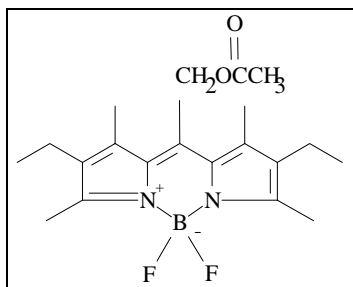




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## PYRRROMETHENE 605



**Chemical Name:** 8-Acetoxyethyl-2,6-diethyl-1,3,5,7-tetramethyl pyrromethene fluoroborate

**Chemical Formula:** C<sub>20</sub>H<sub>27</sub>N<sub>2</sub>O<sub>2</sub>BF<sub>2</sub>

**MW:** 376.25

**CAS Registry Number:** N/A

**Synonyms:**

**Melting Point:** 175-177(181-182°C)<sup>218</sup>

**Exciton Catalog No.:** 06050

### Spectral Information:

$\lambda_{\max, \text{abs}} = 543\text{nm}$  (Ethanol)<sup>218</sup>

$\log_{543} \epsilon = (4.89 \text{ liter mol}^{-1} \text{ cm}^{-1})$

$\lambda_{\max, \text{fl}} = 575\text{nm}$  (Ethanol)

$\Phi_f = 0.74$  (Ethanol)

### Selected Solubility Limits (g/l) (25°C):

		$\lambda_{\text{abs max}}$ :
Methanol	0.51	542.6
Ethanol	0.52	543.5 (71,200)
NMP	26.3	544 (dec.)
EPH	5.7	550.5
PPH	10.0	549.9
p-Dioxane	16.3	543.9

### REPORTED LASER PERFORMANCE DATA

Lasing Wavelength Max. Range (nm)	Pump Source (nm)	Solvent	Concentration (molar)	Conversion Efficiency	Stability (1/2- life)
605(bb) 575	FL <sup>218</sup> Nd:YAG(532) <sup>228</sup>	Ethanol HTP	$2 \times 10^{-4}$ $1 \times 10^{-4}$	70% <sup>s</sup>	-

\*(FWHM); bb (broad band); s (slope efficiency)

EPH (2-Phenoxyethanol); HTP (High Temperature Plastic); NMP (N-Methyl-2-Pyrrolidinone); PPH (1-Phenoxy-2-propanol)

### REFERENCES:

218. Pyrromethene-BF<sub>2</sub> Complexes as Laser Dyes: 2, J.H. Boyer, A.M. Haag, G. Sathyamoorthi, M.-L. Soong, and K. Thangaraj, *Heteroatom Chem.*, 4(1), 39 (1993).
228. Spectroscopy and Laser Properties of Perylimide and New Pyrromethene-BF<sub>2</sub> Dyes in a High Temperature Plastic, T.H. Allik, S. Chandra and T.R. Robinson, CLEO '95, poster paper Ctu158 (1995)

For a current list of biology, biological stain, or biochemistry references for Pyrromethene 605 from PubMed, click on the following link:

[Pyrromethene 605](#)