

wavelength nm	atom / molecule -	wavelength nm	atom / molecule -	wavelength nm	atom / molecule -
205.5	Cr	288.0	Si	337.7	NO
206.8	Ge	288.5	NO	338.6	NO
221.6	Ni	289.3	NO	339.2	Zr
229.9	SiO	289.8	CN	341.5	Ni
232.0	Ni	290.0	CO2	343.8	Zr
234.4	SiO	292.1	CF2	346.2	Ni
235.0	As	292.5	CO	349.3	CO
237.0	NO	295.3	N2	349.6	Zr
238.9	CO	296.2	N2	350.0	N2
240.0	CF	297.7	N2	352.5	Ni
255.1	W	301.2	Ni	353.7	N2
255.3	P	301.2	Ta	357.2	NO
255.8	CF	302.1	OH	357.7	N2
256.1	Cl2	302.8	CO	357.9	Cr
257.8	He	303.5	NO	358.1	Fe
258.0	CCl	304.2	CN	358.4	NO
259.5	CF2	304.3	NO	358.6	CN
259.6	NO	306.4	OH	359.0	CN
261.4	AlCl	306.7	OH	359.3	Cr
262.9	CF2	307.0	CCl	360.1	Zr
264.8	AlCl	307.8	OH	360.5	Cr
264.7	Ta	308.2	Al	363.5	Ti
265.1	Ge	308.9	OH	364.2	N2
265.9	Pt	309.3	Al	365.3	Ti
266.5	BCl	310.4	N2	367.2	N2
266.9	SiO	311.7	N2	371.1	N2
268.0	NO	313.2	Mo	372.0	Fe
268.3	AlCl	313.4	CO	373.7	Fe
269.4	SiO	313.6	N2	375.5	N2
269.8	CO	313.8	CO	379.8	Mo
271.1	CF2	315.9	N2	380.5	N2
271.5	Ta	317.0	Mo	382.0	He
272.2	BCl	319.3	Mo	385.8	N2
272.2	NO	319.8	NO	386.2	CN
272.4	W	320.7	NO	386.4	Mo
275.0	CF2	321.4	CF2	387.0	CN
277.8	CCl	325.3	CO	387.1	CN
278.8	CCl	325.6	In	388.3	CN
280.0	CF2	326.8	N2	388.9	He
280.7	SiCl	328.5	N2	389.5	N2
281.0	SiCl	330.6	CO	389.0	Zr
281.1	OH	330.9	N2	390.2	SiCl
281.4	N2	331.1	Ta	390.3	Mo
282.0	N2	333.9	N2	391.2	O
282.4	SiCl	334.6	SiF	394.3	N2
283.3	CO	335.0	N2	394.4	Al
283.7	C	335.0	Ti	395.5	SiF2
286.0	BCl	336.0	NH	396.0	Al
286.0	NO	336.3	SiF	396.5	He
287.1	SiCl	337.0	CO2	397.3	O
288.0	CO2	337.1	N2	399.8	N2

