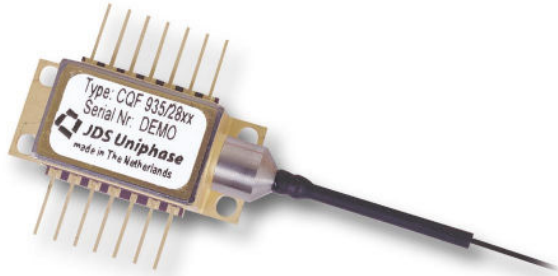


Product Bulletin



CQF935/508 Series 20 mW 1550 nm CW DFB Lasers with PM Fiber for WDM Applications

The CQF935 has been especially developed for use in WDM systems as a wavelength-selected source in combination with an external modulator (such as a LiNbO_3 -based Mach-Zehnder modulator). The wavelengths that can be selected comply with the ITU recommendation both in range (1527.61 to 1610.06 nm) and in channel definition, adhering to the 100 GHz grid (0.8 nm) relative to a frequency of 193.1 THz (i.e. a wavelength of 1552.52 nm). Customization of the wavelength spacing to a 50 GHz grid (0.4 nm) is possible. Each laser is accurately measured for wavelength and is accompanied by a datasheet for the laser's performance at the temperature at which the required wavelength channel is reached. The laser shows excellent side-mode suppression ratios (typically 45 dB) and small linewidths (<2 MHz). The butterfly-packaged laser is provided with a polarization maintaining fiber to facilitate coupling to the modulator and shows excellent thermal stability (e.g. wavelength drift with case temperature is better than 0.001 nm/°C).

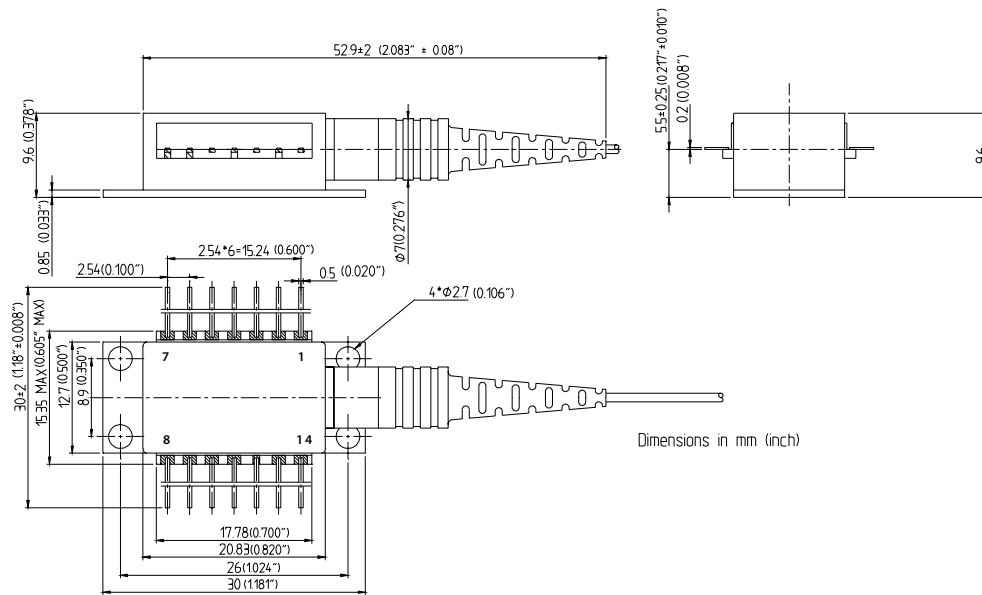
Key Features

- 1550 nm (WDM) DFB laser diode
- Built-in thermo-electric cooler
- High power: >20 mW
- Polarization maintaining fiber
- Cooled built-in optical isolator
- Suitable for external modulation at 2.5 and 10 Gb/s
- 1527 to 1610 nm wavelength range
- 0.8 nm (100 GHz) spacing
- 0.4 nm (50 GHz) spacing optional

Characteristics for All Types ($R_{th} = 10 \text{ k}\Omega$, unless otherwise specified)

