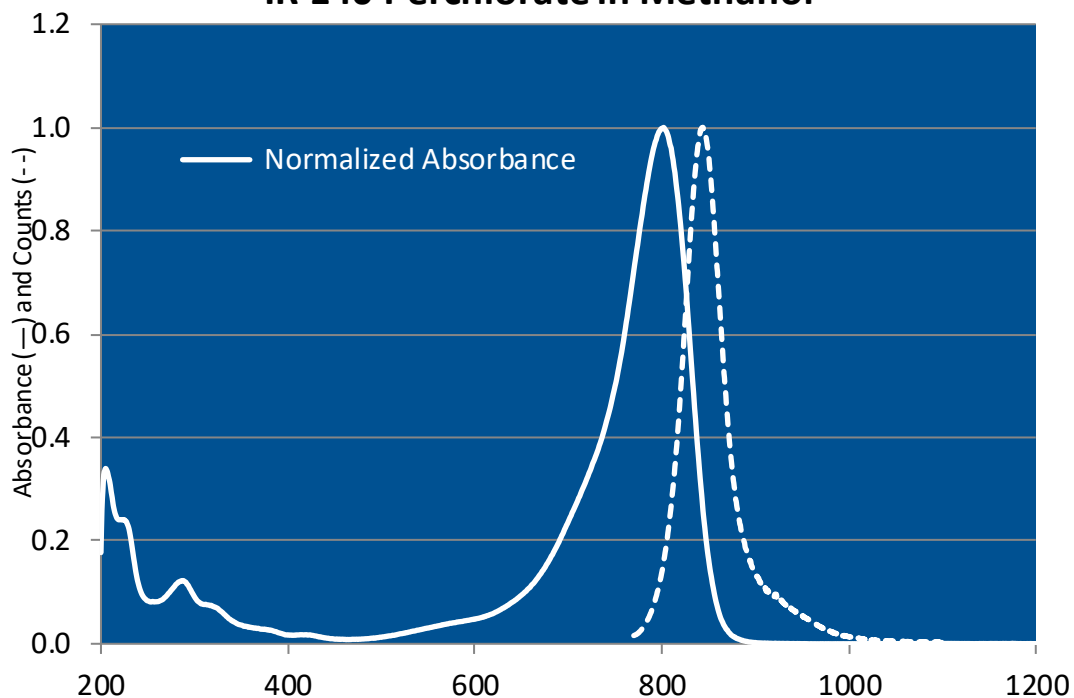
Structure:



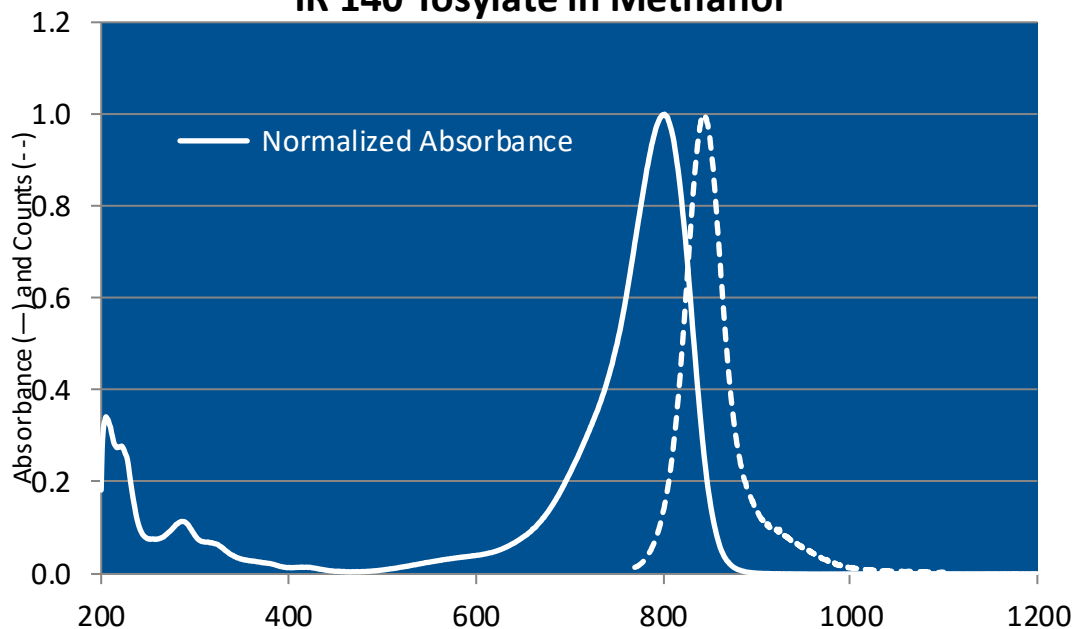
Max. (nm)	Range (nm)	Pump Source (nm)	Solvent	Concentration (molar)	Abs λ-max	Fl λ-max
	805-872	FL→OX720(690-709) ³	Ethanol	1 x 10 ⁻⁴	823 ^s	882 ^s
	875-916	FL→OX720(709) ³	DMSO	2 x 10 ⁻⁴	776 ^e	
950		FL ⁹⁹	DMSO	1 x 10 ⁻⁴		
880	868-900	XeCl(308) ¹¹⁴	DMF	3.2 x 10 ⁻⁴		
884	876-912	XeCl(308) ¹¹⁴	DMF	6.4 x 10 ⁻⁴		
936	900-995	XeCl(308) ¹¹⁰	DMSO	1 x 10 ⁻³		
865	859-872	Nd:YAG(532) ¹¹⁶	Ethanol/DMSO,94/6	1.5 x 10 ⁻⁴ (IR-140), 9.5 x 10 ⁻⁴ (R640)		
875	866-882	Nd:YAG(532) ¹¹⁶	Ethanol/DMSO,94/6	2.8 x 10 ⁻⁴ (IR-140), 9.5 x 10 ⁻⁴ (R640)		
893	882-913	Nd:YAG ⁵³	DMSO			
898		Nd:YAG→C720(700) ⁶⁶	DMSO	2 x 10 ⁻⁴		
908	Δλ(bb)=15	Nd:YAG(532) ¹⁰²	DMSO	4 x 10 ⁻⁴		
910	Δλ(bb)=20	Nd:YAG(532) ¹⁰¹	DMSO	5 x 10 ⁻⁴		
912	896-940	N ₂ (337) ¹¹⁴	DMSO	1.5 x 10 ⁻³		
920	906-968	N ₂ (337) ¹¹⁴	DMSO	3 x 10 ⁻³		
930	915-960	N ₂ (337) ¹¹¹	DMSO	3 x 10 ⁻³		
964	906-1018	N ₂ (337) ⁹⁰	DMSO	1 x 10 ⁻³		
	887-986	Kr(752,799) ⁷¹	EG/DMSO,3/1	5.1 x 10 ⁻⁴		
927	858-1030	Kr(752) ¹⁰⁰	EG/DMSO,3/1	1 x 10 ⁻³		
950	862-1013	Kr(752,799) ⁹⁸	EG/DMSO,1/1	6.4 x 10 ⁻⁴		
961	875-1015	Kr(IR) ⁶⁸				
	850-930	Ruby(694) ³⁵	DMSO			

e = Ethanol; s = DMSO; DMSO = Dimethylsulfoxide; DMF = dimethylformamide; EG = Ethylene Glycol

IR 140 Perchlorate in Methanol



IR 140 Tosylate 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
	840-915	0.167	Ethanol		S-4

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