wavelength nm	atom / molecule -	wavelength nm	atom / molecule -	wavelength nm	atom / molecule -
399.9	Ti	474.2	Ge	670.5	N2
400.0	Ti	476.5	Ar	674.0	N
400.9	W	479.4	Cl	677.4	F
402.6	He	482.5	CO	678.9	N2
405.1	SiN	483.5	CO	683.4	F
405.9	N2	486.1	H	685.4	F
407.2	W	488.0	Ar	685.6	F
407.4	W	489.7	Cl	687.0	F
407.6	O	492.2	He	690.2	F
407.7	TiF	501.6	He	691.0	F
408.1	Zr	503.0	SiBr	696.5	Ar
408.7	SiN	504.1	Si	696.6	F
409.5	N2	504.8	He	703.7	F
411.6	SiN	505.5	Si	706.5	He
412.7	SiN	516.5	C2	706.7	Ar
414.2	N2	519.8	CO	712.8	F
418.1	CN	520.8	Cr	716.5	N2
418.3	TiCl	521.8	Cl	720.2	F
419.0	O	542.3	Cl	725.4	O
419.3	TiCl	561.0	CO	725.6	Cl
419.7	CN	575.5	N2	727.3	N2
420.0	N2	580.4	N2	728.1	He
420.4	SiN	585.8	CN	732.6	C
421.6	CN	585.4	N2	733.2	F
423.9	SiN	587.6	He	738.4	Ar
424.1	AlH	589.3	Ge	738.7	N2
425.4	Cr	590.6	N2	739.9	F
425.9	AlH	595.9	N2	741.4	Cl
426.7	C	601.4	N2	742.6	F
427.0	N2	607.0	N2	750.4	Ar
427.5	Cr	608.0	CO	750.4	N2
429.5	W	615.6	O	751.5	Ar
431.4	CH	615.7	O	751.5	F
434.0	H	615.8	O	755.2	F
434.5	N2	623.9	F	757.3	F
434.8	Ar	632.3	N2	760.7	F
436.8	SiF	634.7	Si	762.6	N2
438.8	He	634.8	F	763.5	Ar
440.1	SiF	637.1	Si	772.4	Ar
440.7	SiN	639.5	N2	775.3	N2
444.3	SiN	641.4	F	775.5	F
447.1	He	645.6	O	777.0	SiF
451.1	CO	646.0	P	777.2	O
460.0	CO	646.9	N2	780.0	F
460.2	P	647.8	CN	787.3	CN
464.9	O	654.5	N2	789.6	N2
468.8	Zr	656.3	H	794.8	Ar
469.0	Zr	656.5	H		
469.5	S	662.0	CO		
471.3	He	662.4	N2		
473.7	C2	667.8	He		

atom / molecule	wavelength nm	atom / molecule	wavelength nm	atom / molecule	wavelength nm
Al	308.2	CN	304.2	F	696.6
Al	309.3	CN	358.6	F	703.7
Al	394.4	CN	359.0	F	712.8
Al	396.0	CN	386.2	F	720.2
AlCl	261.4	CN	387.0	F	733.2
AlCl	264.8	CN	387.1	F	739.9
AlCl	268.3	CN	388.3	F	742.6
AlH	424.1	CN	418.1	F	751.5
AlH	425.9	CN	419.7	F	755.2
Ar	434.8	CN	421.6	F	757.3
Ar	476.5	CN	585.8	F	760.7
Ar	488.0	CN	647.8	F	775.5
Ar	696.5	CN	787.3	F	780.0
Ar	706.7	CO	238.9	Fe	358.1
Ar	738.4	CO	269.8	Fe	372.0
Ar	750.4	CO	283.3	Fe	373.7
Ar	751.5	CO	292.5	Ge	206.8
Ar	763.5	CO	302.8	Ge	265.1
Ar	772.4	CO	313.4	Ge	474.2
Ar	794.8	CO	313.8	Ge	589.3
As	235.0	CO	325.3	H	434.0
BCl	266.5	CO	330.6	H	486.1
BCl	272.2	CO	349.3	H	656.3
BCl	286.0	CO	451.1	H	656.5
C	283.7	CO	460.0	He	257.8
C	426.7	CO	482.5	He	382.0
C	732.6	CO	483.5	He	388.9
C2	473.7	CO	519.8	He	396.5
C2	516.5	CO	561.0	He	402.6
CCl	258.0	CO	608.0	He	438.8
CCl	277.8	CO	662.0	He	447.1
CCl	278.8	CO2	288.0	He	471.3
CCl	307.0	CO2	290.0	He	492.2
CF	240.0	CO2	337.0	He	501.6
CF	255.8	Cr	205.5	He	504.8
CF2	259.5	Cr	357.9	He	587.6
CF2	262.9	Cr	359.3	He	667.8
CF2	271.1	Cr	360.5	He	706.5
CF2	275.0	Cr	425.4	He	728.1
CF2	280.0	Cr	427.5	In	325.6
CF2	292.1	Cr	520.8	Mo	313.2
CF2	321.4	F	623.9	Mo	317.0
CH	431.4	F	634.8	Mo	319.3
Cl	479.4	F	641.4	Mo	379.8
Cl	489.7	F	677.4	Mo	386.4
Cl	521.8	F	683.4	Mo	390.3
Cl	542.3	F	685.4	N	674.0
Cl	725.6	F	685.6	N2	281.4
Cl	741.4	F	687.0	N2	282.0
Cl2	256.1	F	690.2	N2	295.3
CN	289.8	F	691.0	N2	296.2

