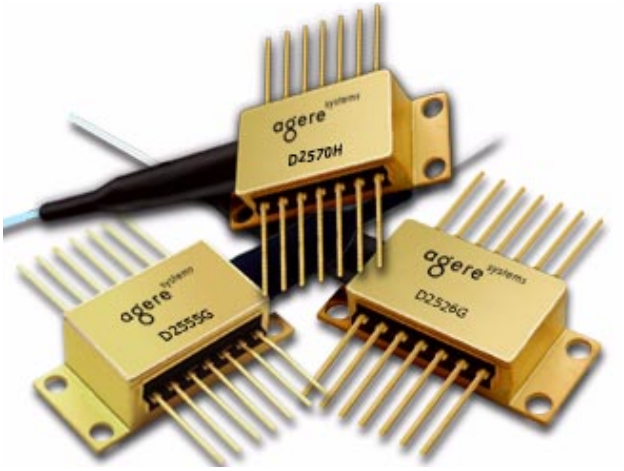
# D2570, D2526, D2555 Wavelength-Selected Direct Modulated Isolated DFB Laser Module




**The 1.5 μm D2570, D2526G, and D2555 Laser Modules are available in a 14-pin, hermetic, butterfly package.**

## Features

- ITU wavelengths available from 1528.77 nm —1610.06 nm
- SONET/SDH compatible up to OC-48/STM-16
- Temperature tunable for precise wavelength selection
- Integrated optical isolator
- High-performance, multiquantum well (MQW) distributed-feedback (DFB) laser
- Industry-standard, 14-pin butterfly package
- Characterized at 2.488 Gbits/s (NRZ)
- InGaAs, PIN photodetector back-facet monitor
- Low threshold current
- High-reliability, hermetic packaging
- Excellent long-term wavelength stability can eliminate the need for external wavelength locker
- Qualified to meet the intent of *Telcordia Technologies** 468

* *Telcordia Technologies* is a trademark of Telcordia Technologies, Inc.

## Applications

- Three direct-modulated DWDM families available to meet a number of OC-48/STM-16 applications:
  — Extended reach (100 km)
  — Very long reach (170 km)
  — Metro DWDM
  — Digital video

## Product Codes

| Product Code | Peak Power | Dispersion Performance |
|---|---|---|
| D2570H | 10 mW | 1800 ps/nm (100 km) |
| D2526G | 2 mW | 1800 ps/nm (100 km) |
| D2555G | 2 mW | 3000 ps/nm (170 km) |

## Description

The Direct Modulated Isolated DFB Laser Module contains an internally cooled, InGaAs, MQW, distributed-feedback (DFB) laser designed for 1.5 μm applications. The following three direct-modulation DWDM product families have been established to meet various OC-48/STM-16 system applications:

- D2526-type: designed to be used in OC-48/STM-16 (2.488 Gbits/s) for extended reach, dense WDM applications (1800 ps/nm). The wavelength of the laser can be temperature-tuned for precise wavelength selection by adjusting the temperature of the internal thermoelectric cooler.
- D2555-type: high-performance device designed for very low dispersion; used in fiber spans exceeding 170 km (3000 ps/nm).
- D2570-type: high-power, direct-modulated laser eliminates the need for optical amplifiers in DWDM many applications.

## Description (continued)

### Controlled Feedback

The module contains an internal optical isolator that suppresses optical feedback in laser-based, fiber-optic systems. Light reflected back to the laser is attenuated a minimum of 30 dB.

### Controlled Temperature

An integral thermoelectric cooler (TEC) provides stable thermal characteristics. The TEC allows for heating and cooling of the laser chip to maintain a temperature of 25 °C for case temperatures from –40 °C to +70 °C. The laser temperature is monitored by the internal thermistor, which can be used with external circuitry to control the laser chip temperature.

### Controlled Power

An internal, InGaAs, PIN photodiode functions as the back-facet monitor. The photodiode monitors emission from the rear facet of the laser and, when used in conjunction with control circuitry, can control optical power launched into the fiber. Normally, this configuration is used in a feedback arrangement to maintain consistent laser output power.

### Standard Package

The laser module is fabricated in a 14-pin, hermetic, metal/ceramic butterfly package that incorporates a bias tee, which separates the dc-bias path from the RF input. The RF input has a nominal 25 Ω impedance.

The laser module is equipped with *SMF-28** type fiber. The fiber has a 900 µm tight buffer jacket. Various connectors and pigtail lengths are available.

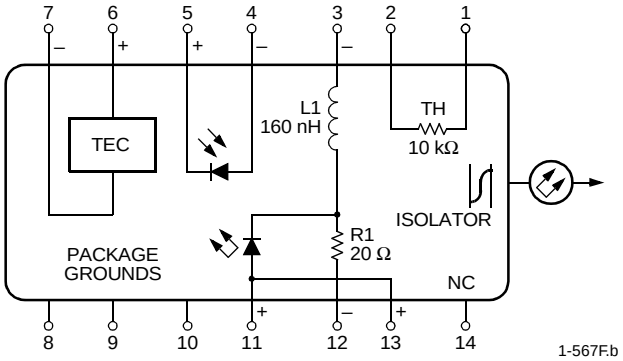
Agere Systems' optoelectronic components are being qualified to rigorous internal standards that are consistent with *Telcordia Technologies* TR-NWT-000468. All design and manufacturing operations are *ISO** 9001 certified. The module is being fully qualified for central office applications.

* *ISO* is a registered trademark of The International Organization for Standardization.
† *SMF-28* is a trademark of Corning Inc.

