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DOTC

Synonym: 3-ethyl-2-[7-(3-ethyl-2(3H)-benzoxazolylidene)-1,3,5-heptatrienyl]-benzoxazolium iodide or perchlorate

Catalog No.: 08250 (iodide); 08251 (perchlorate)

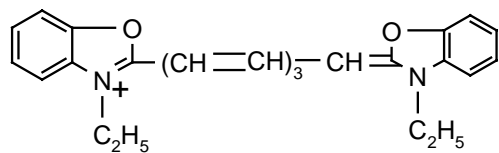
CAS No.: 15185-43-0 (08250); Not available (08251)

Chemical Formula: C₂₅H₂₅N₂O₂.I (08250); C₂₅H₂₅N₂O₂.ClO₄ (08251)

Molecular Weight: 512.39 (08250); 484.94 (08251)

Appearance: Steely blue-gray crystals (08250); Steel blue crystals (08251)

Structure:



I⁻ or ClO₄⁻

Max. Lasing Wavelength (nm)	Range (nm)	Pump Source (nm)	Solvent	Concentration (molar)	Abs λ-max	FI λ-max
732		FL→R610(622) ⁶⁵	MeOH/N ₂ /COT	3 x 10 ⁻⁵	687 ^e	725 ^e
745		FL→R610(622) ⁶⁵	DMSO	1 x 10 ⁻⁴	695 ^s	719 ^s
	750-825	FL→R640(660) ³	EG	1 x 10 ⁻⁴		
798	777-800	XeCl(308) ¹¹⁴	DMSO	1.5 x 10 ⁻³		
803	776-832	XeCl(308) ¹¹⁰	DMSO	1.5 x 10 ⁻³		
	785-800	Nd:YAG→R610(585) ⁶⁷	DMSO	3.9 x 10 ⁻³		
740		Nd:YAG→R610(585) ⁶⁷	DMSO	1.9 x 10 ⁻⁴		
754	Δλ(bb)=23	Nd:YAG(532) ¹⁰²	DMSO	2.6 x 10 ⁻⁴		
756	736-793	Nd:YAG(532) ⁵³	Methanol			
770		Nd:YAG→R610(585) ⁶⁷	DMSO	7.8 x 10 ⁻⁴		
760	748-776	N ₂ (337) ¹¹¹	DMSO	6 x 10 ⁻³ (DOTC), 1 x 10 ⁻² (OX725)		
777	761-802	N ₂ (337) ¹¹¹	DMSO	1.2 x 10 ⁻³		
782	(bb)	N ₂ (337) ⁹⁷	DMSO	2.5 x 10 ⁻¹		
791	752-839	N ₂ (337) ⁹⁰	DMSO	1 x 10 ⁻³		
795	760-830	N ₂ (337) ¹⁸³	DMSO	11.6mg/20ml		
823	794-867	N ₂ (337) ⁹⁰	DMSO	2.4 x 10 ⁻³ (DOTC), 5.8 x 10 ⁻⁵ (HITC)		
854	815-892	N ₂ (337) ⁹⁰	DMSO	1.25 x 10 ⁻³ (DOTC), 1 x 10 ⁻³ (HITC)		
783	750-833	Kr(647,676) ³⁸	EG	7.8 x 10 ⁻⁴		
795	765-875	Kr(646,676) ¹⁷	EG/DMSO,84/16	6 x 10 ⁻⁴		
800	755-870	Kr(647,676) ^{36b}	DMSO+EG or G	1 x 10 ⁻³		
808	756-871	Kr(Red) ⁶⁸				
	742-874	Kr(647) ⁷¹	EG/DMSO,3/1	1 x 10 ⁻³		
	725-765	Ruby(694) ³⁵	DMSO	5 x 10 ⁻⁵		
742		Ruby(694) ⁹⁵	Acetone	1 x 10 ⁻⁴		
798	789-810	AlGaInP(laser diode, 690) ²⁰⁸	EG	3.55 x 10 ⁻⁴		

COT = cyclooctatetraene; DMSO = dimethylsulfoxide; E = ethanol; EG = ethylene glycol; G = glycerol; MeOH = methanol; S = DMSO



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

[DOTC I or DOTC Perchlorate](#) (zero references as of May 2006)