DFB & DBR Laser Diodes

updated weekly
inventory subject to prior sales

Distributed Feedback (DFB) and Distributed Bragg Reflector (DBR) laser diodes feature a frequency-selective structure within the laser chip, which restricts the laser emission to a single longitudinal mode. The lasing wavelength is tuned by varying either the driver current or the chip temperature. Single-frequency operation is usually maintained over several hundred GHz without any mode-hops.

In the table below, WL indicates the design wavelength. P is the maximum output power of the diode. WLmin and WLmax denote the wavelength range accessible via temperature tuning and dL/dT is the thermal tuning coefficient in nm/K.

Note that the range between WLmin and WLmax is usually, but not always, mode-hop free. If your application requires guaranteed mode-hop-free tuning, please inquire with TOPTICA Photonics. Further information e.g. regarding electric tuning, fast modulation options, spectroscopic applications and locking to resonance lines is available upon request.

Diodes with a TO-3 or butterfly-type package include a built-in thermistor and thermoelectric cooler. For other diodes (5.6 mm or 9 mm housings), we recommend TOPTICA's patented ColdPack for precise temperature control.

WL nm	P mW	WLmin nm	WLmax nm	dL/dT nm/K	Linewidth $\Delta\nu$ in kHz	Article Number	Stock	Remark
633.0		632.8	633.2	0.04	1000	#LD-0633-0010-DBR-1	2	
634.0		633.8	634.2	0.04	1000	#LD-0633-0010-DBR-1	1	
760.0		759.4	760.6	0.07	400	#LD-0760-0080-DBR-1	u.r.	
760.9	40	759.9	761.4	0.06		#LD-0760-0040-DFB-1	1	TO-3
764.0	50			0.06		#LD-0764-0050-DFB-1	u.r.	TO-3 not selected
772.5	75	771.5	773.5	0.06		#LD-0773-0075-DFB-1	1	
778.0	60	777.1	778.9	0.06	500	#LD-0778-0060-DBR-1	u.r.	
779.9	80	778.7	780.8	0.06		#LD-0780-0080-DFB-2	u.r.	For Rb spectroscopy [1], TO-3
780.0	80	778.8	780.9	0.06		#LD-0780-0080-DFB-2	u.r.	For Rb spectroscopy [1], TO-3
780.0	120	778.8	781.2	0.07	500	#LD-0780-0120-DBR-1	1	
782.9	100	781.7	784.1	0.06		#LD-0783-0080-DFB-1	u.r.	Limited stock!
785.0	100	783.8	786.2	0.06		#LD-0785-0080-DFB-1	1	For THz applications, TO-3
795.0	80	793.9	795.8	0.06		#LD-0795-0080-DFB-1	1	For Rb spectroscopy (D1 line)
808.0	100				500	#LD-0808-0100-DBR-1	1	
851.4	140	850.4	852.4	0.06		#LD-0852-0150-DFB-1	u.r.	For Cs spectroscopy [1], TO-3
854.0	100	853	855	0.06	500	#LD-0854-0100-DFB-1	u.r.	
895.0	40	893.8	896.2	0.07	500	#LD-0895-0040-DBR-1	3	For Cs spectroscopy [1]
911.6	25	910.6	912.6	0.08		#LD-0910-0025-DFB-1	u.r.	Special offer - limited stock!

[1] Note: The diodes reach the target wavelengths for Rb/Cs spectroscopy, though not necessarily at the center of the tuning range.

u.r. : upon request

TOPTICA Photonics AG, Lochhamer Schlag 19, D-82166 Gräfelfing, Phone: +49 (0)89 858 37-0, Fax: +49 (0)89 858 37-200

email: info@toptica.com, internet: www.toptica.com or www.laser-diodes.com

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WL nm	P mW	WLmin nm	WLmax nm	dL/dT nm/K	Linewidth $\Delta\nu$ in kHz	Article Number	Stock	Remark
935.0	30	934.9	936.3	0.08		#LD-0935-0030-DFB-1	u.r.	
936.0	80	934.9	936.8	0.06		#LD-0935-0080-DFB-1	2	
1030.0	40			0.08		#LD-1030-0040-DFB-3	u.r.	ellipse 5:1, APP recommended not selected
1047.0	30	1045.1	1049.2	0.1		#LD-1053-0030-DFB-1	u.r.	Butterfly + pigtail
1054.0	30	1052.1	1056.2	0.1		#LD-1053-0030-DFB-1	u.r.	Butterfly + pigtail
1056.2	40	1055.2	1057.5	0.08		#LD-1055-0040-DFB-1	1	
1063.9	25			0.06		#LD-1064-0025-DFB-1	u.r.	
1064.0	30	1062.1	1066.2	0.1		#LD-1064-0030-DFB-1	1	Butterfly + pigtail
1065.0	30	1063.1	1067.2	0.1		#LD-1064-0030-DFB-1	1	Butterfly + pigtail
1083.0	70	1081.7	1084.7	0.08		#LD-1083-0070-DFB-1	1	TO-3
1266.0	20	1263	1269	0.1	2000	#LD-1266-0020-DFB-1	u.r.	TO39
1276.0	10	1272	1276.1	0.1		#LD-1280-0010-DFB-1	1	Special offer - limited stock!
1278.2	10	1274.2	1278.3	0.1		#LD-1280-0010-DFB-1	u.r.	Special offer - limited stock!
1315.0	10	1314	1316		2000	#LD-1315-0010-DFB-1	u.r.	Butterfly + pigtail
1315.0	20	1314	1316		2000	#LD-1315-0020-DFB-1	u.r.	Butterfly + pigtail
1364.7	20	1362.7	1366.7	0.1		#LD-1360-0020-DFB-1	u.r.	Butterfly + pigtail
1392.4	10	1390.4	1394.4	0.1	2000	#LD-1395-0010-DFB-1	u.r.	Butterfly, PM Pigtail
1470.0	20	1467.6	1472.4	0.12		#LD-1470-0020-DFB-1	u.r.	Butterfly + pigtail
1479.0	20	1476.6	1481.4	0.12		#LD-1470-0020-DFB-1	2	Butterfly + pigtail
1490.0	8				800	#LD-1490-0010-DFB-1	u.r.	Butterfly, PM Pigtail not selected
1530.0	40	1528.1	1532.2	0.1	<1000	#LD-1550-0040-DFB-1	u.r.	Butterfly + pigtail
1537.0	40	1535.1	1539.2	0.1	<1000	#LD-1550-0040-DFB-1	u.r.	Butterfly + pigtail
1545.0	40	1543.1	1547.2	0.1	<1000	#LD-1550-0040-DFB-1	u.r.	Butterfly + pigtail
1550.0	40	1548.1	1552.2	0.1	<1000	#LD-1550-0040-DFB-1	u.r.	Butterfly + pigtail
1550.0	80	1547.8	1552.2	0.11	<1000	#LD-1550-0080-DFB-1	u.r.	Butterfly + pigtail
1550.0	100	1547.8	1552.2	0.11	<1000	#LD-1550-0100-DFB-1	u.r.	Butterfly + pigtail

[1] Note: The diodes reach the target wavelengths for Rb/Cs spectroscopy, though not necessarily at the center of the tuning range.

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1550.1	100	1547.9	1552.3	0.11	<1000	#LD-1550-0100-DFB-1	u.r.	Butterfly + pigtail
1575.0	40	1573.1	1577.2	0.1	<1000	#LD-1550-0040-DFB-1	u.r.	Butterfly + pigtail
2723.0	2	2718.2	2725.2	0.23		#LD-2740-0003-DFB-1	u.r.	

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