



NEC's TUNABLE CW InGaAsP MQW-DFB LASER DIODE MODULE WITH WAVELENGTH MONITOR FOR DWDM APPLICATIONS (20 mW MIN)

NX8570 SERIES

FEATURES

- **WAVELENGTH SELECTABLE FOR ITU-T STANDARDS:**
(50 GHz grid)
- **NX8570SCXXXD - 4x50 GHz TUNABLE**
- **NX8570SCXXXQ - 8x50 GHz TUNABLE**
- **WAVELENGTH MONITOR FUNCTION:**
(Etalon Filter, Wavelength monitor PD)
- **OUTPUT POWER:**
P_f = 20 mW MIN
- **INTERNAL THERMOELECTRIC COOLER AND ISOLATOR**
- **HERMETICALLY SEALED 14-PIN BUTTERFLY PACKAGE**
- **POLARIZATION MAINTAIN FIBER PIGTAIL**

DESCRIPTION

NEC's NX8570 series is a 1550 nm Multiple Quantum Well (MQW) structured Distributed Feed-Back laser diode with wavelength monitor function. This device is temperature tunable up to 8 x 50 GHz channels. Available at both C-band(1550.334 to 1565.087 nm) and L-band (1565.496 to 1508.760 nm) ITU-T grid wavelength. This device is designed as a CW light source and is ideal for transmission systems in which external modulators are used.

ELECTRO-OPTICAL CHARACTERISTICS (T_{LD} = 25°C, T_C = -5 to +70°C, unless otherwise specified)

| PART NUMBER | | | NX8570 SERIES | | |
|------------------|---|--------------------|---------------|--------------------|------|
| SYMBOLS | PARAMETERS AND CONDITIONS | UNITS | MIN | TYP | MAX |
| T _{SET} | Laser Set Temperature | Fixed Wavelength | °C | 20 | 35 |
| | | 4 channel tuneable | °C | 10 | 45 |
| | | 8 channel tuneable | °C | 5 | 55 |
| V _F | Forward Voltage, P _f = 20 mW | V | 0.9 | 1.2 | 2.5 |
| I _{TH} | Threshold Current | mA | | 20 | 40 |
| I _{OP} | Operation Current, P _f = 20 mW | mA | | 120 | 167 |
| P _f | Optical Output Power from Fiber, I _F = 167 mA, T _{LD} = T _{SET} | mW | 20 | | |
| P _{TH} | Threshold Output Power from Fiber, I _F = I _{TH} | μW | | | 100 |
| λ _p | Peak Emission Wavelength, P _f = 20 mW, CW, T _{LD} = T _{SET} | nm | 1530 | ITU-T ¹ | 1609 |
| | Wavelength Stability, T _{LD} = T _{SET} , applicable to wavelength monitor, E.O.L. | pm | -20 | | +20 |
| Δν | Spectral Line Width, P _f = 20 mW, CW, 3 dB down | MHz | | 1 | 5 |
| SMSR | Side mode Suppression Ratio, P _f = 20 mW, CW | dB | 35 | 45 | |
| RIN | Relative Intensity Noise, P _f = 20 mW, 20 MHz to 3 GHz | dB/Hz | | | -150 |
| ext | Polarization Extinction Ratio ² , P _f = 20 mW, CW | dB | 20 | | |
| ISOL | Isolation | dB | 30 | | |

Notes:

1. Available for DWDM wavelengths based on ITU-T recommended grid. Please refer to "tables A, B, and C".
2. Polarization state of LD is aligned parallel to the slow axis.

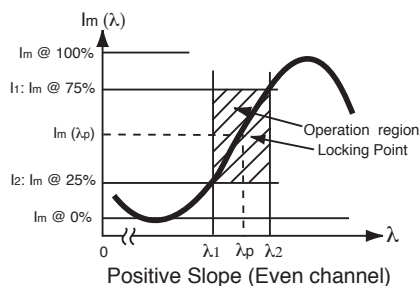
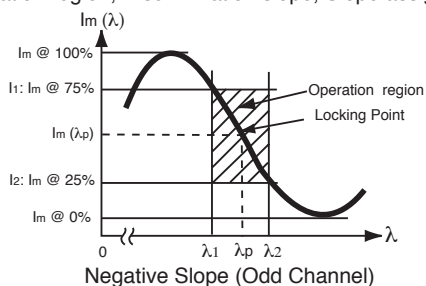
NX8570 SERIES

ELECTRO-OPTICAL CHARACTERISTICS (Applicable to Monitor PD: $T_{LD} = T_{set}$, $T_C = -5$ to $+70^\circ\text{C}$)

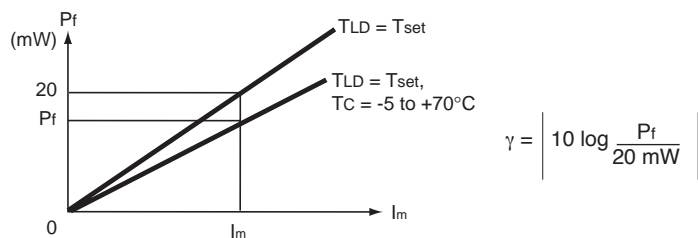
| PART NUMBER | | | NX8570 Series | | |
|---------------------------|--|-------------------------|---------------|-----|-----|
| SYMBOLS | PARAMETERS AND CONDITIONS | UNITS | MIN | TYP | MAX |
| $I_m(P_f)$ | Monitor Current (P_f Monitor), $P_f = 20$ mW, $V_R = 5$ V | μA | 30 | | 300 |
| $I_m(\lambda_p)$ | Monitor Current (λ_p Monitor), $P_f = 20$ mW, $V_R = 5$ V, Peak value | μA | 15 | | 150 |
| $I_m(\lambda)$ | Operation region ¹ | % | 25 | | 75 |
| $ \lambda_1 - \lambda_2 $ | | pm | 90 | | |
| $\eta\lambda$ | Discrimination slope ¹ | $\mu\text{A}/\text{pm}$ | 0.05 | | |
| I_D | Dark Current, $V_R = 5$ V | nA | | 2 | 10 |
| γ^2 | Tracking Error, $I_m = \text{const.}$ | dB | | | 0.5 |

