

Integrated band strength of pure solid CH₄ bands. The values relative to the most intense mid-IR bands have been estimated at 12.5 K by Mulas et al. (1998, A&A 333,1025) using a density value of solid CH₄ of 0.52 g cm⁻³ (after Landolt-Börnstein 1971, Zahlenwerte und Funktionen. Springer-Verlag, Berlin, II. Band, 1. Teil, 471). The other values have been estimated at 16 K by Brunetto et al. (2008, ApJ 686, 1480) using a density value of solid CH₄ of 0.403 g cm⁻³ measured in the same work. Please refer to these articles when you use the values given below.

Peak ^a (cm ⁻¹)	Position (μm)	FWHM ^a (cm ⁻¹)	Mode ^b	Strength ^c , A (cm molecule ⁻¹)
1301.5	7.6805	6.7	v ₄	6.4x10 ⁻¹⁸
2815.2	3.5521	7.8	v ₂ +v ₄	2.76x10 ⁻¹⁹
3010.1	3.32	5.2	v ³	9.5x10 ⁻¹⁸
3847.8	2.5989	2.9	3v ₄	- ^d
4114.5	2.4304	12.4	v ₂ +2v ₄	9.05x10 ⁻²¹
4202.7	2.3794	7.2	v ₁ +v ₄	3.59x10 ⁻¹⁹
4301.3	2.3249	6.1	v ₃ +v ₄	6.85x10 ⁻¹⁹
4528.4	2.2083	8.9	v ₂ +v ₃	6.52x10 ⁻²⁰
5566.1	1.7966	5.4	v ₃ +2v ₄	9.50x10 ⁻²¹
5800.9	1.7239	8.2	v ₂ +v ₃ +v ₄	2.01x10 ⁻²⁰
5919.3	1.6894	7.7	-	- ^d
5987.2	1.6702	7.1	2v ₃	4.15x10 ⁻²⁰
7487.3	1.3356	10.4	v ₂ +2v ₃	1.26x10 ⁻²⁰

Note:

^a Errors on peak position and FWHM are of 0.5 cm⁻¹.

^b Mode identifications are after Quirico and Schmitt 1997, Icarus, 127, 354

^c Errors on band strengths are of the order of 5%-10%.

^d The feature is too weak to allow band strength calculations.