## Pin Information

| Pin | Name |
|---|---|
| 1 | Thermistor |
| 2 | Thermistor |
| 3 | Laser dc Bias (Cathode) (–) |
| 4 | Back-facet Monitor Anode (–) |
| 5 | Back-facet Monitor Cathode (+) |
| 6 | Thermoelectric Cooler (+)* |
| 7 | Thermoelectric Cooler (–)† |
| 8 | Case Ground |
| 9 | Case Ground |
| 10 | Case Ground |
| 11 | Laser Anode (+)† |
| 12 | RF Laser Input Cathode (–) |
| 13 | Laser Anode (+)† |
| 14 | Case Ground |

* A positive current through the thermoelectric heat pump cools the laser.
† Both leads should be grounded for optimum performance.




Top view.

**Figure 1. Circuit Schematic**

## Absolute Maximum Ratings

Stresses in excess of the absolute maximum ratings can cause permanent damage to the device. These are absolute stress ratings only. Functional operation of the device is not implied at these or any other conditions in excess of those given in the performance characteristics of the data sheet. Exposure to absolute maximum ratings for extended periods can adversely affect device reliability.

| Parameter | Symbol | Min | Max | Unit |
|---|---|---|---|---|
| Laser Reverse Voltage | $V_{RLMAX}$ | — | 2 | V |
| dc Forward Current | $I_{FLMAX}$ | — | 150 | mA |
| Operating Case Temperature Range | $T_C$ | –40 | 70 | °C |
| Storage Case Temperature Range* | $T_{stg}$ | –40 | 85 | °C |
| Photodiode Reverse Voltage | $V_{RPDMAX}$ | — | 10 | V |
| Photodiode Forward Current | $I_{FPDMAX}$ | — | 2 | mA |

* Does not apply to shipping container.

## Handling Precautions

### Power Sequencing

To avoid the possibility of damage to the laser module from power supply switching transients, follow this turn-on sequence:

1. All ground connections
2. Most negative supply
3. Most positive supply
4. All remaining connections

Reverse the order for the proper turn-off sequence.

### Electrostatic Discharge

**CAUTION: This device is susceptible to damage as a result of electrostatic discharge. Take proper precautions during both handling and testing. Follow guidelines such as JEDEC Publication No. 108-A (Dec. 1988).**

Agere Systems employs a human-body model (HBM) for ESD-susceptibility testing and protection-design evaluation. ESD voltage thresholds are dependent on the critical parameters used to define the model. A standard HBM (resistance = 1.5 k¾, capacitance = 100 pF) is widely used and, therefore, can be used for comparison purposes. The HBM ESD threshold presented here was obtained using these circuit parameters:

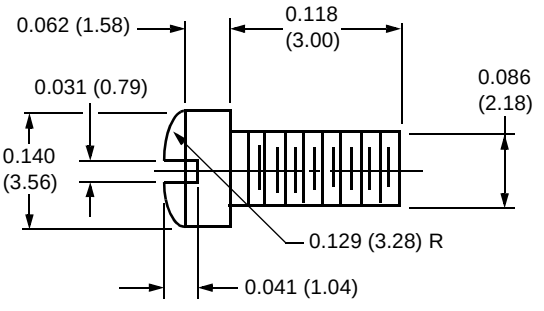
| Parameter | Value | Unit |
|---|---|---|
| Human-body Model | >400 | V |

## Mounting Instructions

The minimum fiber bend radius is 1.23 in (31.25 mm).

To avoid degradation in performance, mount the module on the board as follows:

1. Place the bottom flange of the module on a flat heat sink at least 0.5 in. x 1.180 in. (12.7 mm x 30 mm) in size. The surface finish of the heat sink should be better than 32 µin. (0.8 µm), and the surface flatness must be better than 0.001 in. (25.4 µm). Using thermal conductive grease is optional; however, thermal performance can be improved by up to 5% if conductive grease is applied between the bottom flange and the heat sink.
2. Mount four #2-56 screws with Fillister heads (M2-3 mm) at the four screw hole locations (see Outline Diagram). The Fillister head diameter must not exceed 0.140 in. (3.55 mm). Do not apply more than 1 in./lb. of torque to the screws.




Note: Dimensions are in inches and (millimeters).

**Figure 2. Fillister Head Screw**

## D2526 Characteristics

Minimum and maximum values are testing requirements. Typical values are characteristics of the device and are the result of engineering evaluations. Typical values are for information purposes only and are not part of the testing requirements.

**Table 1. Electrical Characteristics (at 25 °C laser temperature)**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Slope Efficiency | η | $L_F$ = 2 mW (CW) | 0.06 | 0.09 | 0.13 | mW/mA |
| Threshold Current | $I_{TH}$ | — | — | 14 | 30 | mA |
| Laser Forward Voltage | $V_{LF}$ | $L_F$ = 2 mW (CW) | — | 1.3 | 1.8 | V |
| Laser Submount Temperature | $T_{LASER}$ | — | 20 | — | 30 | °C |
| Monitor Reverse-bias Voltage* | $V_{RMON}$ | — | 3 | 5 | 10 | V |
| Monitor Current | $I_{RMON}$ | $P_{OL}$ = 1 mW (CW) | 0.1 | 0.3 | 1.5 | mA |
| Monitor Dark Current | $I_D$ | $I_F$ = 0, $V_{RMON}$ = 5 V | — | 0.01 | 0.1 | µA |
| Input Impedance | $Z_{IN}$ | — | — | 25 | — | Ω |
| Thermistor Current | $I_{TC}$ | — | 10 | — | 100 | µA |
| Resistance Ratio† | — | — | 9.1 | — | 9.6 | — |
| Thermistor Resistance | $R_{TH}$ | $T_L$ = 25 °C | 9.5 | — | 10.5 | kΩ |
| TEC Current | $I_{TEC}$ | $T_L$ = 25 °C, $T_C$ = 70 °C | — | 0.6 | 1.0 | A |
| TEC Voltage | $V_{TEC}$ | $T_L$ = 25 °C, $T_C$ = 70°C | — | 1.3 | 2.0 | V |
| TEC Capacity | ΔT | $T_C$ = 70 °C | — | — | 50 | °C |