Notes:

1. Operation region, Discrimination slope, Slope assignment.



2. Tracking error: γ



ELECTRO-OPTICAL CHARACTERISTICS (Applicable to Thermistor and TEC: $T_{LD} = T_{set}$, $T_C = -5$ to $+70^\circ\text{C}$)

| PART NUMBER | | | NX8570 Series | | |
|-------------|---|------------|---------------|------|------|
| SYMBOLS | PARAMETERS AND CONDITIONS | UNITS | MIN | TYP | MAX |
| R | Thermistor Resistance, $T_{LD} = 25^\circ\text{C}$ | k Ω | 9.5 | 10.0 | 10.5 |
| B | B Constant, $T_{LD} = 25^\circ\text{C}$ | K | 3350 | 3450 | 3550 |
| I_C | Cooler Current, $\Delta T = 70 - T_{SET}$, $P_f = 20$ mW | A | | | 1.5 |
| V_C | Cooler Voltage, $\Delta T = 70 - T_{SET}$, $P_f = 20$ mW | V | | | 3.0 |

ABSOLUTE MAXIMUM RATINGS¹

($T_A = 25^\circ\text{C}$, unless otherwise specified)

| SYMBOLS | PARAMETERS | UNITS | RATINGS |
|-----------|-----------------------------------|------------------|------------|
| I_F | Forward Current of LD | mA | 300 |
| V_R | Reverse Voltage of LD | V | 2.0 |
| I_F | Forward Current of PD | mA | 10 |
| V_R | Reverse Voltage of PD | V | 20 |
| T_C | Operating Case Temperature | $^\circ\text{C}$ | -20 to +70 |
| T_{STG} | Storage Temperature | $^\circ\text{C}$ | -40 to +85 |
| T_{SLD} | Lead Soldering Temperature (10 s) | $^\circ\text{C}$ | 260 |

Note:

1. Operation in excess of any one of these parameters may result in permanent damage.

ORDERING INFORMATION

| Part Number | Wavelength | Available Connector |
|--------------------|--------------------------------------|----------------------|
| NX8570SCxxx-BA | Fixed (Refer to table A) | With FC-PC Connector |
| NX8570SCxxx-CA *1 | | With SC-PC Connector |
| NX8570SCxxxD-BA | 4 channel tunable (Refer to table B) | With FC-PC Connector |
| NX8570SCxxxD-CA *1 | | With SC-PC Connector |
| NX8570SCxxxQ-BA | 8 channel tunable (Refer to table C) | With FC-PC Connector |

Note:

1. SC Connector: option

Table A: Part number for fixed wavelength product

| Part Number | Channel | ITU-T Wavelength | Frequency | Monitor Slope |
|------------------------------------|---------|------------------|-----------|---------------|
| With FC-PC Connector (Standard) | | (nm) | (THz) | |
| NX8570SC303-BA | 1 | 1530.334 | 195.90 | Negative |
| NX8570SC307-BA | 2 | 1530.725 | 195.85 | Positive |
| NX8570SC311-BA | 3 | 1531.116 | 195.80 | Negative |
| NX8570SC315-BA | 4 | 1531.507 | 195.75 | Positive |
| NX8570SC318-BA | 5 | 1531.898 | 195.70 | Negative |
| NX8570SC322-BA | 6 | 1532.290 | 195.65 | Positive |
| NX8570SC326-BA | 7 | 1532.681 | 195.60 | Negative |
| NX8570SC330-BA | 8 | 1533.073 | 195.55 | Positive |
| NX8570SC334-BA | 9 | 1533.465 | 195.50 | Negative |
| NX8570SC338-BA | 10 | 1533.858 | 195.45 | Positive |
| NX8570SC342-BA | 11 | 1534.250 | 195.40 | Negative |
| NX8570SC346-BA | 12 | 1534.643 | 195.35 | Positive |
| NX8570SC350-BA | 13 | 1535.036 | 195.30 | Negative |
| NX8570SC354-BA | 14 | 1535.429 | 195.25 | Positive |
| NX8570SC358-BA | 15 | 1535.822 | 195.20 | Negative |
| NX8570SC362-BA | 16 | 1536.216 | 195.15 | Positive |
| NX8570SC366-BA | 17 | 1536.609 | 195.10 | Negative |
| NX8570SC370-BA | 18 | 1537.003 | 195.05 | Positive |
| NX8570SC373-BA | 19 | 1537.397 | 195.00 | Negative |
| NX8570SC377-BA | 20 | 1537.792 | 194.95 | Positive |
| NX8570SC381-BA | 21 | 1538.186 | 194.90 | Negative |
| NX8570SC385-BA | 22 | 1538.581 | 194.85 | Positive |
| NX8570SC389-BA | 23 | 1538.976 | 194.80 | Negative |
| NX8570SC393-BA | 24 | 1539.371 | 194.75 | Positive |
| NX8570SC397-BA | 25 | 1539.766 | 194.70 | Negative |
| NX8570SC401-BA | 26 | 1540.162 | 194.65 | Positive |
| NX8570SC405-BA | 27 | 1540.557 | 194.60 | Negative |
| NX8570SC409-BA | 28 | 1540.953 | 194.55 | Positive |
| NX8570SC413-BA | 29 | 1541.349 | 194.50 | Negative |
| NX8570SC417-BA | 30 | 1541.746 | 194.45 | Positive |
| NX8570SC421-BA | 31 | 1542.142 | 194.40 | Negative |
| NX8570SC425-BA | 32 | 1542.539 | 194.35 | Positive |
| NX8570SC429-BA | 33 | 1542.936 | 194.30 | Negative |
| NX8570SC433-BA | 34 | 1543.333 | 194.25 | Positive |
| NX8570SC437-BA | 35 | 1543.730 | 194.20 | Negative |

