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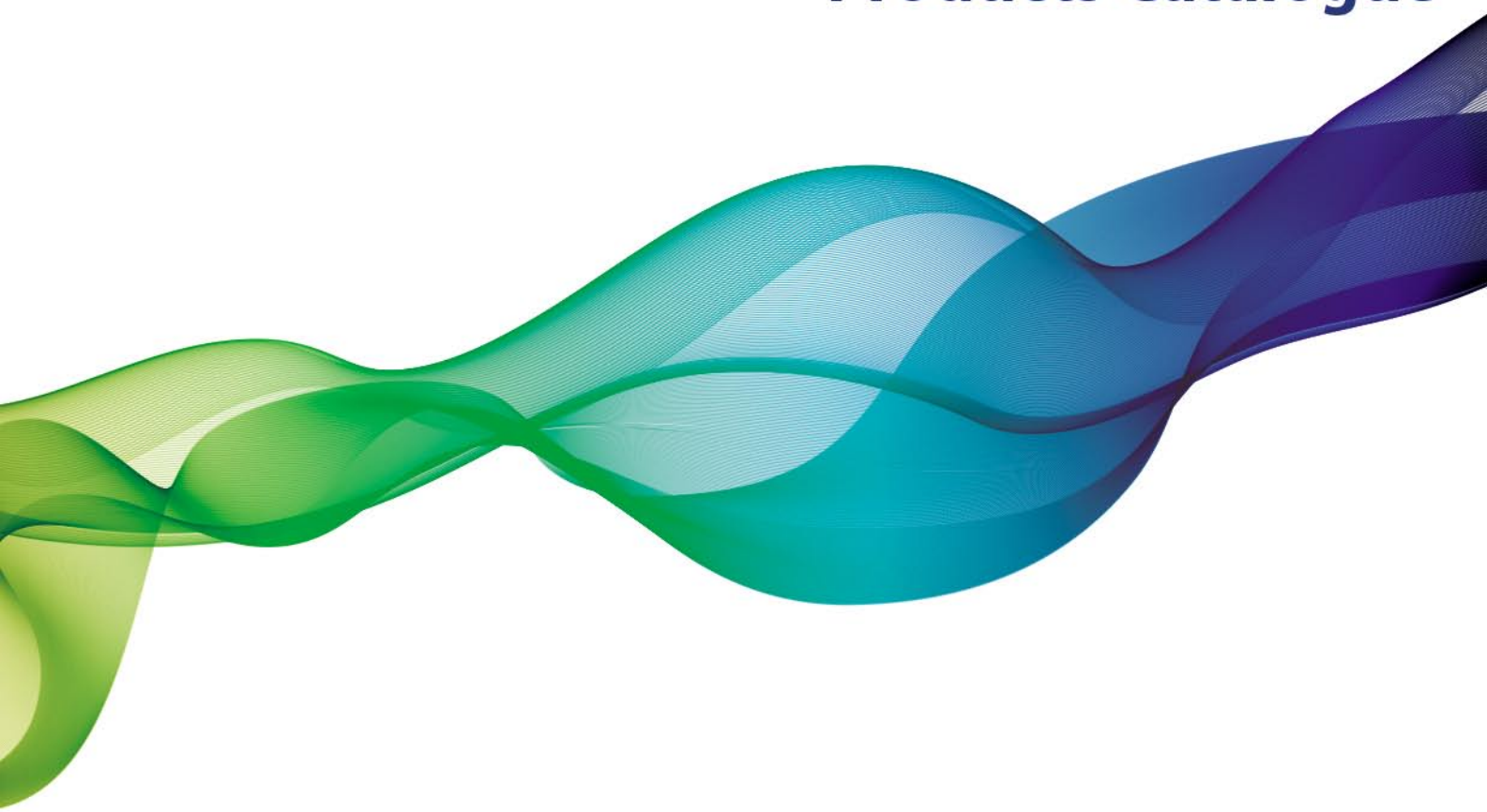
INTEC E&C
Products Catalogue



INTEC
advanced fiber optic

High End Optical Transceiver [SFP28/QSFP+/QSFP28]

