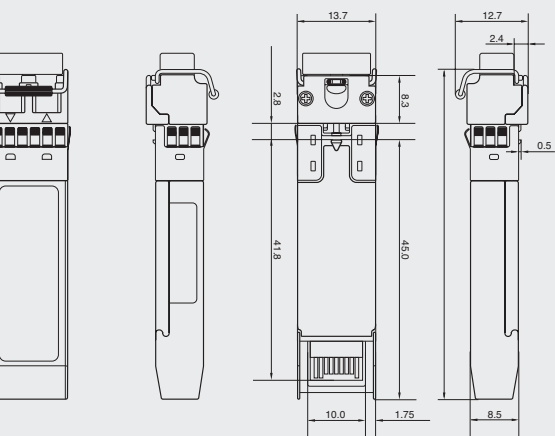




# QSFP28 100G BIDI

## Overview

Integra Optics' QSFP28 100G BiDi transceivers are designed in accordance to industry standards and are available in a variety of power budgets and data rate options. Integra QSFP28 100G BiDi transceivers are coded to be 100% OEM compatible and are more than capable of significantly growing network capacity to levels far beyond that of previous generation optical transceivers.



## Features

- ➔ Supports 100G
- ➔ Distances up to 80km
- ➔ SMF Simplex Bi-Directional LC Connector Interface
- ➔ Commercial Temperature
- ➔ Digital Diagnostics Monitoring
- ➔ QSFP28 MSA Compliant

## Applications

- ➔ 100Gbase BIDI ethernet for distances up to 80km
- ➔ Datacenter, Metro, and Regional Transport

## Product Specifications

| Integra Part Number | Wavelength (nm)   | Distance (km) | Budget (dB) | TX Min/Max (dBm) | Rx Sensitivity (dBm) | Fiber Type | Description              |
|---------------------|-------------------|---------------|-------------|------------------|----------------------|------------|--------------------------|
| QSFP28-W23-10-100GD | 1270              | 10            | 6.3         | -1.4/4.5         | -7.7/4.5             | SMF        | QSFP28 BIDI 100GBase LR1 |
| QSFP28-W32-10-100GD | 1330              | 10            | 6.3         | -1.4/4.5         | -7.7/4.5             | SMF        | QSFP28 BIDI 100GBase LR1 |
| QSFP28-WAB-40-100GD | 1304.58           | 40            | 17.7        | 1.7/7.1          | -16/-3.4             | SMF        | QSFP28 BIDI 100GBase ER1 |
| QSFP28-WBA-40-100GD | 1309.14           | 40            | 17.7        | 1.7/7.1          | -16/-3.4             | SMF        | QSFP28 BIDI 100GBase ER1 |
| QSFP28-WCD-80-100GD | 1273.55 - 1286.66 | 80            | 32          | 2/6              | -30/-7               | SMF        | QSFP28 BIDI 100GBase ZR4 |
| QSFP28-WDC-80-100GD | 1295.53 - 1309.14 | 80            | 32          | 2/6              | -30/-7               | SMF        | QSFP28 BIDI 100GBase ZR4 |

## Did You Know?

You can ensure coding accuracy and eliminate time spent finding replacement optics when you choose Integra transceivers. Our Smart Coder allows technicians to reconfigure our transceivers for specific hardware right in the field.

## QSFP28 100G Bidi 10km

### Detailed Specifications

| Parameter                             | Minimum | Typical | Maximum | Unit |
|---------------------------------------|---------|---------|---------|------|
| Storage Temperature (Ts)              | -40     | -       | 85      | °C   |
| Operating Case Temperature CTemp (Tc) | 0       | -       | 70      | °C   |
| Wattage                               | -       | -       | 4.5     | W    |
| Power Supply Voltage (Vcc)            | 3.135   | 3.3     | 3.465   | V    |
| Power Supply Current (Icc)            | -       | -       | 1435    | mA   |

### Transmitter

| Parameter                     | Minimum | Typical | Maximum | Unit |
|-------------------------------|---------|---------|---------|------|
| Center Wavelength A           | 1264.5  | 1271    | 1277.5  | nm   |
| Center Wavelength B           | 1324.5  | 1330    | 1337.5  | nm   |
| Datarate                      | -       | -       | 100     | Gbps |
| Average Output Power          | -1.4    | -       | 4.5     | dBm  |
| Optical Return Loss Tolerance | -       | -       | 15.6    | dB   |
| Extinction Ratio              | 3.5     | -       | -       | dB   |
| Modulation Format             | PAM4    |         |         |      |

### Receiver

| Parameter           | Minimum | Typical | Maximum | Unit |
|---------------------|---------|---------|---------|------|
| Center Wavelength A | 1324.5  | 1331    | 1337.5  | nm   |
| Center Wavelength B | 1264.5  | 1271    | 1277.5  | nm   |
| Receive Level       | -7.7    | -       | 4.5     | dBm  |