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Table A: Part number for fixed wavelength product (con't)

| Part Number | Channel | ITU-T Wavelength (nm) | Frequency (THz) | Monitor Slope |
|------------------------------------|---------|--------------------------|--------------------|---------------|
| With FC-PC Connector (Standard) | | | | |
| NX8570SC445-BA | 37 | 1544.526 | 194.10 | Negative |
| NX8570SC449-BA | 38 | 1544.924 | 194.05 | Positive |
| NX8570SC453-BA | 39 | 1545.322 | 194.00 | Negative |
| NX8570SC457-BA | 40 | 1545.720 | 193.95 | Positive |
| NX8570SC461-BA | 41 | 1546.119 | 193.90 | Negative |
| NX8570SC465-BA | 42 | 1546.518 | 193.85 | Positive |
| NX8570SC469-BA | 43 | 1546.917 | 193.80 | Negative |
| NX8570SC473-BA | 44 | 1547.316 | 193.75 | Positive |
| NX8570SC477-BA | 45 | 1547.715 | 193.70 | Negative |
| NX8570SC481-BA | 46 | 1548.115 | 193.65 | Positive |
| NX8570SC485-BA | 47 | 1548.515 | 193.60 | Negative |
| NX8570SC489-BA | 48 | 1548.915 | 193.55 | Positive |
| NX8570SC493-BA | 49 | 1549.315 | 193.50 | Negative |
| NX8570SC497-BA | 50 | 1549.715 | 193.45 | Positive |
| NX8570SC501-BA | 51 | 1550.116 | 193.40 | Negative |
| NX8570SC505-BA | 52 | 1550.517 | 193.35 | Positive |
| NX8570SC509-BA | 53 | 1550.918 | 193.30 | Negative |
| NX8570SC513-BA | 54 | 1551.319 | 193.25 | Positive |
| NX8570SC517-BA | 55 | 1551.721 | 193.20 | Negative |
| NX8570SC521-BA | 56 | 1552.122 | 193.15 | Positive |
| NX8570SC525-BA | 57 | 1552.524 | 193.10 | Negative |
| NX8570SC529-BA | 58 | 1552.926 | 193.05 | Positive |
| NX8570SC533-BA | 59 | 1553.329 | 193.00 | Negative |
| NX8570SC537-BA | 60 | 1553.731 | 192.95 | Positive |
| NX8570SC541-BA | 61 | 1554.134 | 192.90 | Negative |
| NX8570SC545-BA | 62 | 1554.537 | 192.85 | Positive |
| NX8570SC549-BA | 63 | 1554.940 | 192.80 | Negative |
| NX8570SC553-BA | 64 | 1555.343 | 192.75 | Positive |
| NX8570SC557-BA | 65 | 1555.747 | 192.70 | Negative |
| NX8570SC561-BA | 66 | 1556.151 | 192.65 | Positive |
| NX8570SC565-BA | 67 | 1556.555 | 192.60 | Negative |
| NX8570SC569-BA | 68 | 1556.959 | 192.55 | Positive |
| NX8570SC573-BA | 69 | 1557.363 | 192.50 | Negative |
| NX8570SC577-BA | 70 | 1557.768 | 192.45 | Positive |
| NX8570SC581-BA | 71 | 1558.173 | 192.40 | Negative |
| NX8570SC585-BA | 72 | 1558.578 | 192.35 | Positive |
| NX8570SC589-BA | 73 | 1558.983 | 192.30 | Negative |
| NX8570SC593-BA | 74 | 1559.389 | 192.25 | Positive |
| NX8570SC597-BA | 75 | 1559.794 | 192.20 | Negative |
| NX8570SC602-BA | 76 | 1560.200 | 192.15 | Positive |
| NX8570SC606-BA | 77 | 1560.606 | 192.10 | Negative |
| NX8570SC610-BA | 78 | 1561.013 | 192.05 | Positive |
| NX8570SC614-BA | 79 | 1561.419 | 192.00 | Negative |
| NX8570SC618-BA | 80 | 1561.826 | 191.95 | Positive |
| NX8570SC622-BA | 81 | 1562.233 | 191.90 | Negative |
| NX8570SC626-BA | 82 | 1562.640 | 191.85 | Positive |
| NX8570SC630-BA | 83 | 1563.047 | 191.80 | Negative |
| NX8570SC634-BA | 84 | 1563.455 | 191.75 | Positive |
| NX8570SC638-BA | 85 | 1563.863 | 191.70 | Negative |

Table A: Part number for fixed wavelength product (con't)

| Part Number With FC-PC Connector (Standard) | Channel | ITU-T Wavelength (nm) | Frequency (THz) | Monitor Slope |
|---|---------|--------------------------|--------------------|---------------|
| NX8570SC642-BA | 86 | 1564.271 | 191.65 | Positive |
| NX8570SC646-BA | 87 | 1564.679 | 191.60 | Negative |
| NX8570SC650-BA | 88 | 1565.087 | 191.55 | Positive |