* Standard operating condition is 5.0 V reverse bias.
† Ratio of thermistor resistance at 0 °C to thermistor resistance at 50 °C.

**Table 2. Optical Characteristics (at 25 °C laser temperature)**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Peak Optical Output Power | $P_{PEAK}$ | — | 2.0 | — | — | mW |
| Center Wavelength (See Table 10.) | λc | $T_L$ = 25 °C CW wavelength | 1528.77 | — | 1610.06 | nm |
| Line Width (3 dB full width) | Δλ | Modulated at 2.5 Gbits/s at rated power | — | 2 | 10 | MHz |
| Side-mode Suppression Ratio | SMSR | CW | 30 | — | — | dB |
| Optical Isolation | — | $T_C$ = 0 °C to 70 °C | 30 | — | — | dB |
| Wavelength Drift (EOL) | Δλ | Tested over 25-year lifetime | — | — | ±0.1 | nm |
| Center Wavelength Drift with Case Temperature | Δλc/ΔTc | 0 °C ≤ $T_C$ ≤ 70 °C | — | — | 1 | pm/°C |
| Wavelength Temperature Tuning Coefficient | — | — | — | 0.095 | — | nm/°C |
| Tracking Error | — | $T_C$ = –20 °C/25 °C/70 °C | — | — | 1 | dB |

**Table 3. Dispersion Performance**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Dispersion Penalty for Extended Reach | DP | 1800 ps/nm | — | — | 2.0 | dB |

## D2555 Characteristics

Minimum and maximum values are testing requirements. Typical values are characteristics of the device and are the result of engineering evaluations. Typical values are for information purposes only and are not part of the testing requirements.

**Table 4. Electrical Characteristics (at 25 °C laser temperature)**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Slope Efficiency | $\eta$ | $L_F$ = 2 mW (CW) | 0.05 | 0.08 | 0.10 | mW/mA |
| Threshold Current | $I_{TH}$ | — | — | 12 | 35 | mA |
| Laser Forward Voltage | $V_{LF}$ | $L_F$ = 2 mW (CW) | — | 1.3 | 1.8 | V |
| Laser Submount Temperature | $T_{LASER}$ | — | 20 | — | 30 | °C |
| Monitor Reverse-bias Voltage* | $V_{RMON}$ | — | 3 | 5 | 10 | V |
| Monitor Current | $I_{RMON}$ | $P_{OL}$ = 1 mW (CW) | 0.1 | 0.3 | 1.9 | mA |
| Monitor Dark Current | $I_D$ | $I_F$ = 0, $V_{RMON}$ = 5 V | — | 0.01 | 0.1 | µA |
| Input Impedance | $Z_{IN}$ | — | — | 25 | — | Ω |
| Thermistor Current | $I_{TC}$ | — | 10 | — | 100 | µA |
| Resistance Ratio† | — | — | 9.1 | — | 9.6 | — |
| Thermistor Resistance | $R_{TH}$ | $T_L$ = 25 °C | 9.5 | — | 10.5 | kΩ |
| TEC Current | $I_{TEC}$ | $T_L$ = 25 °C, $T_C$ = 70 °C | — | 0.6 | 1.0 | A |
| TEC Voltage | $V_{TEC}$ | $T_L$ = 25 °C, $T_C$ = 70°C | — | 1.3 | 2.0 | V |
| TEC Capacity | $\Delta T$ | $T_C$ = 70 °C | — | — | 50 | °C |

* Standard operating condition is 5.0 V reverse bias.
† Ratio of thermistor resistance at 0 °C to thermistor resistance at 50 °C.

**Table 5. Optical Characteristics (at 25 °C laser temperature)**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Peak Optical Output Power | $P_{PEAK}$ | — | 2.0 | — | — | mW |
| Center Wavelength (See Table 11.) | $\lambda c$ | $T_L$ = 25 °C CW wavelength | 1528.77 | — | 1563.86 | nm |
| Line Width (3 dB full width) | $\Delta\lambda$ | Modulated at 2.5 Gbits/s at rated power | — | 2 | 10 | MHz |
| Side-mode Suppression Ratio | SMSR | CW | 30 | — | — | dB |
| Optical Isolation | — | $T_C$ = 0 °C to 75 °C | 30 | — | — | dB |
| Wavelength Drift (EOL) | $\Delta\lambda$ | Tested over 25-year lifetime | — | — | ±0.1 | nm |
| Center Wavelength Drift with Case Temperature | $\Delta\lambda c/\Delta T_C$ | 0 °C ≤ $T_C$ ≤ 75 °C | — | — | 1 | pm/°C |
| Wavelength Temperature Tuning Coefficient | — | — | — | 0.095 | — | nm/°C |
| Tracking Error | — | $T_C$ = –20 °C/25 °C/70 °C | — | — | 1 | dB |

**Table 6. Dispersion Performance**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Dispersion Penalty for Extended Reach | DP | 3000 ps/nm | — | — | 2.0 | dB |

## D2570 Characteristics

Minimum and maximum values are testing requirements. Typical values are characteristics of the device and are the result of engineering evaluations. Typical values are for information purposes only and are not part of the testing requirements.