Symbol	Parameter	Minimum	Typical	Maximum
I_{th}	Threshold current		25 mA	40 mA
λ_c	Central wavelength (ITU grid)	1527 nm		1610 nm
T_λ	Laser set temperature for λ_c	20 °C		35 °C
P_o	Output power from pigtail ($T = T_\lambda$)	20 mW		
SMSR	Side-mode suppression ratio	30 dB	45 dB	
RIN	Relative intensity noise			-145 dB/Hz

Mechanical Dimensions



Pinning

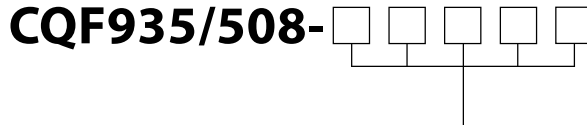
1	Thermistor
2	Thermistor
3	LD cathode DC input via inductance
4	PD anode
5	PD cathode
6	Cooler anode
7	Cooler cathode
8	Case GND
9	Case GND
10	Not connected
11	LD anode, case
12	LD cathode, AC input
13	LD anode, case
14	Not connected

Ordering Information

Indicate your requirements from the configuration table. Please print the corresponding code in the available boxes to form your part number. For more information on this or other products and their availability, please contact your JDS Uniphase account manager, call +1 408 546-4200, or call 1-877-550-JDSU toll free in North America, or visit www.jdsuniphase.com.

Sample: CQF935/508-19270 for wavelength 1555.75 nm

Attention: Order confirmations on this part number will be preceded by FG' (e.g. FG'CQF935/508-19270).

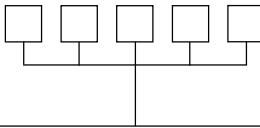


Channel Code	Optical Frequency f_c (THz)	Central Wavelength (vacuum) λ_c (nm)
19625	196.25	1527.61
19620	196.20	1527.99
19615	196.15	1528.38
19610	196.10	1528.77
19605	196.05	1529.16
19600	196.00	1529.55
19595	195.95	1529.94
19590	195.90	1530.33
19585	195.85	1530.73
19580	195.80	1531.12
19575	195.75	1531.51
19570	195.70	1531.90
19565	195.65	1532.29
19560	195.60	1532.68
19555	195.55	1533.07
19550	195.50	1533.47
19545	195.45	1533.86
19540	195.40	1534.25
19535	195.35	1534.64
19530	195.30	1535.04
19525	195.25	1535.43
19520	195.20	1535.82
19515	195.15	1536.22
19510	195.10	1536.61
19505	195.05	1537.00
19500	195.00	1537.40
19495	194.95	1537.79
19490	194.90	1538.19
19485	194.85	1538.58
19480	194.80	1538.98
19475	194.75	1539.37
19470	194.70	1539.77
19465	194.65	1540.16
19460	194.60	1540.56
19455	194.55	1540.95
19450	194.50	1541.35
19445	194.45	1541.75
19440	194.40	1542.14

Channel Code	Optical Frequency f_c (THz)	Central Wavelength (vacuum) λ_c (nm)
19435	194.35	1542.54
19430	194.30	1542.94
19425	194.25	1543.33
19420	194.20	1543.73
19415	194.15	1544.13
19410	194.10	1544.53
19405	194.05	1544.92
19400	194.00	1545.32
19395	193.95	1545.72
19390	193.90	1546.12
19385	193.85	1546.52
19380	193.80	1546.92
19375	193.75	1547.32
19370	193.70	1547.72
19365	193.65	1548.12
19360	193.60	1548.51
19355	193.55	1548.92
19350	193.50	1549.32
19345	193.45	1549.72
19340	193.40	1550.12
19335	193.35	1550.52
19330	193.30	1550.92
19325	193.25	1551.32
19320	193.20	1551.72
19315	193.15	1552.12
19310	193.10	1552.52
19305	193.05	1552.93
19300	193.00	1553.33
19295	192.95	1553.73
19290	192.90	1554.13
19285	192.85	1554.54
19280	192.80	1554.94
19275	192.75	1555.34
19270	192.70	1555.75
19265	192.65	1556.15
19260	192.60	1556.56
19255	192.55	1556.96
19250	192.50	1557.36