Table B: Part number for 4 channel tunable product

| Part Number | ITU-T Wavelength (nm) | Frequency (THz) | Monitor slope |
|-----------------|--------------------------|--------------------|---------------|
| NX8570SC315D-BA | 1530.334 | 195.90 | Negative |
| | 1530.725 | 195.85 | Positive |
| | 1531.116 | 195.80 | Negative |
| | 1531.507 | 195.75 | Positive |
| NX8570SC330D-BA | 1531.898 | 195.70 | Negative |
| | 1532.290 | 195.65 | Positive |
| | 1532.681 | 195.60 | Negative |
| | 1533.073 | 195.55 | Positive |
| NX8570SC346D-BA | 1533.465 | 195.50 | Negative |
| | 1533.858 | 195.45 | Positive |
| | 1534.250 | 195.40 | Negative |
| | 1534.643 | 195.35 | Positive |
| NX8570SC362D-BA | 1535.036 | 195.30 | Negative |
| | 1535.429 | 195.25 | Positive |
| | 1535.822 | 195.20 | Negative |
| | 1536.216 | 195.15 | Positive |
| NX8570SC377D-BA | 1536.609 | 195.10 | Negative |
| | 1537.003 | 195.05 | Positive |
| | 1537.397 | 195.00 | Negative |
| | 1537.792 | 194.95 | Positive |
| NX8570SC393D-BA | 1538.186 | 194.90 | Negative |
| | 1538.581 | 194.85 | Positive |
| | 1538.976 | 194.80 | Negative |
| | 1539.371 | 194.75 | Positive |
| NX8570SC409D-BA | 1539.766 | 194.70 | Negative |
| | 1540.162 | 194.65 | Positive |
| | 1540.557 | 194.60 | Negative |
| | 1540.953 | 194.55 | Positive |
| NX8570SC425D-BA | 1541.349 | 194.50 | Negative |
| | 1541.746 | 194.45 | Positive |
| | 1542.142 | 194.40 | Negative |
| | 1542.539 | 194.35 | Positive |
| NX8570SC441D-BA | 1542.936 | 194.30 | Negative |
| | 1543.333 | 194.25 | Positive |
| | 1543.730 | 194.20 | Negative |
| | 1544.128 | 194.15 | Positive |
| NX8570SC457D-BA | 1544.526 | 194.10 | Negative |
| | 1544.924 | 194.05 | Positive |
| | 1545.322 | 194.00 | Negative |
| | 1545.720 | 193.95 | Positive |

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Table B: Part number for 4 channel tunable product (con't)

| Part Number | ITU-T Wavelength (nm) | Frequency (THz) | Monitor slope |
|-----------------|-----------------------|-----------------|---------------|
| NX8570SC473D-BA | 1546.119 | 193.90 | Negative |
| | 1546.518 | 193.85 | Positive |
| | 1546.917 | 193.80 | Negative |
| | 1547.316 | 195.75 | Positive |
| NX8570SC489D-BA | 1547.715 | 193.70 | Negative |
| | 1548.115 | 193.65 | Positive |
| | 1548.515 | 193.60 | Negative |
| | 1548.915 | 193.55 | Positive |
| NX8570SC505D-BA | 1549.315 | 193.50 | Negative |
| | 1549.715 | 193.45 | Positive |
| | 1550.116 | 193.40 | Negative |
| | 1550.517 | 193.35 | Positive |
| NX8570SC521D-BA | 1550.918 | 193.30 | Negative |
| | 1551.319 | 193.25 | Positive |
| | 1551.721 | 193.20 | Negative |
| | 1552.122 | 193.15 | Positive |
| NX8570SC537D-BA | 1552.524 | 193.10 | Negative |
| | 1552.926 | 193.05 | Positive |
| | 1553.329 | 193.00 | Negative |
| | 1553.731 | 192.95 | Positive |
| NX8570SC553D-BA | 1554.134 | 192.90 | Negative |
| | 1554.537 | 192.85 | Positive |
| | 1554.940 | 192.80 | Negative |
| | 1555.343 | 192.75 | Positive |
| NX8570SC569D-BA | 1555.747 | 192.70 | Negative |
| | 1556.151 | 192.65 | Positive |
| | 1556.555 | 192.60 | Negative |
| | 1556.959 | 192.55 | Positive |
| NX8570SC585D-BA | 1557.363 | 192.50 | Negative |
| | 1557.768 | 192.45 | Positive |
| | 1558.173 | 192.40 | Negative |
| | 1558.578 | 192.35 | Positive |
| NX8570SC602D-BA | 1558.983 | 192.30 | Negative |
| | 1559.389 | 192.25 | Positive |
| | 1559.794 | 192.20 | Negative |
| | 1560.200 | 192.15 | Positive |
| NX8570SC618D-BA | 1560.606 | 192.10 | Negative |
| | 1561.013 | 192.05 | Positive |
| | 1561.419 | 192.00 | Negative |
| | 1561.826 | 191.95 | Positive |
| NX8570SC634D-BA | 1562.233 | 191.90 | Negative |
| | 1562.640 | 191.85 | Positive |
| | 1563.047 | 191.80 | Negative |
| | 1563.455 | 191.75 | Positive |
| NX8570SC650D-BA | 1563.863 | 191.70 | Negative |
| | 1564.271 | 191.65 | Positive |
| | 1564.679 | 191.60 | Negative |

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Table B: Part number for 4 channel tunable product (con't)