atom / molecule	wavelength nm	atom / molecule	wavelength nm	atom / molecule	wavelength nm
N2	297.7	Ni	221.6	SiCl	282.4
N2	310.4	Ni	232.0	SiCl	287.1
N2	311.7	Ni	301.2	SiCl	390.2
N2	313.6	Ni	341.5	SiF	334.6
N2	315.9	Ni	346.2	SiF	336.3
N2	326.8	Ni	352.5	SiF	436.8
N2	328.5	NO	237.0	SiF	440.1
N2	330.9	NO	259.6	SiF	777.0
N2	333.9	NO	268.0	SiF2	395.5
N2	335.0	NO	272.2	SiN	405.1
N2	337.1	NO	286.0	SiN	408.7
N2	350.0	NO	288.5	SiN	411.6
N2	353.7	NO	289.3	SiN	412.7
N2	357.7	NO	303.5	SiN	420.4
N2	364.2	NO	304.3	SiN	423.9
N2	367.2	NO	319.8	SiN	440.7
N2	371.1	NO	320.7	SiN	444.3
N2	375.5	NO	337.7	SiO	229.9
N2	380.5	NO	338.6	SiO	234.4
N2	385.8	NO	357.2	SiO	266.9
N2	389.5	NO	358.4	SiO	269.4
N2	394.3	O	391.2	Ta	264.7
N2	399.8	O	397.3	Ta	271.5
N2	405.9	O	407.6	Ta	301.2
N2	409.5	O	419.0	Ta	331.1
N2	414.2	O	464.9	Ti	335.0
N2	420.0	O	615.6	Ti	363.5
N2	427.0	O	615.7	Ti	365.3
N2	434.5	O	615.8	Ti	399.9
N2	575.5	O	645.6	Ti	400.0
N2	580.4	O	725.4	TiCl	418.3
N2	585.4	O	777.2	TiCl	419.3
N2	590.6	OH	281.1	TiF	407.7
N2	595.9	OH	302.1	W	255.1
N2	601.4	OH	306.4	W	272.4
N2	607.0	OH	306.7	W	400.9
N2	632.3	OH	307.8	W	407.2
N2	639.5	OH	308.9	W	407.4
N2	646.9	P	255.3	W	429.5
N2	654.5	P	460.2	Zr	339.2
N2	662.4	P	646.0	Zr	343.8
N2	670.5	Pt	265.9	Zr	349.6
N2	678.9	S	469.5	Zr	360.1
N2	716.5	Si	288.0	Zr	389.0
N2	727.3	Si	504.1	Zr	408.1
N2	738.7	Si	505.5	Zr	468.8
N2	750.4	Si	634.7	Zr	469.0
N2	762.6	Si	637.1		
N2	775.3	SiBr	503.0		
N2	789.6	SiCl	280.7		
NH	336.0	SiCl	281.0		

Table based on data from Verity Instruments, Inc. and the following sources:
Herman, Irving; "Optics Diagnostics for Thin Film Processing"; Academic Press; 1966
"CRC Handbook of Chemistry and Physics"; CRC Press, Inc. 1978
Pearse, Gaydon; "Identification of Molecular Spectra", Chapman and Hall; 1976
Yoshida, Tokashiki, Miyamoto; Proceedings of the Dry process Symposium, 1998, p. 153.