## QSFP28 100G Bidi 40km

### Detailed Specifications

| Parameter                             | Minimum | Typical | Maximum | Unit |
|---------------------------------------|---------|---------|---------|------|
| Storage Temperature (Ts)              | -40     | -       | 85      | °C   |
| Operating Case Temperature CTemp (Tc) | -5      | -       | 75      | °C   |
| Wattage                               | -       | -       | 4.5     | W    |
| Power Supply Voltage (Vcc)            | 3.135   | 3.3     | 3.465   | V    |
| Power Supply Current (Icc)            | -       | -       | 1435    | mA   |

### Transmitter

| Parameter                     | Minimum | Typical | Maximum | Unit |
|-------------------------------|---------|---------|---------|------|
| Center Wavelength A           | 1304.06 | 1304.58 | 1305.1  | nm   |
| Center Wavelength B           | 1308.61 | 1309.14 | 1309.66 | nm   |
| Datarate                      | -       | -       | 100     | Gbps |
| Average Output Power          | 1.7     | -       | 7.1     | dBm  |
| Optical Return Loss Tolerance | -       | -       | 15      | dB   |
| Extinction Ratio              | 5       | -       | -       | dB   |
| Modulation Format             | PAM4    |         |         |      |

### Receiver

| Parameter           | Minimum | Typical | Maximum | Unit |
|---------------------|---------|---------|---------|------|
| Center Wavelength A | 1308.61 | 1309.14 | 1309.66 | nm   |
| Center Wavelength B | 1304.06 | 1304.58 | 1305.1  | nm   |
| Receive Level       | -16     | -       | -3.4    | dBm  |

## QSFP28 100G Bidi 80km

### Detailed Specifications

| Parameter                  | Minimum | Typical | Maximum | Unit |
|----------------------------|---------|---------|---------|------|
| Storage Temperature        | -40     | -       | 85      | °C   |
| Operating Case Temperature | 0       | -       | 70      | °C   |
| Wattage                    | -       | -       | 5.5     | W    |
| Power Supply Voltage       | 3.135   | 3.3     | 3.465   | V    |
| Power Supply Current       | -       | -       | 1754    | mA   |

### Transmitter

| Parameter                     | Minimum | Typical | Maximum | Unit |
|-------------------------------|---------|---------|---------|------|
| Center Wavelength C 1         | 1272.55 | 1273.55 | 1274.54 | nm   |
| Center Wavelength C 2         | 1276.89 | 1277.89 | 1278.89 | nm   |
| Center Wavelength C 3         | 1281.25 | 1282.26 | 1283.27 | nm   |
| Center Wavelength C 4         | 1285.65 | 1286.66 | 1287.68 | nm   |
| Center Wavelength D 1         | 1294.53 | 1295.56 | 1296.59 | nm   |
| Center Wavelength D 2         | 1299.02 | 1300.05 | 1301.09 | nm   |
| Center Wavelength D 3         | 1303.54 | 1304.58 | 1305.63 | nm   |
| Center Wavelength D 4         | 1308.09 | 1309.14 | 1310.09 | nm   |
| Datarate                      | -       | -       | 103.125 | Gbps |
| Average Output Power          | 2       | -       | 6       | dBm  |
| Optical Return Loss Tolerance | -       | -       | 20      | dB   |
| Extinction Ratio              | 6       | -       | -       | dB   |

### Receiver

| Parameter             | Minimum | Typical | Maximum | Unit |
|-----------------------|---------|---------|---------|------|
| Center Wavelength C 1 | 1294.53 | 1295.56 | 1296.59 | nm   |
| Center Wavelength C 2 | 1299.02 | 1300.05 | 1301.09 | nm   |
| Center Wavelength C 3 | 1303.54 | 1304.58 | 1305.63 | nm   |
| Center Wavelength C 4 | 1308.09 | 1309.14 | 1310.09 | nm   |
| Center Wavelength D 1 | 1272.55 | 1273.55 | 1274.54 | nm   |
| Center Wavelength D 2 | 1276.89 | 1277.89 | 1278.89 | nm   |
| Center Wavelength D 3 | 1281.25 | 1282.26 | 1283.27 | nm   |
| Center Wavelength D 4 | 1285.65 | 1286.66 | 1287.68 | nm   |
| Receive Level         | -30     | -       | -7      | dBm  |

### Additional Information

For more information about Integra Optics' QSFP28 100G BiDi please contact a sales representative at [sales@integraoptics.com](mailto:sales@integraoptics.com) or visit [integraoptics.com](http://integraoptics.com)