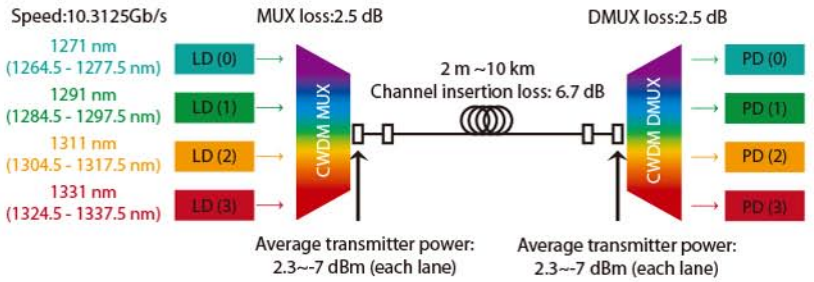
25G SFP28 optical transceiver

- **Features :** LC Duplex/BIDI SFP28 transceiver
  Up to 28Gbps optical data links over SMF up to 20Km
  Compliant with SFP MSA
  Uncooled DFB laser transmitters
  Single power supply voltage : +3.3V
  Operating temperature range : Tc0℃ to Tc70 ℃
- **Description :** Optical transmission systems of Datacom and Telecom.

Module type	Part number	λ(nm)	LD/PD	Data rate (Gbps)	Reach	Temp.	Connector
Duplex SFP28	IDP-28xxyyB -S02I IDP-28xxyyB -S10I	1270~1330	DFB/PIN	Up to 28	2Km/ 10Km	CT	LC
BIDI SFP28	IBP-28xxyyB -S02I IBP-28xxyyB -S10I	1270/1330	DFB/PIN	Up to 28	2Km/ 10Km	CT	LC

40G/50G QSFP+ optical transceiver

- **Features :** LC Duplex QSFP+ transceiver
  Up to 40Gbps optical data links over SMF up to 10Km
  Up to 50Gbps optical data links over SMF up to 10Km
  50G QSFP+ have an automatic protection switching function
  Compliant with QSFP MSA
  Single power supply voltage : +3.3V
  Operating temperature range : Tc0℃ to Tc70 ℃
- **Description :** Optical transmission systems of Datacom and Telecom.



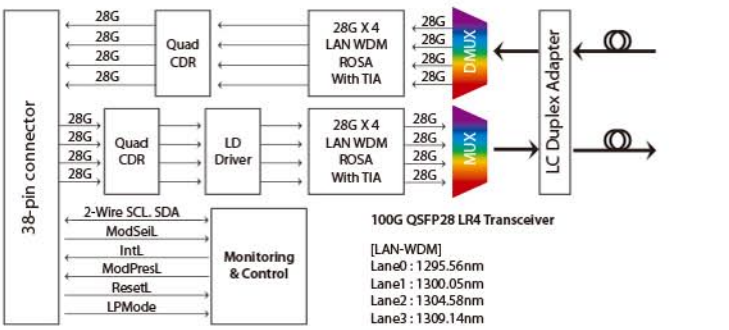
[40G QSFP+ LR4]

[50G(25GX2) QSFP+ : On Developing]

100G QSFP28 LR4 optical transceiver

- **Features :** LC Duplex QSFP28 LR4 transceiver
  Up to 100Gbps optical data links over SMF up to 10Km
  Support OTU4
  Compliant with QSFP MSA
  Single power supply voltage : +3.3V
  Operating temperature range : Tc0℃ to Tc70 ℃
- **Description :** Optical transmission systems of Datacom and Telecom.

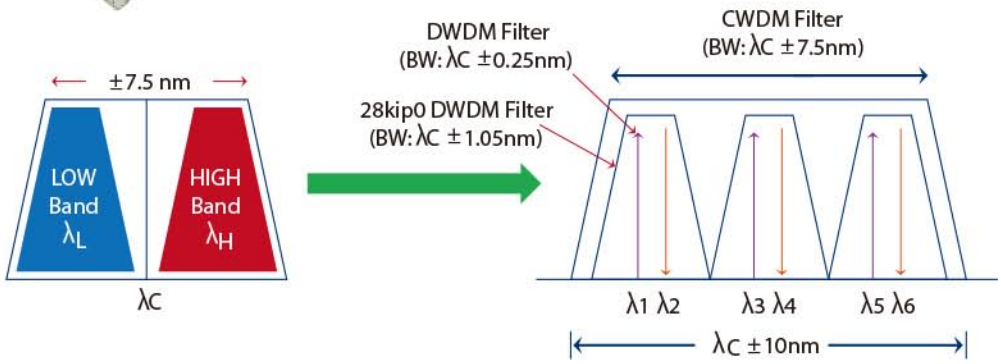
λ(nm)	LD/PD	Data rate (Gbps)	Reach	Temp.
LWDM	DFB/PIN	100	10Km	CT



Special SFP Optical Transceiver [HSFP & P2SFP]