**Table 7. Electrical Characteristics (at 25 °C laser temperature)**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Slope Efficiency | $\eta$ | $L_F$ = 10 mW (CW) | 0.12 | 0.15 | 0.2 | mW/mA |
| Threshold Current | $I_{TH}$ | — | — | 14 | 25 | mA |
| Laser Forward Voltage | $V_{LF}$ | $L_F$ = 10 mW (CW) | — | 1.3 | 1.8 | V |
| Laser Submount Temperature | $T_{LASER}$ | — | 20 | — | 30 | °C |
| Monitor Reverse-bias Voltage* | $V_{RMON}$ | — | 3 | 5 | 10 | V |
| Monitor Current | $I_{RMON}$ | $P_{OL}$ = 5 mW (CW) | 0.25 | 0.7 | 1.25 | mA |
| Monitor Dark Current | $I_D$ | $I_F$ = 0, $V_{RMON}$ = 5 V | — | 0.01 | 0.1 | µA |
| Input Impedance | $Z_{IN}$ | — | — | 25 | — | Ω |
| Thermistor Current | $I_{TC}$ | — | 10 | — | 100 | µA |
| Resistance Ratio† | — | — | 9.1 | — | 9.6 | — |
| Thermistor Resistance | $R_{TH}$ | $T_L$ = 25 °C | 9.5 | — | 10.5 | kΩ |
| TEC Current | $I_{TEC}$ | $T_L$ = 25 °C, $T_C$ = 70 °C | — | 0.6 | 1.0 | A |
| TEC Voltage | $V_{TEC}$ | $T_L$ = 25 °C, $T_C$ = 70°C | — | 1.3 | 2.0 | V |
| TEC Capacity | $\Delta T$ | $T_C$ = 70 °C | — | — | 50 | °C |

* Standard operating condition is 5.0 V reverse bias.
† Ratio of thermistor resistance at 0 °C to thermistor resistance at 50 °C.

**Table 8. Optical Characteristics (at 25 °C laser temperature)**

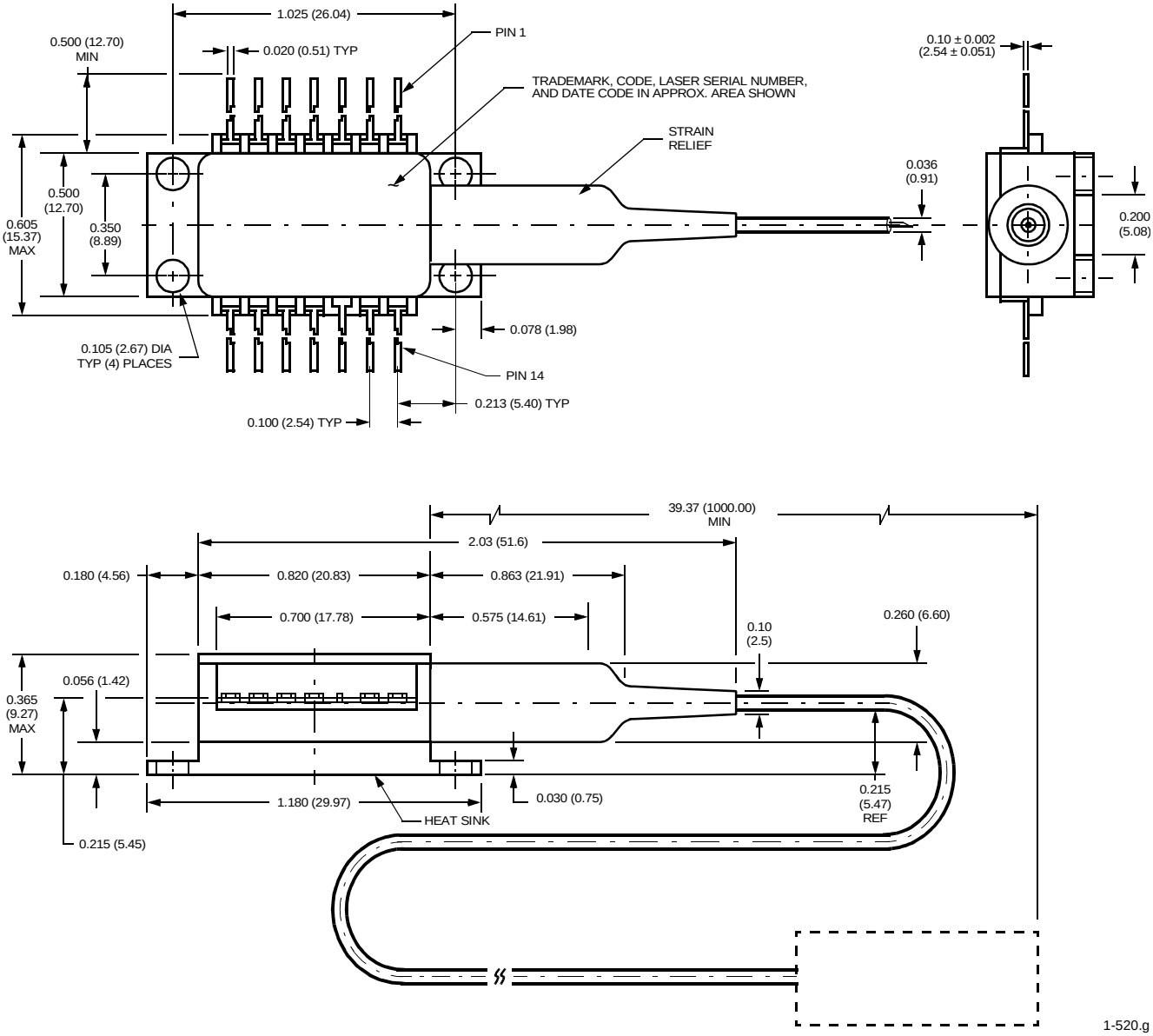
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Peak Optical Output Power | $P_{PEAK}$ | — | 10 | — | — | mW |
| Center Wavelength (See Table 12.) | $\lambda c$ | $T_L$ = 25 °C CW wavelength | 1528.77 | — | 1610.06 | nm |
| Line Width (3 dB full width) | $\Delta\lambda$ | Modulated at 2.5 Gbits/s at rated power | — | 2 | 10 | MHz |
| Side-mode Suppression Ratio | SMSR | CW | 30 | — | — | dB |
| Optical Isolation | — | $T_C$ = 0 °C to 70 °C | 30 | — | — | dB |
| Wavelength Drift (EOL) | $\Delta\lambda$ | Tested over 25-year lifetime | — | — | ±0.1 | nm |
| Center Wavelength Drift with Case Temperature | $\Delta\lambda c/\Delta T_C$ | 0 °C ≤ $T_C$ ≤ 70 °C | — | — | 1 | pm/°C |
| Wavelength Temperature Tuning Coefficient | — | — | — | 0.095 | — | nm/°C |
| Tracking Error | — | $T_C$ = –20 °C/25 °C/70 °C | — | — | 1 | dB |

