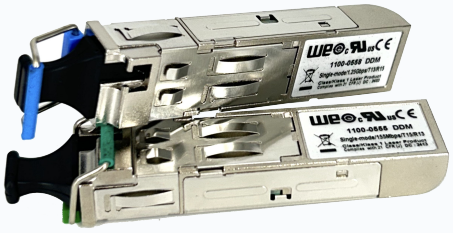
Singlemode BiDi SFP Transceivers

Gigabit Fibre Optic Transceivers with BiDi

- **High bandwidth with 1 Gbit/s BiDi**
  - Utilize high bandwidth fibre connectivity
  - Transmit and receive when only a single fibre core is available with a bi-directional transceiver
  - Bi-directional fibre transceivers available in 20, 40, 60 and 80 km variants
- **Short and long range fibre optic communication**
  - Short- and long-range installations on 9/125 µm fibre cables
  - Real time monitoring of the SFP using DDM, integrated with WeOS
- **Robust and reliable**
  - Thoroughly tested to high standards
  - Wide operating temperature range, -40 to +85°C
  - Functionality validated for mission critical applications
- **Full WeOS support**
  - Transceivers and WeOS developed in symbiosis
  - All functionality available
  - Technical support and know-how



EN 50121-4 Railway Trackside

EN 60825-1 Safety of Laser Products

Westermo's range of 1 Gbit/s singlemode SFPs with BiDi-functionality are suitable for short- and long-range applications that require high bandwidth. A BiDi transceiver enables data communication in both directions simultaneously over a single core optical fibre. Using the DDM functionality, which is fully integrated into WeOS, it is possible to monitor parameters such as temperature, TX/RX power and voltage, ensuring correct operation.

As industrial networks transmit more data, 1 Gbit/s fibre links can be used to link data-intensive sites across long distances. Setting up high bandwidth network backbones over long distances is now possible and BiDi transceivers can double the capacity by using different wavelengths for upstream and downstream communication over the same fibre link. The SFPs are tested and optimized for compatibility with the WeOS platform and are offered in multiple different variants, with indicative ranges from 20 km to 80 km.

To meet the high demands of mission-critical applications, all SFP transceivers undergo thorough environmental testing to ensure they can perform under the harshest conditions. Additionally, their functionality is pushed to the limit to guarantee availability and reliability.

WeOS, the Westermo operating system, is designed to meet the toughest requirements, and full support for all offered transceivers is a crucial aspect. All features of WeOS are extensively tested and verified to be fully supported on any WeOS device with a Westermo transceiver installed.

Specifications - Singlemode BiDi SFP Transceivers

Housing	
Dimensions device (W x H x D)	14 x 13 x 57 mm (0.55 x 0.51 x 2.24 inches)
Dimensions protrosion (W x H x D)	14 x 13 x 9 mm (0.55 x 0.51 x 0.35 inches)

Environmental	
Operating temperature	-40 to +85°C (-40 to +185°F)
Storage and transport temperatures[a.]	-40 to +85°C (-40 to +185°F)
Humidity (operating)	5-95% relative humidity

[a.] Case operating temperature

Interface								
Connector type	Simplex LC							
Transceiver type	Singlemode							
Model	**GSLC20-BiDi-A-DDM**	**GSLC40-BiDi-A-DDM**	**GSLC60-BiDi-A-DDM**	**GSLC80-BiDi-A-DDM**	**GSLC20-BiDi-B-DDM**	**GSLC40-BiDi-B-DDM**	**GSLC60-BiDi-B-DDM**	**GSLC80-BiDi-B-DDM**
Clasp colour	Blue				Green			
Transmission speed	1 Gbit/s							
Transmit wavelength	1310 nm		1310 nm	1510 nm	1550 nm	1490 nm	1550nm	1570 nm
Transmit power (max)	-2 dBm	+2 dBm	+5 dBm	1 dBm	-2 dBm	+2 dBm	+4 dBm	+1 dBm
Transmit power (min)	-8 dBm	-3 dBm	0 dBm	-4 dBm	-8 dBm	-3 dBm	-2 dBm	-4 dBm
Receive wavelength	1550 nm	1490 nm	1550 nm	1570 nm	1310 nm	1310 nm		1510 nm
Receiver power/ sensitivity (min)	-23 dBm		-24 dBm	-26 dBm	-23 dBm		-25 dBm	-26 dBm
Receiver power (max)	2 dBm	0 dBm	-1 dBm	0 dBm	-2 dBm	0 dBm	-1 dBm	0 dBm
Power budget	15 dBm	20 dBm	24 dBm	22 dBm	15 dBm	20 dBm	23 dBm	22 dBm
Indicative range	20 km	40 km	60 km	80 km	20 km	40 km	60 km	80 km

Diagnostics (DDM)	
Parametres	**Accuracy**
Temperature	±3°C
Voltage	± 0.1 VDC
Bias current	± 10% or 5 mA
TX power	± 3 dBm
RX power	± 3 dBm

Approvals	
EMC	EN 50121-4/IEC 62236-4, Railway signalling and telecommunications apparatus
Safety	EN/IEC 60825-1, Laser products - part 1: Equipment classification and requirement EN/IEC 60825-2, Laser products - part 2: Safety of optical fibre communication systems EN/IEC/UL 62368-1, Audio/video, information and communication technology equipment

Warranty	
Validity	5 years

Ordering information	
Art. no.	**Description**
1100-0558	GSLC20-BiDi-A-DDM
1100-0559	GSLC20-BiDi-B-DDM
1100-0567	GSLC40-BiDi-A-DDM
1100-0568	GSLC40-BiDi-B-DDM
1100-0566	GSLC60-BiDi-A-DDM
1100-0569	GSLC60-BiDi-B-DDM
1100-0526	GSLC80-BiDi-A-DDM
1100-0527	GSLC80-BiDi-B-DDM