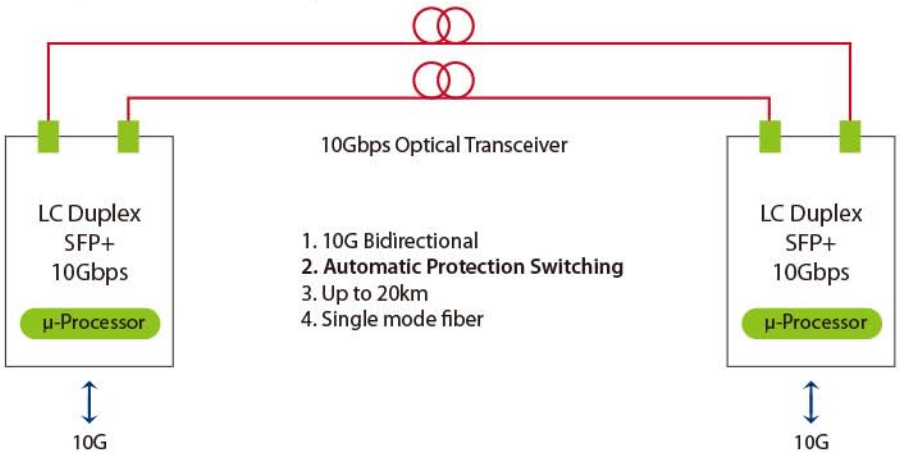
HSFP optical transceiver

- **Features :** High density bidirectional SFP transceiver
  - Up to 5Gbps optical data links over SMF up to 20Km
    - 10Gbps : On Developing
  - Channel extension
  - Compliant with SFP MSA
  - Cooled DFB laser transmitters
  - Single power supply voltage : +3.3V
  - Receptacle with LC connector
  - Operating temperature range : Ta-40℃ to Tc85 ℃
- **Description :** Optical transmission systems of Datacom and Telecom.

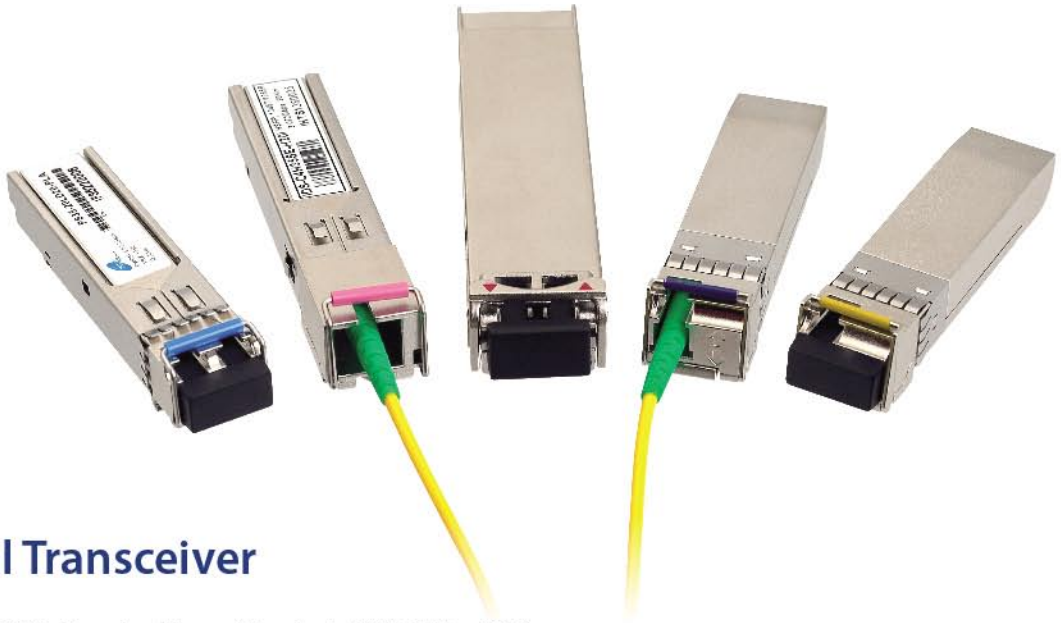


P2SFP optical transceiver

- **Features :** Automatic protection switching BIDI SFP transceiver
  - Up to 2.5Gbps optical data links over SMF up to 20Km
    - 10Gbps : On Developing
  - Compliant with SFP MSA
  - Uncooled DFB laser transmitters
  - Single power supply voltage : +3.3V
  - Receptacle with LC connector
  - Operating temperature range : Ta-40℃ to Tc85 ℃
- **Description :** Optical transmission systems of Datacom and Telecom.