**Table 9. Dispersion Performance**

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Dispersion Penalty for Extended Reach | DP | 1800 ps/nm | — | — | 2.5 | dB |

## Outline Drawings

Dimensions are in inches and (millimeters).




1-520.g

## Ordering Information

**Table 10. Ordering Information D2526G (FC-PC Connector)**

| Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode | Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode |
|---|---|---|---|---|---|---|---|
| D2526G61 | 196.1 | 1528.77 | 108221599 | D2526G19 | 191.9 | 1562.23 | 108003260 |
| D2526G60 | 196.0 | 1529.55 | 108221581 | D2526G18 | 191.8 | 1563.05 | 108221540 |
| D2526G59 | 195.9 | 1530.33 | 108221573 | D2526G17 | 191.7 | 1563.86 | 108221532 |
| D2526G58 | 195.8 | 1531.12 | 108221565 | D2526G916 | 191.6 | 1564.68 | 108512526 |
| D2526G57 | 195.7 | 1531.90 | 108221557 | D2526G915 | 191.5 | 1565.50 | 108512518 |
| D2526G56 | 195.6 | 1532.68 | 108003658 | D2526G914 | 191.4 | 1566.31 | 108479858 |
| D2526G55 | 195.5 | 1533.47 | 108003641 | D2526G913 | 191.3 | 1567.13 | 108479841 |
| D2526G54 | 195.4 | 1534.25 | 108003633 | D2526G912 | 191.2 | 1567.95 | 108479833 |
| D2526G53 | 195.3 | 1535.04 | 108003625 | D2526G911 | 191.1 | 1568.77 | 108479825 |
| D2526G52 | 195.2 | 1535.82 | 108003617 | D2526G910 | 191.0 | 1569.59 | 108479817 |
| D2526G51 | 195.1 | 1536.61 | 108003609 | D2526G909 | 190.9 | 1570.42 | 108479809 |
| D2526G50 | 195.0 | 1537.40 | 108003591 | D2526G908 | 190.8 | 1571.24 | 108480369 |
| D2526G49 | 194.9 | 1538.19 | 108003583 | D2526G907 | 190.7 | 1572.06 | 108480351 |
| D2526G48 | 194.8 | 1538.98 | 108003575 | D2526G906 | 190.6 | 1572.89 | 108480344 |
| D2526G47 | 194.7 | 1539.77 | 108003567 | D2526G905 | 190.5 | 1573.71 | 108479791 |
| D2526G46 | 194.6 | 1540.56 | 108003559 | D2526G904 | 190.4 | 1574.54 | 108479783 |
| D2526G45 | 194.5 | 1541.35 | 108003542 | D2526G903 | 190.3 | 1575.37 | 108479775 |
| D2526G44 | 194.4 | 1542.14 | 108003534 | D2526G902 | 190.2 | 1576.20 | 108479767 |
| D2526G43 | 194.3 | 1542.94 | 108003526 | D2526G901 | 190.1 | 1577.02 | 108479759 |
| D2526G42 | 194.2 | 1543.73 | 108003518 | D2526G900 | 190.0 | 1577.85 | 108479742 |
| D2526G41 | 194.1 | 1544.53 | 108003500 | D2526G899 | 189.9 | 1578.69 | 108480336 |
| D2526G40 | 194.0 | 1545.32 | 108003492 | D2526G898 | 189.8 | 1579.52 | 108479734 |
| D2526G39 | 193.9 | 1546.12 | 108003484 | D2526G897 | 189.7 | 1580.35 | 108479700 |
| D2526G38 | 193.8 | 1546.92 | 108003476 | D2526G896 | 189.6 | 1581.18 | 108479692 |
| D2526G37 | 193.7 | 1547.72 | 108003468 | D2526G895 | 189.5 | 1582.02 | 108479684 |
| D2526G36 | 193.6 | 1548.51 | 108003450 | D2526G894 | 189.4 | 1582.85 | 108479676 |
| D2526G35 | 193.5 | 1549.32 | 108003443 | D2526G893 | 189.3 | 1583.69 | 108479668 |
| D2526G34 | 193.4 | 1550.12 | 108003435 | D2526G892 | 189.2 | 1584.53 | 108479650 |
| D2526G33 | 193.3 | 1550.92 | 108003427 | D2526G891 | 189.1 | 1585.36 | 108479643 |
| D2526G32 | 193.2 | 1551.72 | 108003419 | D2526G890 | 189.0 | 1586.20 | 108479635 |
| D2526G31 | 193.1 | 1552.52 | 108003385 | D2526G889 | 188.9 | 1587.04 | 108479627 |
| D2526G30 | 193.0 | 1553.33 | 108003377 | D2526G888 | 188.8 | 1587.88 | 108479619 |
| D2526G29 | 192.9 | 1554.13 | 108003369 | D2526G887 | 188.7 | 1588.72 | 108479601 |
| D2526G28 | 192.8 | 1554.94 | 108003351 | D2526G886 | 188.6 | 1589.57 | 108479585 |
| D2526G27 | 192.7 | 1555.75 | 108003344 | D2526G885 | 188.5 | 1590.41 | 108479577 |
| D2526G26 | 192.6 | 1556.55 | 108003336 | D2526G884 | 188.4 | 1591.25 | 108479569 |
| D2526G25 | 192.5 | 1557.36 | 108003328 | D2526G883 | 188.3 | 1592.10 | 108479551 |
| D2526G24 | 192.4 | 1558.17 | 108003310 | D2526G882 | 188.2 | 1592.95 | 108479544 |
| D2526G23 | 192.3 | 1558.98 | 108003302 | D2526G881 | 188.1 | 1593.79 | 108479536 |
| D2526G22 | 192.2 | 1559.79 | 108003294 | D2526G880 | 188.0 | 1594.64 | 108479528 |
| D2526G21 | 192.1 | 1560.61 | 108003286 | D2526G879 | 187.9 | 1595.49 | 108479510 |