Channel Code	Optical Frequency f_c (THz)	Central Wavelength (vacuum) λ_c (nm)
19245	192.45	1557.77
19240	192.40	1558.17
19235	192.35	1558.58
19230	192.30	1558.98
19225	192.25	1559.39
19220	192.20	1559.79
19215	192.15	1560.20
19210	192.10	1560.61
19205	192.05	1561.01
19200	192.00	1561.42
19195	191.95	1561.83
19190	191.90	1562.23
19185	191.85	1562.64
19180	191.80	1563.05
19175	191.75	1563.46
19170	191.70	1563.86
19165	191.65	1564.27
19160	191.60	1564.68
19155	191.55	1565.09
19150	191.50	1565.50
19145	191.45	1565.90
19140	191.40	1566.31
19135	191.35	1566.72
19130	191.30	1567.13
19125	191.25	1567.54
19120	191.20	1567.95
19115	191.05	1568.39
19110	191.10	1568.77
19105	191.05	1569.18
19100	191.00	1569.59
19095	190.95	1570.01
19090	190.90	1570.42
19085	190.85	1570.83
19080	190.80	1571.24
19075	190.75	1571.65
19070	190.70	1572.06
19065	190.65	1572.48
19060	190.60	1572.89

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Channel Code	Optical Frequency f_c (THz)	Central Wavelength (vacuum) λ_c (nm)
19055	190.55	1573.30
19050	190.50	1573.71
19045	190.45	1574.13
19040	190.40	1574.54
19035	190.35	1574.95
19030	190.30	1575.37
19025	190.25	1575.78
19020	190.20	1576.20
19015	190.15	1576.61
19010	190.10	1577.03
19005	190.05	1577.44
19000	190.00	1577.86
18995	189.95	1578.27
18990	189.90	1578.69
18985	189.85	1579.10
18980	189.80	1579.52
18975	189.75	1579.93
18970	189.70	1580.35
18965	189.65	1580.77
18960	189.60	1581.18
18955	189.55	1581.60
18950	189.50	1582.02
18945	189.45	1582.44
18940	189.40	1582.85
18935	189.35	1583.27
18930	189.30	1583.69
18925	189.25	1584.11
18920	189.20	1584.53
18915	189.15	1584.95
18910	189.10	1585.36

Channel Code	Optical Frequency f_c (THz)	Central Wavelength (vacuum) λ_c (nm)
18905	189.05	1585.78
18900	189.00	1586.20
18895	188.95	1586.62
18890	188.90	1587.04
18885	188.85	1587.46
18880	188.80	1587.88
18875	188.75	1588.30
18870	188.70	1588.73
18865	188.65	1589.15
18860	188.60	1589.57
18855	188.55	1589.99
18850	188.50	1590.41
18845	188.45	1590.83
18840	188.40	1591.26
18835	188.35	1591.68
18830	188.30	1592.10
18825	188.25	1592.52
18820	188.20	1592.95
18815	188.15	1593.37
18810	188.10	1593.79
18805	188.05	1594.22
18800	188.00	1594.64
18795	187.95	1595.07
18790	187.90	1595.49
18785	187.85	1595.91
18780	187.80	1596.34
18775	187.75	1596.76
18770	187.70	1597.19
18765	187.65	1597.62

Channel Code	Optical Frequency f_c (THz)	Central Wavelength (vacuum) λ_c (nm)
18760	187.60	1598.04
18755	187.55	1598.47
18750	187.50	1598.89
18745	187.45	1599.32
18740	187.40	1599.75
18735	187.35	1600.17
18730	187.30	1600.60
18725	187.25	1601.03
18720	187.20	1601.46
18715	187.15	1601.88
18710	187.10	1602.31
18705	187.05	1602.74
18700	187.00	1603.17
18695	186.95	1603.60
18690	186.90	1604.03
18685	186.85	1604.46
18680	186.80	1604.88
18675	186.75	1605.31
18670	186.70	1605.74
18665	186.65	1606.17
18660	186.60	1606.61
18655	186.55	1607.04
18650	186.50	1607.47
18645	186.45	1607.90
18640	186.40	1608.33
18635	186.35	1608.76
18630	186.30	1609.19
18625	186.25	1609.62
18620	186.20	1610.06

Fiber Termination

- 1.25 mm or 2.5 mm ferrule



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