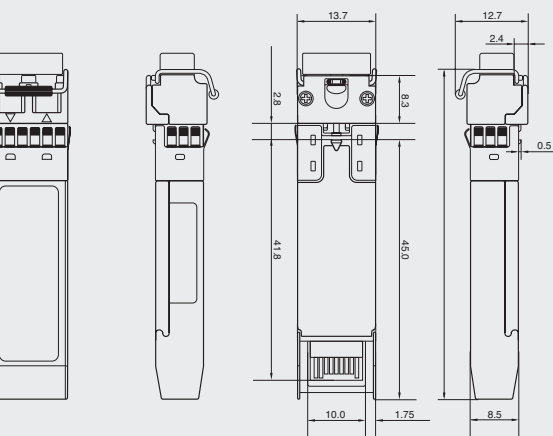




SFP 1G

Overview

Integra Optics' SFP transceivers are designed in accordance to industry standards and are available in a variety of power budgets and data rate options. Integra SFP transceivers are coded to be 100% OEM compatible and provide for reliable, versatile, cost effective 1G service deployments capable of meeting both current and future networking requirements.



Features

- ➔ Operating Data Rate up to 1.25Gbps
- ➔ Distance Ranging from 550m to 160km
- ➔ MMF or SMF Duplex LC Connector Interface
- ➔ Commercial, Extended or Industrial Temperatures
- ➔ Digital Diagnostics Monitoring
- ➔ SFP MSA Compliant

Applications

- ➔ 1000Base-SX, 1000Base-LX, 1000Base-EX, 1000Base-ZX
- ➔ Enterprise Networks
- ➔ Fiber Channel
- ➔ Extended ZX Optical Links

Product Specifications

Integra Part Number	Wavelegnth	Distance	Budget	TX (dbm) Min/Max	RX (dbm) Min/Max	Interface	Description
SFP-SX-D	850	550m	7.5	-9.5/-3	-3/-17	LC/MMF	SFP-1000Base-SX
SFP-10-GD	1310	10km	12	-9/-3	-3/-21	LC/SMF	SFP-1000Base
SFP-15-GD	1310	15km	13	-8/-3	-3/-21	LC/SMF	SFP-1000Base
SFP-20-GD	1310	20km	14	-8/-3	-3/-22	LC/SMF	SFP-1000Base
SFP-30-GD	1310	30km	19	-5/0	-3/-24	LC/SMF	SFP-1000Base
SFP-40-GD(1310)	1310	40km	23	-2/3	-3/-25	LC/SMF	SFP-1000Base
SFP-40-GD(1550)	1550	40km	19	-5/0	-3/-24	LC/SMF	SFP-1000Base
SFP-60-GD	1550	60km	22	-2/3	-3/-24	LC/SMF	SFP-1000Base
SFP-80-GD	1550	80km	24	0/5	-3/-24	LC/SMF	SFP-1000Base
SFP-100-GD	1550	100km	28	0/5	-10/-28	LC/SMF	SFP-1000Base
SFP-120-GD	1550	120km	32	0/5	-10/-32	LC/SMF	SFP-1000Base
SFP-160-GD	1550	160km	37	0/5	-10/-37	LC/SMF	SFP-1000Base

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.

SFP-SX-D

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	830	850	860	Nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	0.85	nm
Average Output Power (Pout, AVG)	-9.5	-	-3	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	760	-	860	nm
Receiver Sensitivity (PMIN)	-17	-	-	dBm
Receiver Overload 1(PMAX)	-	-	-3	dBm

SFP-10-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	1310	1360	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	4	nm
Average Output Power (Pout, AVG)	-9	-	-3	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-21	-	-	dBm
Receiver Overload (PMAX)	-	-	-3	dBm

SFP-15-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	1310	1360	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	4	nm
Average Output Power (Pout, AVG)	-9	-	-3	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-21	-	-	dBm
Receiver Overload (PMAX)	-	-	-3	dBm

SFP-20-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	1310	1360	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	4	nm
Average Output Power (Pout, AVG)	-8	-	-3	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-22	-	-	dBm
Receiver Overload (PMAX)	-	-	-3	dBm

SFP-30-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	1310	1360	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	4	nm
Average Output Power (Pout, AVG)	-5	-	-0	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PIMN)	-24	-	-	dBm
Receiver Overload (PMAx)	-	-	-3	dBm