| Part Number | ITU-T Wavelength ^{*1} (nm) | Frequency (THz) | Monitor Slope |
|-----------------|--|--------------------|---------------|
| NX8570SC667D-BA | 1565.49 | 191.50 | Negative |
| | 1565.90 | 191.45 | Positive |
| | 1566.31 | 191.40 | Negative |
| | 1566.72 | 191.35 | Positive |
| NX8570SC683D-BA | 1567.13 | 191.30 | Negative |
| | 1567.54 | 191.25 | Positive |
| | 1567.95 | 191.20 | Negative |
| | 1568.36 | 191.15 | Positive |
| NX8570SC700D-BA | 1568.77 | 191.10 | Negative |
| | 1569.18 | 191.05 | Positive |
| | 1569.59 | 191.00 | Negative |
| | 1570.00 | 190.95 | Positive |
| NX8570SC716D-BA | 1570.41 | 190.90 | Negative |
| | 1570.82 | 190.85 | Positive |
| | 1571.23 | 190.80 | Negative |
| | 1571.65 | 190.75 | Positive |
| NX8570SC733D-BA | 1572.06 | 190.70 | Negative |
| | 1572.47 | 190.65 | Positive |
| | 1572.88 | 190.60 | Negative |
| | 1573.30 | 190.55 | Positive |
| NX8570SC749D-BA | 1573.71 | 190.50 | Negative |
| | 1574.12 | 190.45 | Positive |
| | 1574.54 | 190.40 | Negative |
| | 1574.95 | 190.35 | Positive |
| NX8570SC766D-BA | 1575.36 | 190.30 | Negative |
| | 1575.78 | 190.25 | Positive |
| | 1576.19 | 190.20 | Negative |
| | 1576.61 | 190.15 | Positive |
| NX8570SC782D-BA | 1577.02 | 190.10 | Negative |
| | 1577.44 | 190.05 | Positive |
| | 1577.85 | 190.00 | Negative |
| | 1578.27 | 189.95 | Positive |
| NX8570SC799D-BA | 1578.68 | 189.90 | Negative |
| | 1579.10 | 189.85 | Positive |
| | 1579.51 | 189.80 | Negative |
| | 1579.93 | 189.75 | Positive |
| NX8570SC816D-BA | 1580.35 | 189.70 | Negative |
| | 1580.76 | 189.65 | Positive |
| | 1581.18 | 189.60 | Negative |
| | 1581.60 | 189.55 | Positive |
| NX8570SC832D-BA | 1582.01 | 189.50 | Negative |
| | 1582.43 | 189.45 | Positive |
| | 1582.85 | 189.40 | Negative |
| | 1583.27 | 189.35 | Positive |
| NX8570SC849D-BA | 1583.69 | 189.30 | Negative |
| | 1584.10 | 189.25 | Positive |
| | 1584.52 | 189.20 | Negative |
| | 1584.94 | 189.15 | Positive |
| NX8570SC866D-BA | 1585.36 | 189.10 | Negative |
| | 1585.78 | 189.05 | Positive |
| | 1586.20 | 189.00 | Negative |
| | 1586.62 | 188.95 | Positive |
| NX8570SC883D-BA | 1587.04 | 188.90 | Negative |
| | 1587.46 | 188.85 | Positive |
| | 1587.88 | 188.80 | Negative |
| | 1588.30 | 188.75 | Positive |

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Table B: Part number for 4 channel tunable product (con't)

| Part Number | ITU-T Wavelength **1 (nm) | Frequency (THz) | Monitor Slope |
|------------------|------------------------------|--------------------|---------------|
| NX8570SC899D-BA | 1588.72 | 188.70 | Negative |
| | 1589.14 | 188.65 | Positive |
| | 1589.56 | 188.60 | Negative |
| | 1589.98 | 188.55 | Positive |
| NX8570SC916D-BA | 1590.41 | 188.50 | Negative |
| | 1590.83 | 188.45 | Positive |
| | 1591.25 | 188.40 | Negative |
| | 1591.67 | 188.35 | Positive |
| NX8570SC933D-BA | 1592.10 | 188.30 | Negative |
| | 1592.52 | 188.25 | Positive |
| | 1592.94 | 188.20 | Negative |
| | 1593.36 | 188.15 | Positive |
| NX8570SC950D-BA | 1593.79 | 188.10 | Negative |
| | 1594.21 | 188.05 | Positive |
| | 1594.64 | 188.00 | Negative |
| | 1595.06 | 187.95 | Positive |
| NX8570SC967D-BA | 1595.48 | 187.90 | Negative |
| | 1595.91 | 187.85 | Positive |
| | 1596.33 | 187.80 | Negative |
| | 1596.76 | 187.75 | Positive |
| NX8570SC984D-BA | 1597.18 | 187.70 | Negative |
| | 1597.61 | 187.65 | Positive |
| | 1598.04 | 187.60 | Negative |
| | 1598.46 | 187.55 | Positive |
| NX8570SC6001D-BA | 1598.89 | 187.50 | Negative |
| | 1599.32 | 187.45 | Positive |
| | 1599.74 | 187.40 | Negative |
| | 1600.17 | 187.35 | Positive |
| NX8570SC6018D-BA | 1600.60 | 187.30 | Negative |
| | 1601.02 | 187.25 | Positive |
| | 1601.45 | 187.20 | Negative |
| | 1601.88 | 187.15 | Positive |
| NX8570SC6035D-BA | 1602.31 | 187.10 | Negative |
| | 1602.74 | 187.05 | Positive |
| | 1603.16 | 187.00 | Negative |
| | 1603.59 | 186.95 | Positive |
| NX8570SC6053D-BA | 1604.02 | 186.90 | Negative |
| | 1604.45 | 186.85 | Positive |
| | 1604.88 | 186.80 | Negative |
| | 1605.31 | 186.75 | Positive |
| NX8570SC6070D-BA | 1605.74 | 186.70 | Negative |
| | 1606.17 | 186.65 | Positive |
| | 1606.60 | 186.60 | Negative |
| | 1607.03 | 186.55 | Positive |
| NX8570SC6087D-BA | 1607.46 | 186.50 | Negative |
| | 1607.89 | 186.45 | Positive |
| | 1608.32 | 186.40 | Negative |
| | 1608.76 | 186.35 | Positive |

Table C: Part number for 8 channel tunable product (TLD = Tset)