Optical Transceiver



Optical Transceiver

- **Features :** MSA Standard based Products(SFP, SFP+, XFP)
  Flexible interface option 100M to 10G

- **Description :** Our optical transceivers are very reliable and cost effective for optical transmission systems of Datacom and Telecom.
  Most of our transceivers are BIDI types to reduce CAPEX for CWDM and DWDM SFP, SFP+ and XFP.
  All transceiver can be built in or removed from any MSA compliant pluggable small form factor whether system is operating or not.

Wavelength type	Data Rate	Form Factor	10Km	15Km	20Km	40Km	80Km	120Km
BIDI	10G	SFP+	◆	◆	◆	◆		
		XFP	◆	◆	◆	◆		
	6G	SFP+	◆	◆	◆	◆		
	3G	SFP	◆	◆	◆	◆	◆	
	2.5G	SFP	◆	◆	◆	◆	◆	
	1.25G	SFP	◆	◆	◆	◆	◆	◆
TDM	10G	SFP+	◆	◆	◆	◆	◆	
		XFP	◆	◆	◆	◆	◆	
	6G	SFP+	◆	◆	◆	◆	◆	
	3G	SFP	◆	◆	◆	◆	◆	
	2.5G	SFP	◆	◆	◆	◆	◆	
	1.25G	SFP	◆	◆	◆	◆	◆	◆
CWDM	10G	SFP+			◆	◆	◆	
		XFP				◆	◆	
	6G	SFP+			◆	◆	◆	
	3G	SFP				◆	◆	
	2.5G	SFP				◆	◆	
	1.25G	SFP				◆	◆	
DWDM	10G	SFP+				◆	◆	
		XFP				◆	◆	
	2.5G	SFP				◆	◆	◆

Optical Device Module

Optical Device Module

- **Features and Applications :** Isolated DFB-LD module
  Receptacle/Pigtail Type
  Optical digital/analog transceivers for Mobile
  Communication systems and CATV

- **Description :** We introduce our optical modules being used for mobile communication systems, CATV and DAS optical systems.
  We have TOSA, ROSA and BOSA for 20nm spacing CWDM SFP, XFP transceivers and analog optical modules.
  Most of them are isolated and uncooled types. Currently we have developed cooled type LD modules with coaxial package

BOSA

Data Rate	Wavelength		Package Type	LD TO Can	PD TO Can	Temp.	Remarks
	Tx	Rx					
10G	1270	1330	LC Receptacle/Pigtail	CWDM/DFB	PIN/APD	0~70°C/-40~85°C	
10G	1330	1270	LC Receptacle/Pigtail	CWDM/DFB	PIN/APD	0~70°C/-40~85°C	
25G	1270/1330	1330/1270	LC Receptacle	CWDM/DFB	PIN/APD	0~70°C/ 40~85°C	

TOSA

Data Rate	Wavelength		Package Type	LD TO Can	Temp.	Remarks
	Tx	Rx				
10G	1270 ~ 1330		LC Receptacle/Pigtail	CWDM/DFB	0~70°C/-40~85°C	
10G	1270 ~ 1330		LC Receptacle/Pigtail	CWDM/DFB	0~70°C/-40~85°C	
25G	1270 ~ 1330		LC Receptacle	CWDM/DFB	0~70°C/-40~85°C	

ROSA

Data Rate	Package Type	PD TO Can	Temp.	Receptacle Connector	Pigtail Connector	Pigtail Fiber Type	Remarks
10G	LC Receptacle/Pigtail	PIN/TIA	0~70°C/-40~85°C	LC	SC/UPC SC/APC FC/APC	SM	With Flex
10G	LC Receptacle/Pigtail	APD/TIA	0~70°C/-40~85°C	LC	SC/UPC SC/APC FC/APC	SM	With Flex
25G	LC Receptacle	PIN/TIA	0~70°C/-40~85°C	LC	-	-	-

Analog Optical Transceiver

Analog Optical Transceiver

- **Features :** For single band,multi band and broad band etc.
  LD/PD monitoring and alarm
  Isolated DFB Lasers

- **Description :** Intec's analog optical transceivers have been used for CATV systems and Mobile communication systems like DAS over 15 years.
  There are several kind of Rof modules, For exemple, for single band, multi band and broad band.
  We make many type of them, point to point type, star type,cascade type of RoF modules, for the network monitoring.