SFP-40-GD(1310)

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	1310	1360	Nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	4	Nm
Average Output Power (Pout, AVG)	-2		3	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-25	-	-	dBm
Receiver Overload (PMAX)	-	-	-3	dBm

SFP-40-GD(1550)

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1500	1550	1580	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	1	nm
Average Output Power (Pout, AVG)	-5	-	0	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-24	-	-	dBm
Receiver Overload (PMAX)	-	-	-3	dBm

SFP-60-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1500	1550	1580	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	1	nm
Average Output Power (Pout, AVG)	-2	-	3	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-24	-	-	dBm
Receiver Overload (PMAX)	-	-	-3	dBm

SFP-80-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1500	1550	1580	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	1	nm
Average Output Power (Pout, AVG)	0	-	5	DBm
Extinction Ratio (ER)	9	-	-	Db

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	Nm
Receiver Sensitivity (PMIN)	-24	-	-	dBm
Receiver Overload (PMAX)	-	-	-3	dBm

SFP-100-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Power Consumption (Pd)	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA



Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1500	1550	1580	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	1	nm
Average Output Power (Pout, AVG)	0	-	5	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-28	-	-	dBm
Receiver Overload (PMAX)	-	-	-10	dBm

SFP-120-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Power Consumption (Pd)	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA



Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1500	1550	1580	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	1	nm
Average Output Power (Pout, AVG)	0	-	5	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-32	-	-	dBm
Receiver Overload (PMAX)	-	-	-10	dBm

SFP-160-GD

Detailed Specifications

Parameter	Minimum	Typical	Maximum	Unit
Storage Temperature (Ts)	-40	-	85	°C
Operating Case Temperature CTemp (Tc)	0	-	70	°C
Operating Case Temperature ITemp (Tc)	-40	-	85	°C
Wattage	-	-	1.04	W
Power Supply Voltage (Vcc)	3.15	3.3	3.45	V
Power Supply Current (Icc)	-	-	300	mA

Transmitter

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1500	1550	1580	nm
Data Rate	-	1.25	-	Gbps
Spectral Width (-20dB) ($\Delta\lambda$)	-	-	1	nm
Average Output Power (Pout, AVG)	0	-	5	dBm
Extinction Ratio (ER)	9	-	-	dB

Receiver

Parameter	Minimum	Typical	Maximum	Unit
Center Wavelength (λ_c)	1260	-	1600	nm
Receiver Sensitivity (PMIN)	-37	-	-	dBm
Receiver Overload (PMAX)	-	-	-10	dBm

Our Mission

Our mission is to ensure that our customers turn up services faster, build out the fiber networks they need to be competitive, and keep them up and running.

Our Process and Commitment to Uptime



Integra Optics is leading the way in uptime. We're innovating the transceiver manufacturing process for more reliable optics and increased availability, from product concept to customer service. We back all of our transceivers with a limited lifetime warranty, and we have designed our process to get the very best transceivers to our customers faster than ever before.

- ➡ **Designed for interoperability:** Integra brand transceivers designed and programmed to be 100% interoperable with OEM platform hardware and fully comply with OEM equipment warranties
- ➡ **Automated production:** Automated production process in our US facility, using the first high-speed robots in the Western Hemisphere for coding and testing transceivers
- ➡ **Accurate coding:** Every transceiver is correctly coded and tested 100% of the time, resulting in optics that are 33 times more reliable than both OEM and third party generics
- ➡ **On-demand availability:** We maintain the largest inventory of transceivers in the Western Hemisphere to fill transceiver orders in days rather than the weeks or months, and help customers manage their supply chains.
- ➡ **24-hour support:** Experienced customer support team, available 24-hours a day, for technical support and equipment orders
- ➡ **A responsive organization:** Unmatched customer service, next-day shipping and even private aircraft to respond to our customers' needs
- ➡ **Experienced engineers:** Vast industry experience to help troubleshoot problems, consult on network design solutions and help with turn up
- ➡ **ISO Certified:** We hold the ISO 9001:2015 Quality Management System Certification for our dedication to quality in every step of our processes

Additional Information

For more information about Integra Optics' SFP please contact a sales representative at sales@integraoptics.com or visit integraoptics.com