| Part Number | ITU-T Wavelength (nm) | Frequency (THz) | Monitor Slope |
|------------------|-----------------------|-----------------|---------------|
| NX8570SC330Q-BA | 1530.33 | 195.90 | Negative |
| | 1530.72 | 195.85 | Positive |
| | 1531.11 | 195.80 | Negative |
| | 1531.50 | 195.75 | Negative |
| | 1531.89 | 195.70 | Negative |
| | 1532.29 | 195.65 | Positive |
| | 1532.68 | 195.60 | Negative |
| | 1533.07 | 195.55 | Positive |
| NX8570SC362Q -BA | 1533.46 | 195.50 | Negative |
| | 1533.85 | 195.45 | Positive |
| | 1534.25 | 195.40 | Negative |
| | 1534.64 | 195.35 | Positive |
| | 1535.03 | 195.30 | Negative |
| | 1535.42 | 195.25 | Positive |
| | 1535.82 | 195.20 | Negative |
| | 1536.21 | 195.15 | Positive |
| NX8570SC393Q-BA | 1536.60 | 195.05 | Negative |
| | 1537.00 | 195.00 | Positive |
| | 1537.39 | 195.00 | Negative |
| | 1537.79 | 194.95 | Positive |
| | 1538.18 | 194.90 | Negative |
| | 1538.58 | 194.85 | Positive |
| | 1538.97 | 194.80 | Negative |
| | 1539.37 | 194.75 | Positive |
| NX8570425Q-BA | 1539.76 | 194.70 | Negative |
| | 1540.16 | 194.65 | Positive |
| | 1540.55 | 194.60 | Negative |
| | 1540.95 | 194.55 | Positive |
| | 1541.34 | 194.50 | Negative |
| | 1541.74 | 194.45 | Positive |
| | 1542.14 | 194.40 | Negative |
| | 1542.53 | 194.35 | Positive |
| NX8570457Q-BA | 1542.93 | 194.30 | Negative |
| | 1543.33 | 194.25 | Positive |
| | 1543.73 | 194.20 | Negative |
| | 1544.12 | 194.15 | Positive |
| | 1544.52 | 194.10 | Negative |
| | 1544.92 | 194.05 | Positive |
| | 1544.32 | 194.00 | Negative |
| | 1545.72 | 193.95 | Positive |
| NX8570489Q-BA | 1546.11 | 193.90 | Negative |
| | 1546.51 | 193.85 | Positive |
| | 1546.91 | 193.80 | Negative |
| | 1547.31 | 193.75 | Positive |
| | 1547.71 | 193.70 | Negative |
| | 1548.11 | 193.65 | Positive |
| | 1548.51 | 193.60 | Negative |
| | 1548.91 | 193.55 | Positive |
| NX8570521Q-BA | 1549.31 | 193.50 | Negative |
| | 1549.71 | 193.45 | Positive |
| | 1550.11 | 193.40 | Negative |
| | 1550.51 | 193.35 | Positive |
| | 1550.91 | 193.30 | Negative |
| | 1551.31 | 193.25 | Positive |
| | 1551.72 | 193.20 | Negative |
| | 1552.12 | 193.15 | Positive |

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Table C: Part number for 8 channel tunable product (TLD = Tset) (cont.)

| Part Number | ITU-T Wavelength (nm) | Frequency (THz) | Monitor Slope |
|-----------------|-----------------------|-----------------|---------------|
| NX8570SC553Q-BA | 1552.52 | 193.10 | Negative |
| | 1552.92 | 193.05 | Positive |
| | 1553.32 | 193.00 | Negative |
| | 1553.73 | 192.95 | Positive |
| | 1554.13 | 192.90 | Negative |
| | 1554.53 | 192.85 | Positive |
| | 1554.94 | 192.80 | Negative |
| | 1555.34 | 195.75 | Positive |
| NX8570SC585Q-BA | 1555.74 | 192.70 | Negative |
| | 1556.15 | 192.65 | Positive |
| | 1556.55 | 192.60 | Negative |
| | 1556.95 | 192.55 | Positive |
| | 1557.36 | 192.50 | Negative |
| | 1557.76 | 192.45 | Positive |
| | 1558.17 | 192.40 | Negative |
| | 1558.57 | 192.35 | Positive |
| NX8570SC618Q-BA | 1558.98 | 192.30 | Negative |
| | 1559.38 | 192.25 | Positive |
| | 1559.79 | 192.20 | Negative |
| | 1560.20 | 192.15 | Positive |
| | 1560.60 | 192.10 | Negative |
| | 1561.01 | 192.05 | Positive |
| | 1561.41 | 192.00 | Negative |
| | 1561.82 | 191.95 | Positive |
| NX8570SC650Q-BA | 1562.23 | 191.90 | Negative |
| | 1562.64 | 191.85 | Positive |
| | 1563.04 | 191.80 | Negative |
| | 1563.45 | 191.75 | Positive |
| | 1563.86 | 191.70 | Negative |
| | 1564.27 | 191.65 | Positive |
| | 1564.67 | 191.60 | Negative |
| | 1565.08 | 191.55 | Positive |
| NX8570SC683Q-BA | 1565.49 | 191.50 | Negative |
| | 1565.90 | 191.45 | Positive |
| | 1566.31 | 191.40 | Negative |
| | 1566.72 | 191.35 | Positive |
| | 1567.13 | 191.30 | Negative |
| | 1567.54 | 191.25 | Positive |
| | 1567.95 | 191.20 | Negative |
| | 1568.36 | 191.15 | Positive |
| NX8570SC716Q-BA | 1568.77 | 191.10 | Negative |
| | 1569.18 | 191.05 | Positive |
| | 1569.59 | 191.00 | Negative |
| | 1570.00 | 190.95 | Positive |
| | 1570.41 | 190.90 | Negative |
| | 1570.82 | 190.85 | Positive |
| | 1571.23 | 190.80 | Negative |
| | 1571.65 | 190.75 | Positive |
| NX8570SC749Q-BA | 1572.06 | 190.70 | Negative |
| | 1572.47 | 190.65 | Positive |
| | 1572.88 | 190.60 | Negative |
| | 1573.30 | 190.55 | Positive |
| | 1573.71 | 190.50 | Negative |
| | 1574.12 | 190.45 | Positive |
| | 1574.54 | 190.40 | Negative |
| | 1574.95 | 190.35 | Positive |

