

## LD 700 PERCHLORATE

**Synonym:** 2,3,6,7,12,13,16,17-octahydro-9-(trifluoromethyl)-1H,5H, 11H,15H,-xantheno[2,3,4-ij:5,6,7-ij']diquinolizin-4-ium perchlorate; Rhodamine 700

**Catalog No.:** 07000

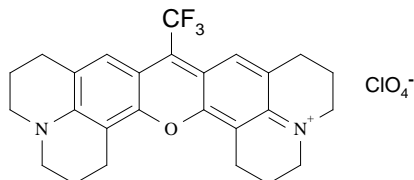
**CAS No.:** 63561-42-2

**Chemical Formula:** C<sub>26</sub>H<sub>26</sub>F<sub>3</sub>N<sub>2</sub>O.ClO<sub>4</sub>

**MW:** 538.95

**Appearance:** Dark green crystals

**Structure:**

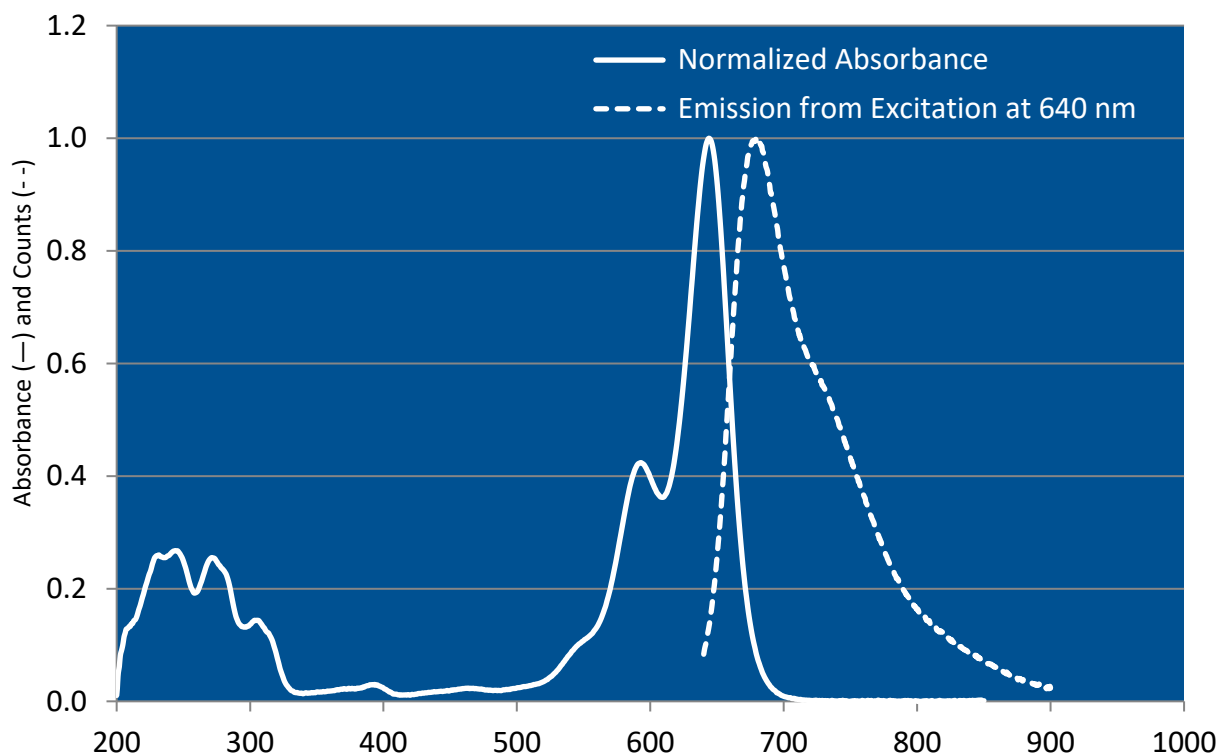


Max. (nm)	Range (nm)	Pump Source (nm)	Solvent	Concentration (molar)	Abs λ-max	FI λ-max
725	710-750	FL <sup>3</sup>	Methanol	1 x 10 <sup>-4</sup>	647 <sup>e</sup>	673 <sup>e</sup>
725	707-760	FL <sup>117</sup>	MeOH/H <sub>2</sub> O,7/3	7 x 10 <sup>-5</sup>	652 <sup>eg</sup>	
734	716-754	FL <sup>69</sup>	Methanol	4.6 x 10 <sup>-5</sup>	658 <sup>s</sup>	
762	730-818	FL <sup>69</sup>	DMSO	5.0 x 10 <sup>-4</sup>		
720	696-753	XeCl(308) <sup>110</sup>	Methanol	5 x 10 <sup>-4</sup>		
727	693-797	XeCl(308) <sup>204</sup>	DMSO	1 x 10 <sup>-3</sup> (osc), 7.5 x 10 <sup>-4</sup> (amp)		
690		Nd:YAG→R610(585) <sup>67</sup>	Alcohol			
708	692-742	Nd:YAG(532) <sup>53</sup>	Methanol			
735	705-775	Nd:YAG(532) <sup>5</sup>	Ethanol	4 x 10 <sup>-3</sup> (osc), 1.5 x 10 <sup>-4</sup> (amp)		
706	692-752	N <sub>2</sub> (337) <sup>50</sup>	Ethanol	9.3 x 10 <sup>-4</sup> (LD700), 5 x 10 <sup>-3</sup> (R640)		
720	698-758	N <sub>2</sub> (337) <sup>50</sup>	Ethanol	1.5 x 10 <sup>-3</sup> (LD700), 4.4 x 10 <sup>-3</sup> (R640)		
702	690-800	Ar(514) <sup>124</sup>	EG/BzOH/MeOH,20/5/1	1.4 x 10 <sup>-3</sup> (DCM), 1.6 x 10 <sup>-3</sup> (LD700)		
730	703-805	Ar <sup>126</sup>	DMSO/BzOH/G,2/1/1	1.2 x 10 <sup>-3</sup> (LD700), 1.2 x 10 <sup>-3</sup> (DCM)		
700	675-725	Kr(647,676) <sup>149</sup>				
740	695-785	Kr(647-676) <sup>206</sup>	EG	2.9 x 10 <sup>-3*</sup>		
740	700-810	Kr(Red) <sup>123</sup>	EG			
740	700-820	Kr(647,676) <sup>68</sup>	EG			
750	680-840	Kr(647,676) <sup>149</sup>				
775	763-844	Kr(Red) <sup>123</sup>	EG			
800	785-875	Kr(647,676) <sup>149</sup>				
742		HeNe(633,20mW) <sup>170</sup>	EG	7.3 x 10 <sup>-4</sup>		
742	728-756	AlGaInP (laser diode, 670) <sup>207</sup>	EG	1.76x10 <sup>-3</sup>		
758		AlGaInP (laser diode, 670) <sup>208a</sup>	EG	1.76x10 <sup>-3</sup>		

\* This represents a maximum value. Concentration should be adjusted to 80-85% absorption of the pump light.