▪ BROADBAND MODULE

No	Model Name	Wavelength(nm) MUX/DEMUX	Frequency	Wavelength	Optical Output Power	Gain
			Mhz	nm	dBm	dB
1	IT-DASHOU-698/2150 IT-DASROU-698/2150	DL UL	698~2155 698~1755	1310 1550	0 7	3±2 -5±2
2	ITOM-ODUB-136/2690 ITOM-ORUB-136/2690	DL UL	136~2690 136~2690	1310 1550	0 7	30±2 15±2

▪ NARROWBAND

No	Model Name	Wavelength(nm) MUX/DEMUX	Frequency	Wavelength	Optical Output Power	Gain
			Mhz	nm	dBm	dB
1	ITWOMI-DOM ITWOMI-ROM	DL UL	2110~2150 1920~1960	1550 1310	7 7	-10±1.5 -10±1.5
2	ITOM-M881M ITOM-M836S	DL UL	869~894 824~849	1550 1310	5 5	4±1.5 4±1.5
3	ITOM-4GDASS-M2500M ITOM-4GDASS-M2500S	DIV DL UL	824~849 2496~2690 2496~2690	1330 1310 1550	5 6 4	4±1.5 2±2 2±2

Optical Multiplexer

Optical Multiplexer

- **Features and Applications :** CAPEX Reduction for optical cable
  High isolation over 30dB
  Low insertion loss and reflection loss
  Options of Expanded channel for the future

- **Description :** Our Optical CWDM,DWDM,DB-CWDM and the other passive modules are very reliable and qualified products.
  We design and produce this kind of modules to reduce CAPEX cost by customer requirement. Especially Many mobile communication carriers use these modules to reduce construction cost or lease expense for using optical cable.

Model Name	λ(nm)	IL(dB)		Iso(dB)	Rip(dB)	RL(dB)	Connector	Remark
	MUX /DeMUX	MUX	DeMUX	MUX/ DeMUX	MUX/ DeMUX	MUX/ DeMUX	MUX/ DeMUX	
IT-M08DM-ELORCM -A55 IT-M08DD-ELORCM -A55	1350,1490±7.5 1550,1610±7.5 1310,1510±7.5 EXP	1.0 1.25 1.5 1.25	1.5 1.25 1.0 1.25	25 25 25 14	0.5	45	LC/UPC Adapter	Dual Band CWDM Filter
IT-M06DWM - E123456 -40466 IT-M06DWD - E123456 -40466	1347.95 ±0.25 1349.55 ±0.25 1351.15 ±0.25 1352.75 ±0.25 1354.35 ±0.25 1355.95 ±0.25	1.0 1.2 1.5 1.8 2.1 2.4	2.4 2.1 1.8 1.5 1.2 1.0	25	0.3	50	LC/APC Pigtail	★1) DWDM Filter
IT-M06DDWM - E123456 -A22 IT-M06DDWD - E123456 -A22	1347.75~1349.8 1350.90~1353.0 1354.10~1356.2 EXP	1.0 1.2 1.2	1.2 1.0 1.2	25 25 14	0.5	50	FC/APC Adapter	★1) Dual Band DWDM Filter

★1) Full wavelength band : 1270um~1610um

History

- **Sep.1999 :** INTEC E&C Established
- **Mar.2001 :** Mass Product of 2wave RF Link Optic Module
- **Mar.2002 :** OFC 2002 Anaheim U,S,A Optic Exhibition
- **Aug.2002 :** ISO 9001:2000,TL 9000(Rev 3.0) Certification
- **Sep.2002 :** ECOC2002 Copenhagen Denmark Optic Exhibition
- **Nov.2002 :** R&D Center Established
- **Mar.2003 :** Micro Optic & Wireless Division founded
- **Jun.2003 :** Developed 4, 7FA DS1,DS2 RF Link Optic Module
- **Dec.2007 :** Developed 2G+3G Optic Integrated Unit
- **Apr.2008 :** Developed Triple Band RRU Optic Module
- **Feb.2009 :** Development of OTTA Optic module
- **Jul.2009 :** Development of 4G SFP(Small Form Pluggable)
- **Jan.2010 :** Development of Optic module for DAS System
- **Apr.2010 :** Development of 10G SFP+ Transceiver
- **Feb.2011 :** Development of 6G SFP+ Transceiver
- **Dec.2011 :** Development of SCAN MUX System
- **Dec.2011 :** Optic Line Saving module for LTE
- **Feb.2012 :** LTE-integrated MUX/DEMUX
- **Jan.2013 :** 1350nm L/H Cooled HSFP Development
- **Jul.2013 :** 8Gb/s SFP+Transceiver
- **Apr.2014 :** Company moved in Gunpo city
- **Jul.2015 :** Venture business certification
- **Oct.2015 :** INNO-BIZ enterprise certification
- **Dec.2015 :** Development of 28Gb/s SFP28
- **Dec.2015 :** On Developing for 100Gb/s QSFP28

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