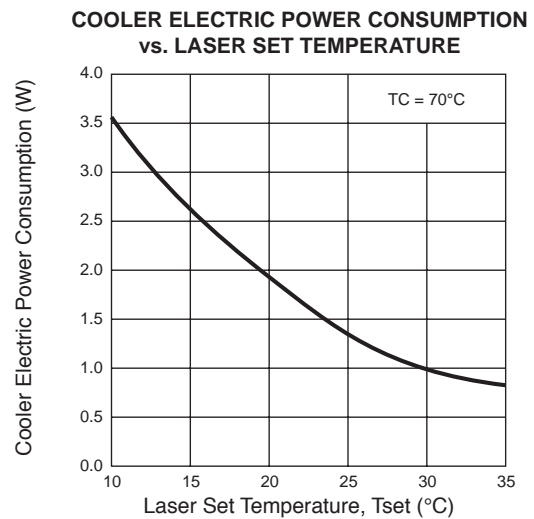
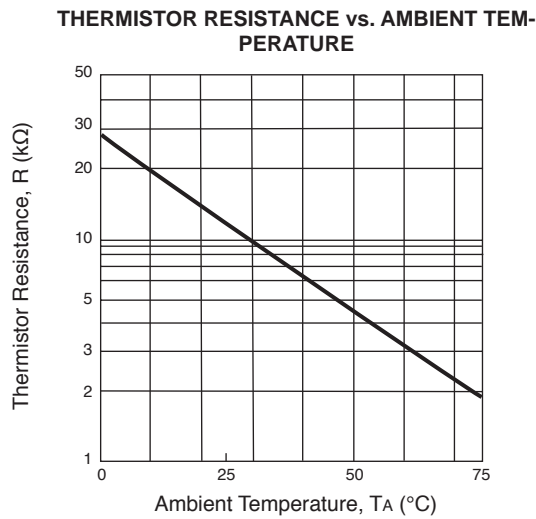
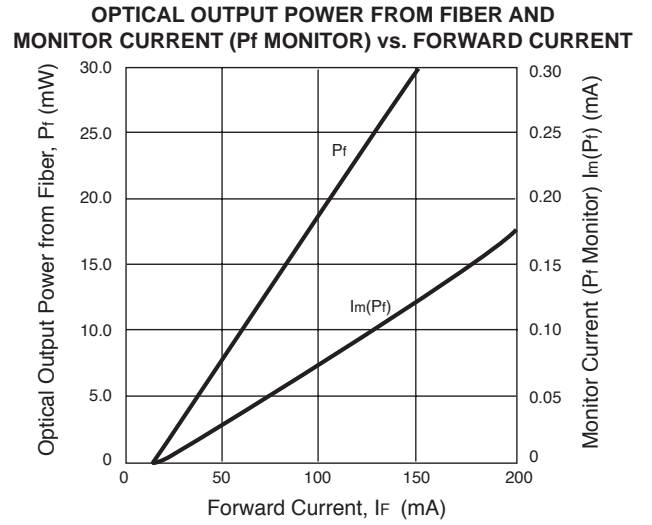
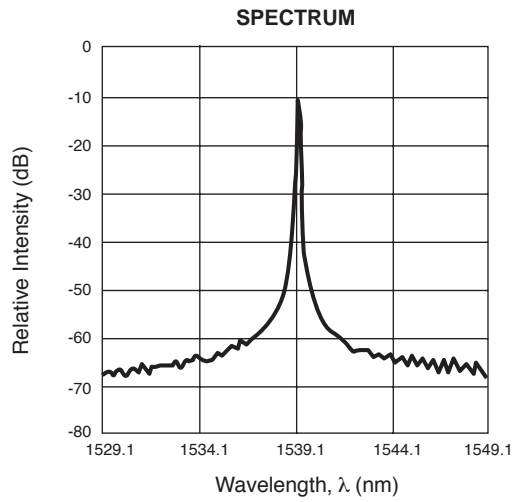
Table C: Part number for 8 channel tunable product (TLD = Tset) (cont.)

| Part Number | ITU-T Wavelength (nm) | Frequency (THz) | Monitor Slope |
|-----------------|-----------------------|-----------------|---------------|
| NX8570SC782Q-BA | 1575.36 | 190.30 | Negative |
| | 1575.78 | 190.25 | Positive |
| | 1576.19 | 190.20 | Negative |
| | 1576.61 | 190.15 | Positive |
| | 1577.02 | 190.10 | Negative |
| | 1577.44 | 190.05 | Positive |
| | 1577.85 | 190.00 | Negative |
| NX8570SC816Q-BA | 1578.27 | 189.95 | Positive |
| | 1578.68 | 189.90 | Negative |
| | 1579.10 | 189.85 | Positive |
| | 1579.51 | 189.80 | Negative |
| | 1579.93 | 189.75 | Positive |
| | 1580.35 | 189.70 | Negative |
| | 1580.76 | 189.65 | Positive |
| NX8570SC849Q-BA | 1581.18 | 189.60 | Negative |
| | 1581.60 | 189.55 | Positive |
| | 1582.01 | 189.50 | Negative |
| | 1582.43 | 189.45 | Positive |
| | 1582.85 | 189.40 | Negative |
| | 1583.27 | 189.35 | Positive |
| | 1583.69 | 189.30 | Negative |
| NX8570SC883Q-BA | 1584.10 | 189.25 | Positive |
| | 1584.52 | 189.20 | Negative |
| | 1584.94 | 189.15 | Positive |
| | 1585.36 | 189.10 | Negative |
| | 1585.78 | 189.05 | Positive |
| | 1586.20 | 189.00 | Negative |
| | 1586.62 | 188.95 | Positive |
| NX8570SC916Q-BA | 1587.04 | 188.90 | Negative |
| | 1587.46 | 188.85 | Positive |
| | 1587.88 | 188.80 | Negative |
| | 1588.30 | 188.75 | Positive |
| | 1588.72 | 188.70 | Negative |
| | 1589.14 | 188.65 | Positive |
| | 1589.56 | 188.60 | Negative |
| NX8570SC950Q-BA | 1589.98 | 188.55 | Positive |
| | 1590.41 | 188.50 | Negative |
| | 1590.83 | 188.45 | Positive |
| | 1591.25 | 188.40 | Negative |
| | 1591.67 | 188.35 | Positive |
| | 1592.10 | 188.30 | Negative |
| | 1592.52 | 188.25 | Positive |
| NX8570SC984Q-BA | 1592.94 | 188.20 | Negative |
| | 1593.36 | 188.15 | Positive |
| | 1593.79 | 188.10 | Negative |
| | 1594.21 | 188.05 | Positive |
| | 1594.64 | 188.00 | Negative |
| | 1595.06 | 187.95 | Positive |
| | 1595.48 | 187.90 | Negative |
| NX8570SC984Q-BA | 1595.91 | 187.85 | Positive |
| | 1596.33 | 187.80 | Negative |
| | 1596.76 | 187.75 | Positive |
| | 1597.18 | 187.70 | Negative |
| | 1597.61 | 187.65 | Positive |
| | 1598.04 | 187.60 | Negative |
| | 1598.46 | 187.55 | Positive |

