

R Branch	Wavelength (nm)	P Branch	Wavelength (nm)
25	1513.2010	1	1525.7602
24	1513.5841	2	1526.3142
23	1513.9735	3	1526.8746(1)
22	1514.3692	4	1527.4415(1)
21	1514.7712	5	1528.0147(1)
20	1515.1794	6	1528.5942(1)
19	1515.5939	7	1529.1802
18	1516.0148	8	1529.7726
17	1516.4419(1)	9	1530.3714
16	1516.8754	10	1530.9766(1)
15	1517.3151	11	1531.5882
14	1517.7612	12	1532.2063
13	1518.2136	13	1532.8307(1)
12	1518.6723	14	1533.4617(1)
11	1519.1373(1)	15	1534.0991
10	1519.6087	16	1534.7429
9	1520.0864	17	1535.3932
8	1520.5704	18	1536.0498
7	1521.0608(1)	19	1536.7130
6	1521.5574	20	1537.3826
5	1522.0605	21	1538.0587
4	1522.5699	22	1538.7413
3	1523.0857	23	1539.4304(1)
2	1523.6077	24	1540.1259(1)
1	1524.1362(1)	25	1540.8280(1)

200 Torr Acetylene Lines

Acetylene absorption vacuum center wavelengths of the $\nu_1+\nu_3$ band of $^{12}\text{C}_2\text{H}_2$. Wavelengths are adjusted for the pressure shift of 200 Torr. The US National Institute of Standards and Technology (NIST) has measured these lines on a similar cell of their own design. Not all lines were directly measured for pressure shift. The lines directly measured are indicated by (1) after the wavelength. These lines are known with an expanded uncertainty of 0.1pm coverage factor 2. The coverage factor 2 means the 1σ uncertainty is 0.05pm. The uncertainty in the other lines is estimated to be $<0.3\text{pm } 1\sigma$.

Dimensions

Mini package:

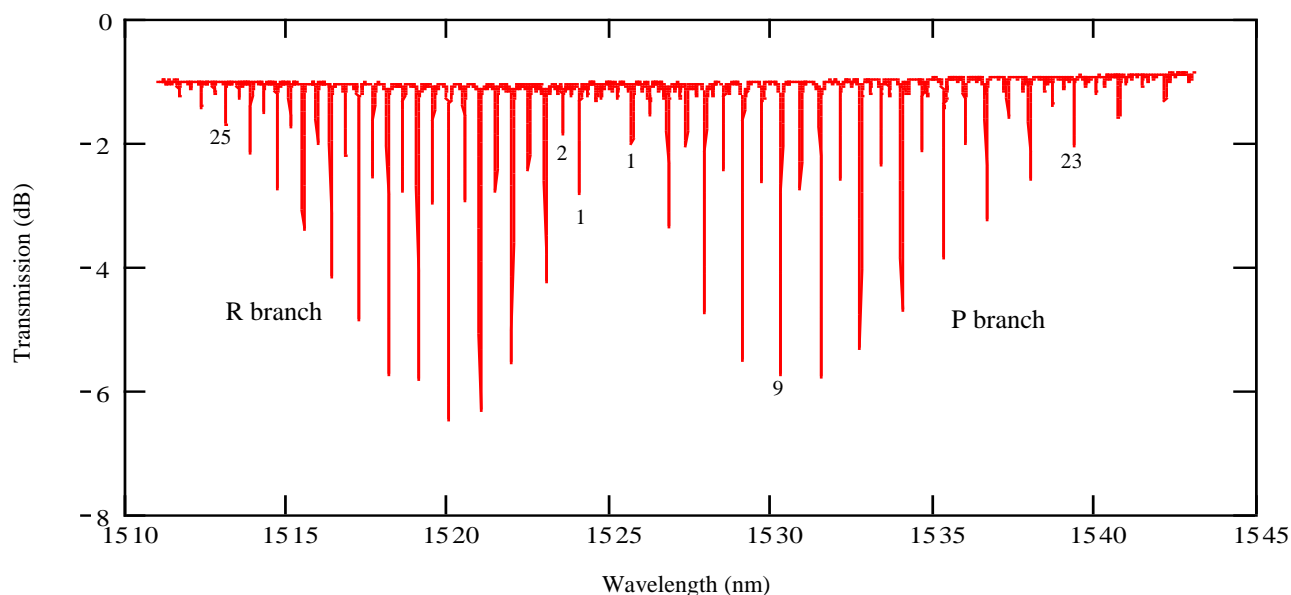
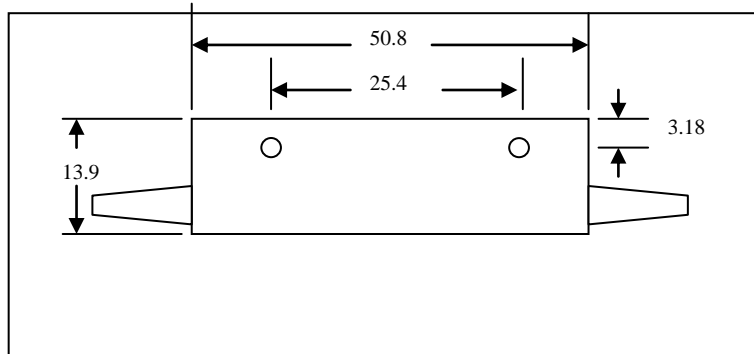
Length: 50.8mm
 Width: 13.9mm
 Height: 11.1mm
 Mounting holes: 2 holes, 25.4mm on centers, threaded
 3 X 0.5mm

Tube

Length: 30 mm
 Diameter: 5 mm OD
 Tipoff length: <5 mm

Ordering Information for Instrument housing:

The cells may be ordered enclosed in a metal instrument housing for protection, to provide bulkhead connectors, and for convenience in laboratory applications. Up to three cells of any type (ie hydrogen cyanide, carbon monoxide, etc) can be ordered in a given housing. The housing used is 28 cm wide by 6.5 cm high by 32 cm deep.



Plot of transmission of M style 200 Torr acetylene cell taken with scanning laser