EG = Ethylene Glycol; DMSO = Dimethylsulfoxide; BzOH = Benzyl Alcohol; G = Glycerol; MeOH/H<sub>2</sub>O = Methanol/Water; e = Ethanol; eg = Ethylene Glycol; s = DMSO

### LD 700 Perchlorate 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
	700		Ethanol	2	C-3

#### REFERENCES:

- Phase-R Corporation, Box G-2 Old Bay Rd., New Durham, NH 03855
- Laser Photonics, Inc., 12351 Research Parkway, Orlando, FL 32826, formerly, Molelectron Corporation and Cooper LaserSonics, Inc.
- G. Holtom, private commun., 1978
- Continuum, 3150 Central Expressway, Santa Clara, CA 95051, formerly, Quantel International
- P. Drell, private commun., 1978
- Coherent Inc., 3210 Porter Dr., Palo Alto, CA 94304
- Candela Laser Corporation, 530 Boston Post Road, Wayland, MA 01778-1833
- Lumonics Inc., 105 Schneider Road, Kanata, (Ottawa), Ontario, Canada K2K 1Y3

117. E. Rohlifing, private commun., 1981
123. Powerful Single-Frequency Ring Dye Laser Spanning the Visible Spectrum, T.F. Johnston, Jr., R.H. Brady and W. Proffitt, *Appl. Optics*, 21(13), 2307 (1982)
124. Near-Infrared Picosecond Pulse Generation in a CW Mode-Locked Dye Laser Pumped Directly by an Argon Ion Laser, R.K. Jain, *Appl. Phys. Lett.*, 40, 295 (1982)
126. Energy Transfer Dye Mixture for Argon-Pumped Dye Laser Operation in the 700 to 800nm Region, E.G. Marason, *Optics Commun.*, 40(3), 212 (1982)
149. Infrared Dye Laser in the 685-880nm Range, G.D. Aumiller, *Applied Optics*, 23(5), 651 (1984)
170. Countinous Wave Dye Laser Pumped by a HeNe Laser, E. Thiel, C. Zander and K. H. Drexhage, *Optics Commun.*, 60(6), 396 (1986)
204. Questek, Inc., 44 Manning Road, Billerica, MA 01821 (Tuning Curves for Model 5200B Dye Laser, PDL-3)
206. Coherent Inc., 3210 Porter Dr., Palo Alto, CA 94304; (599 Composite Tuning Curves, 1992; The concentration shown represents a maximum value. The final concentration should be adjusted to obtain 80-85% absorption of the pump light.)
207. Low-Threshold Dye Laser Pumped by Visible Laser Diodes, R. Scheps, *IEEE Photonics Tech. Lett.*, 5(10), 1156 (1993)
208. Near-IR Dye Laser for Diode-Pumped Operation, R. Scheps, *IEEE J. Quantum Electron.* 31(1), 126 (1995)
- C-3. Photoquenching Parameters for Commonly Used Laser Dyes, S. Speiser and N. Shakkour, *Appl. Phys. B* 38, 191 (1985), <https://doi.org/10.1007/BF00697483>

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