NX8570 SERIES**Table C: Part number for 8 channel tunable product (TLD = Tset) (cont.)**

| Part Number | ITU-T Wavelength (nm) | Frequency (THz) | Monitor Slope |
|------------------|-----------------------|-----------------|---------------|
| NX8570SC6018Q-BA | 1598.89 | 187.50 | Negative |
| | 1599.32 | 187.45 | Positive |
| | 1599.74 | 187.40 | Negative |
| | 1600.17 | 187.35 | Positive |
| | 1600.60 | 187.30 | Negative |
| | 1601.02 | 187.25 | Positive |
| | 1601.45 | 187.20 | Negative |
| NX8570SC6053Q-BA | 1601.88 | 187.15 | Positive |
| | 1602.31 | 187.10 | Negative |
| | 1602.74 | 187.05 | Positive |
| | 1603.16 | 187.00 | Negative |
| | 1603.59 | 186.95 | Positive |
| | 1604.02 | 186.90 | Negative |
| | 1604.45 | 186.85 | Positive |
| NX8570SC6087Q-BA | 1604.88 | 186.80 | Negative |
| | 1605.31 | 186.75 | Positive |
| | 1605.74 | 186.70 | Negative |
| | 1606.17 | 186.65 | Positive |
| | 1606.60 | 186.60 | Negative |
| | 1607.03 | 186.55 | Positive |
| | 1607.46 | 186.50 | Negative |
| NX8570SC6087Q-BA | 1607.89 | 186.45 | Positive |
| | 1608.32 | 186.40 | Negative |
| | 1608.76 | 186.35 | Positive |

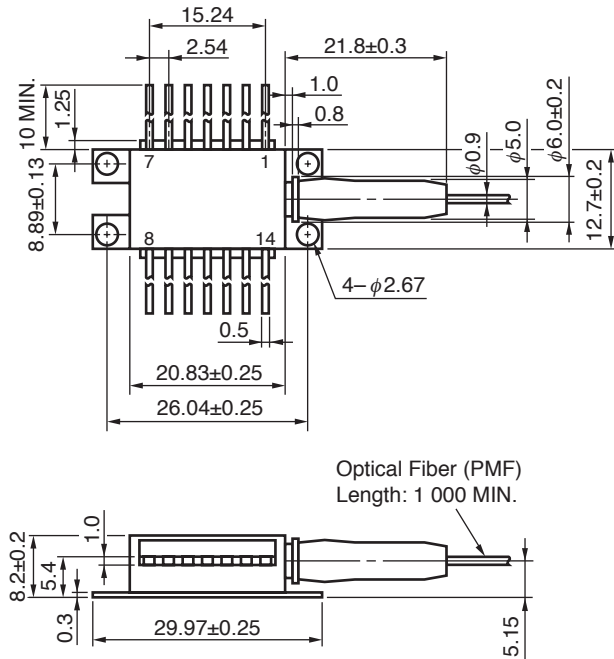
TYPICAL PERFORMANCE CURVES (T_{LD} = 25°C, unless otherwise specified)



Remark: The graphs indicate nominal characteristics.

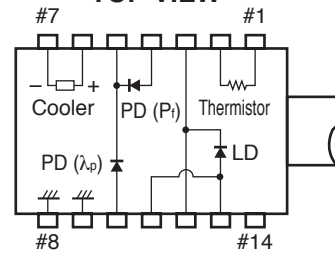
NX8570 SERIES

OUTLINE DIMENSIONS (Units in mm)



NX8570SC

TOP VIEW



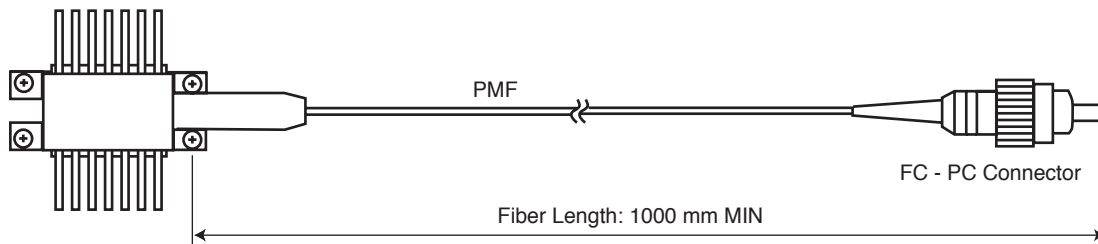
PIN CONNECTIONS

| Pin No. | Function | Pin No. | Function |
|---------|--------------------|---------|--------------------------|
| 1 | Thermistor | 8 | GND |
| 2 | Thermistor | 9 | GND |
| 3 | LD Cathode | 10 | PD (λ_p) Anode |
| 4 | PD (P_i) Anode | 11 | LD Anode |
| 5 | PD Cathode | 12 | LD Cathode |
| 6 | Cooler Anode | 13 | LD Anode |
| 7 | Cooler Cathode | 14 | NC |

OPTICAL FIBER CHARACTERISTICS

(Units in mm)

| PARAMETERS | SPECIFICATIONS |
|------------------------------|----------------|
| Outer Diameter | 0.9±0.1 |
| Minimum Fiber Bending Radius | 25 |
| Fiber Length | 1000 MIN |



Life Support Applications

These NEC products are not intended for use in life support devices, appliances, or systems where the malfunction of these products can reasonably be expected to result in personal injury. The customers of CEL using or selling these products for use in such applications do so at their own risk and agree to fully indemnify CEL for all damages resulting from such improper use or sale.

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08/25/2003

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