## Ordering Information (continued)

**Table 10. Ordering Information D2526G (FC-PC Connector)** (continued)

| Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode | Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode |
|---|---|---|---|---|---|---|---|
| D2526G20 | 192.0 | 1561.42 | 108003278 | D2526G878 | 187.8 | 1596.34 | 108479502 |
| D2526G877 | 187.7 | 1597.19 | 108479494 | D2526G869 | 186.9 | 1604.33 | 108578220 |
| D2526G876 | 187.6 | 1598.04 | 108479486 | D2526G868 | 186.8 | 1604.88 | 108578204 |
| D2526G875 | 187.5 | 1598.89 | 108479478 | D2526G867 | 186.7 | 1605.74 | 108578196 |
| D2526G874 | 187.4 | 1599.75 | 108479460 | D2526G866 | 186.6 | 1606.60 | 108578188 |
| D2526G873 | 187.3 | 1600.60 | 108479452 | D2526G865 | 186.5 | 1607.47 | 108578162 |
| D2526G872 | 187.2 | 1601.45 | 108479445 | D2526G864 | 186.4 | 1608.33 | 108578154 |
| D2526G871 | 187.1 | 1602.31 | 108479437 | D2526G863 | 186.3 | 1609.19 | 108578105 |
| D2526G870 | 187.0 | 1603.17 | 108578246 | D2526G862 | 186.2 | 1610.06 | 108578097 |

**Table 11. Ordering Information D2555G (FC-PC Connector)**

| Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode | Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode |
|---|---|---|---|---|---|---|---|
| D2555G61 | 196.1 | 1528.77 | 108309113 | D2555G38 | 193.8 | 1546.92 | 108167008 |
| D2555G60 | 196.0 | 1529.55 | 108309105 | D2555G37 | 193.7 | 1547.72 | 108166992 |
| D2555G59 | 195.9 | 1530.33 | 108309089 | D2555G36 | 193.6 | 1548.51 | 108166984 |
| D2555G58 | 195.8 | 1531.12 | 108309071 | D2555G35 | 193.5 | 1549.32 | 108166976 |
| D2555G57 | 195.7 | 1531.90 | 108309063 | D2555G34 | 193.4 | 1550.12 | 108166968 |
| D2555G56 | 195.6 | 1532.68 | 108167180 | D2555G33 | 193.3 | 1550.92 | 108166950 |
| D2555G55 | 195.5 | 1533.47 | 108167172 | D2555G32 | 193.2 | 1551.72 | 108166943 |
| D2555G54 | 195.4 | 1534.25 | 108167164 | D2555G31 | 193.1 | 1552.52 | 108166935 |
| D2555G53 | 195.3 | 1535.04 | 108167156 | D2555G30 | 193.0 | 1553.33 | 108166927 |
| D2555G52 | 195.2 | 1535.82 | 108167149 | D2555G29 | 192.9 | 1554.13 | 108166877 |
| D2555G51 | 195.1 | 1536.61 | 108167131 | D2555G28 | 192.8 | 1554.94 | 108166851 |
| D2555G50 | 195.0 | 1537.40 | 108167123 | D2555G27 | 192.7 | 1555.75 | 108166836 |
| D2555G49 | 194.9 | 1538.19 | 108167115 | D2555G26 | 192.6 | 1556.55 | 108166810 |
| D2555G48 | 194.8 | 1538.98 | 108167107 | D2555G25 | 192.5 | 1557.36 | 108166794 |
| D2555G47 | 194.7 | 1539.77 | 108167099 | D2555G24 | 192.4 | 1558.17 | 108166786 |
| D2555G46 | 194.6 | 1540.56 | 108167081 | D2555G23 | 192.3 | 1558.98 | 108166760 |
| D2555G45 | 194.5 | 1541.35 | 108167073 | D2555G22 | 192.2 | 1559.79 | 108166745 |
| D2555G44 | 194.4 | 1542.14 | 108167065 | D2555G21 | 192.1 | 1560.61 | 108166737 |
| D2555G43 | 194.3 | 1542.94 | 108167057 | D2555G20 | 192.0 | 1561.42 | 108166695 |
| D2555G42 | 194.2 | 1543.73 | 108167040 | D2555G19 | 191.9 | 1562.23 | 108166687 |
| D2555G41 | 194.1 | 1544.53 | 108167032 | D2555G18 | 191.8 | 1563.05 | 108309972 |
| D2555G40 | 194.0 | 1545.32 | 108167024 | D2555G17 | 191.7 | 1563.86 | 108309964 |
| D2555G39 | 193.9 | 1546.12 | 108167016 | | | | |

