

## HITC

**Synonym:** 2-[7-(1,3-dihydro-1,3,3-trimethyl-2H-indol-2-ylidene)-1,3,5-heptatrienyl]-1,3,3-trimethyl-3H-indolium iodide or perchlorate; Hexacyanin 3

**Catalog No.:** 08422 (Iodide) or 08421 (Perchlorate)

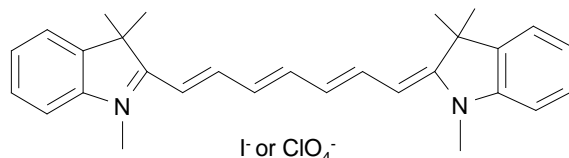
**CAS No.:** 19764-96-6 (08422) or 16595-48-5 (Perchlorate)

**MW:** 536.50 (08422) or 509.04 (08421)

**Chemical Formula:** C<sub>29</sub>H<sub>33</sub>N<sub>2</sub>.I (08422) or C<sub>29</sub>H<sub>33</sub>N<sub>2</sub>.ClO<sub>4</sub> (08421)

**Appearance:** Golden green (08422) or Green crystals (08421)

**Structure:**



Max. Lasing Wavelength (nm)	Range (nm)	Pump Source (nm)	Solvent	Concentration (molar)	Abs λ-max	FI λ-max
	770-830	FL→KR620(Red) <sup>62</sup>	DMSO		751 <sup>S</sup>	790 <sup>S</sup>
	800-882	FL→R640(664) <sup>3</sup>	EG	1 x 10 <sup>-4</sup>	743 <sup>e</sup>	
826	812-838	XeCl(308) <sup>114</sup>	Methanol	1.4 x 10 <sup>-3</sup>		
833	819-845	XeCl(308) <sup>114</sup>	Ethanol/H <sub>2</sub> O/LO,80/15/5	1.4 x 10 <sup>-3</sup>		
835	805-880	XeCl(308) <sup>114</sup>	DMF	1.4 x 10 <sup>-3</sup>		
851	822-887	XeCl(308) <sup>114</sup>	DMSO	2.3 x 10 <sup>-3</sup>		
868	836-905	XeCl(308) <sup>118</sup>	DMSO	2.2 x 10 <sup>-3</sup> (osc)		
871	829-909	XeCl(308) <sup>110</sup>	DMSO	2 x 10 <sup>-3</sup>		
805	795-830	Nd:YAG(532) <sup>116</sup>	Ethanol/DMSO,2/1	6.5 x 10 <sup>-5</sup> (HITC), 9.5 x 10 <sup>-4</sup> (R640)		
806	788-832	Nd:YAG(532) <sup>53</sup>	DMSO			
815	800-849	Nd:YAG(532) <sup>116</sup>	Ethanol	1.5 x 10 <sup>-4</sup> (HITC), 9.5 x 10 <sup>-4</sup> (R640)		
822		Nd:YAG→C720(700) <sup>66</sup>	DMSO	2 x 10 <sup>-4</sup>		
849	(bb)	Nd:YAG(532) <sup>101</sup>	DMSO	5 x 10 <sup>-4</sup>		
802	794-815	N <sub>2</sub> (337) <sup>111</sup>	DMSO	4.4 x 10 <sup>-4</sup> (DOTC), 8.9 x 10 <sup>-5</sup> (HITC)		
817	807-832	N <sub>2</sub> (337) <sup>111</sup>	DMSO	3.4 x 10 <sup>-4</sup> (DOTC), 3.4 x 10 <sup>-4</sup> (HITC)		
840	824-869	N <sub>2</sub> (337) <sup>111</sup>	DMSO	1.2 x 10 <sup>-3</sup>		
846	828-891	N <sub>2</sub> (337) <sup>114</sup>	DMSO	2 x 10 <sup>-3</sup>		
862	(bb)	N <sub>2</sub> (337) <sup>97</sup>	DMSO	2 x 10 <sup>-1</sup>		
869	827-908	N <sub>2</sub> (337) <sup>90</sup>	DMSO	2 x 10 <sup>-3</sup>		
870	850-890	N <sub>2</sub> (337) <sup>183</sup>	DMSO	15mg/20ml		
865	825-912	Kr(Red) <sup>68</sup>				
868	840-887	Kr(Red) <sup>123</sup>	EG/DMSO,4/1			
869	832-888	Kr(647,676) <sup>38</sup>	EG	1.5 x 10 <sup>-3</sup>		
870	812-929	Kr(752,799) <sup>36b</sup>	DMSO & EG or G + COT	4 x 10 <sup>-4</sup>		
870	828-909	Kr(647,676) <sup>36b</sup>	DMSO & EG or G + COT	1.3 x 10 <sup>-3</sup>		
873	819-937	Kr(752) <sup>100</sup>	EG/DMSO,3/1	2.8 x 10 <sup>-4</sup>		
	832-911	Kr(647) <sup>71</sup>	EG/DMSO,3/1	1 x 10 <sup>-3</sup>		

875	840-940	Kr <sup>17</sup>	EG/DMSO,84/16	7.4 x 10 <sup>-4</sup>
819		Ruby(694) <sup>95</sup>	Acetone	1 x 10 <sup>-4</sup>
836		Ruby(694) <sup>37</sup>	EG	
	780-883	Ruby(694) <sup>96</sup>	DMSO	6 x 10 <sup>-5</sup>
	790-840	Ruby(694) <sup>35</sup>	DMSO	3.7 x 10 <sup>-4</sup>

DMSO = dimethylsulfoxide, EG = ethylene glycol, LO = Ammonyx LO, DMF = dimethylformamide, G = glycerol, COT = cyclooctatetraene, s = DMSO, e = ethanol

### Quantum Yields and Lifetimes

Absorbance (nm)	Emission (nm)	Quantum Yield (max = 1.0)	Solvent	Lifetime (ns)	References, Notes
	750		Ethanol	1.3	C-3
	770-870	0.283	Ethanol		S-4
740	840	0.28	Methanol		M-5 Duggan

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