## Ordering Information (continued)

**Table 12. Ordering Information D2570H (*ST*® Ferrule)**

| Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode | Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode |
|---|---|---|---|---|---|---|---|
| D2570H61 | 196.1 | 1528.77 | 108278425 | D2570H18 | 191.8 | 1563.05 | 108277369 |
| D2570H60 | 196.0 | 1529.55 | 108278417 | D2570H17 | 191.7 | 1563.86 | 108277351 |
| D2570H59 | 195.9 | 1530.33 | 108278409 | D2570H916 | 191.6 | 1564.68 | 108512500 |
| D2570H58 | 195.8 | 1531.12 | 108278391 | D2570H915 | 191.5 | 1565.50 | 108512492 |
| D2570H57 | 195.7 | 1531.90 | 108278383 | D2570H914 | 191.4 | 1566.31 | 108488149 |
| D2570H56 | 195.6 | 1532.68 | 108277914 | D2570H913 | 191.3 | 1567.13 | 108488131 |
| D2570H55 | 195.5 | 1533.47 | 108277500 | D2570H912 | 191.2 | 1567.95 | 108488123 |
| D2570H54 | 195.4 | 1534.25 | 108277492 | D2570H911 | 191.1 | 1568.77 | 108488115 |
| D2570H53 | 195.3 | 1535.04 | 108277484 | D2570H910 | 191.0 | 1569.59 | 108488107 |
| D2570H52 | 195.2 | 1535.82 | 108277476 | D2570H909 | 190.9 | 1570.42 | 108488099 |
| D2570H51 | 195.1 | 1536.61 | 108277468 | D2570H908 | 190.8 | 1571.24 | 108488081 |
| D2570H50 | 195.0 | 1537.40 | 108277450 | D2570H907 | 190.7 | 1572.06 | 108488073 |
| D2570H49 | 194.9 | 1538.19 | 108277443 | D2570H906 | 190.6 | 1572.89 | 108488065 |
| D2570H48 | 194.8 | 1538.98 | 108277435 | D2570H905 | 190.5 | 1573.71 | 108488057 |
| D2570H47 | 194.7 | 1539.77 | 108277427 | D2570H904 | 190.4 | 1574.54 | 108488040 |
| D2570H46 | 194.6 | 1540.56 | 108277419 | D2570H903 | 190.3 | 1575.37 | 108488032 |
| D2570H45 | 194.5 | 1541.35 | 108277393 | D2570H902 | 190.2 | 1576.20 | 108488024 |
| D2570H44 | 194.4 | 1542.14 | 108177924 | D2570H901 | 190.1 | 1577.02 | 108488016 |
| D2570H43 | 194.3 | 1542.94 | 108177916 | D2570H900 | 190.0 | 1577.85 | 108488008 |
| D2570H42 | 194.2 | 1543.73 | 108177908 | D2570H899 | 189.9 | 1578.69 | 108487992 |
| D2570H41 | 194.1 | 1544.53 | 108177890 | D2570H898 | 189.8 | 1579.52 | 108487984 |
| D2570H40 | 194.0 | 1545.32 | 108177882 | D2570H897 | 189.7 | 1580.35 | 108487976 |
| D2570H39 | 193.9 | 1546.12 | 108177874 | D2570H896 | 189.6 | 1581.18 | 108487968 |
| D2570H38 | 193.8 | 1546.92 | 108177866 | D2570H895 | 189.5 | 1582.02 | 108487950 |
| D2570H37 | 193.7 | 1547.72 | 108177858 | D2570H894 | 189.4 | 1582.85 | 108487943 |
| D2570H36 | 193.6 | 1548.51 | 108177841 | D2570H893 | 189.3 | 1583.69 | 108487935 |
| D2570H35 | 193.5 | 1549.32 | 108177833 | D2570H892 | 189.2 | 1584.53 | 108487927 |
| D2570H34 | 193.4 | 1550.12 | 108177153 | D2570H891 | 189.1 | 1585.36 | 108487919 |
| D2570H33 | 193.3 | 1550.92 | 108177825 | D2570H890 | 189.0 | 1586.20 | 108487901 |
| D2570H32 | 193.2 | 1551.72 | 108177809 | D2570H889 | 188.9 | 1587.04 | 108487893 |
| D2570H31 | 193.1 | 1552.52 | 108177791 | D2570H888 | 188.8 | 1587.88 | 108487885 |
| D2570H30 | 193.0 | 1553.33 | 108177783 | D2570H887 | 188.7 | 1588.72 | 108487877 |
| D2570H29 | 192.9 | 1554.13 | 108177767 | D2570H886 | 188.6 | 1589.57 | 108487869 |
| D2570H28 | 192.8 | 1554.94 | 108177759 | D2570H885 | 188.5 | 1590.41 | 108487851 |
| D2570H27 | 192.7 | 1555.75 | 108177742 | D2570H884 | 188.4 | 1591.25 | 108487844 |
| D2570H26 | 192.6 | 1556.55 | 108177734 | D2570H883 | 188.3 | 1592.10 | 108487836 |
| D2570H25 | 192.5 | 1557.36 | 108177726 | D2570H882 | 188.2 | 1592.95 | 108487828 |
| D2570H24 | 192.4 | 1558.17 | 108177718 | D2570H881 | 188.1 | 1593.79 | 108487810 |
| D2570H23 | 192.3 | 1558.98 | 108177700 | D2570H880 | 188.0 | 1594.64 | 108487802 |
| D2570H22 | 192.2 | 1559.79 | 108177692 | D2570H879 | 187.9 | 1595.49 | 108487794 |
| D2570H21 | 192.1 | 1560.61 | 108177684 | D2570H878 | 187.8 | 1596.34 | 108487786 |
| D2570H20 | 192.0 | 1561.42 | 108277385 | D2570H877 | 187.7 | 1597.19 | 108487778 |
| D2570H19 | 191.9 | 1562.23 | 108277377 | D2570H876 | 187.6 | 1598.04 | 108487760 |

## Ordering Information (continued)

**Table 12. Ordering Information D2570H (*ST* Ferrule)** (continued)

| Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode | Device Code | ITU Freq. (THz) | Center Wavelength (nm) | Comcode |
|---|---|---|---|---|---|---|---|
| D2570H875 | 187.5 | 1598.89 | 108487752 | D2570H868 | 186.8 | 1604.88 | 108578634 |
| D2570H874 | 187.4 | 1599.75 | 108487745 | D2570H867 | 186.7 | 1605.74 | 108578618 |
| D2570H873 | 187.3 | 1600.60 | 108487737 | D2570H866 | 186.6 | 1606.60 | 108578469 |
| D2570H872 | 187.2 | 1601.45 | 108487729 | D2570H865 | 186.5 | 1607.47 | 108578428 |
| D2570H871 | 187.1 | 1602.31 | 108487711 | D2570H864 | 186.4 | 1608.33 | 108578410 |
| D2570H870 | 187.0 | 1603.17 | 108578659 | D2570H863 | 186.3 | 1609.19 | 108578402 |
| D2570H869 | 186.9 | 1604.33 | 108578642 | D2570H862 | 186.2 | 1610.06 | 108578394 |

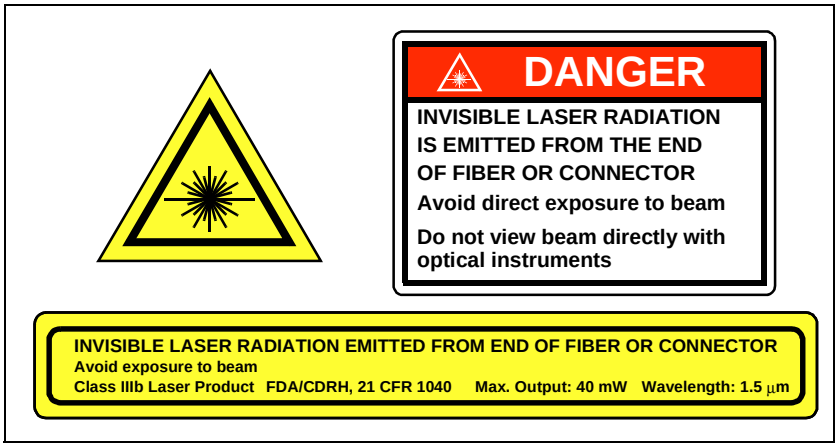
## Laser Safety Information

### Class IIIb Laser Product

FDA/CDRH Class IIIb laser product. All versions are Class IIIb laser products per CDRH, 21 CFR 1040 Laser Safety requirements. The device has been classified with the FDA under accession number 8720010.

This product complies with 21 CFR 1040.10 and 1040.11.
8.3 µm/125 µm single-mode fiber pigtail with 900 µm tight buffer jacket and connector
Wavelength = 1.5 µm
Maximum power = 40 mW
Because of size constraints, laser safety labeling (including an FDA Class IIIb label) is not affixed to the module but attached to the outside of the shipping carton.
Product is not shipped with power supply.

**Caution: Use of controls, adjustments, and procedures other than those specified herein may result in hazardous laser radiation exposure.**



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ASIA PACIFIC: Agere Systems Singapore Pte. Ltd., 77 Science Park Drive, #03-18 Cintech III, Singapore 118256
**Tel. (65) 778 8833**, FAX (65) 777 7495
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**Tel. (86) 21 50471212**, FAX (86) 21 50472266
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Technical Inquiries: OPTOELECTRONICS MARKETING: **(44) 1344 865 900** (Ascot UK)

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