

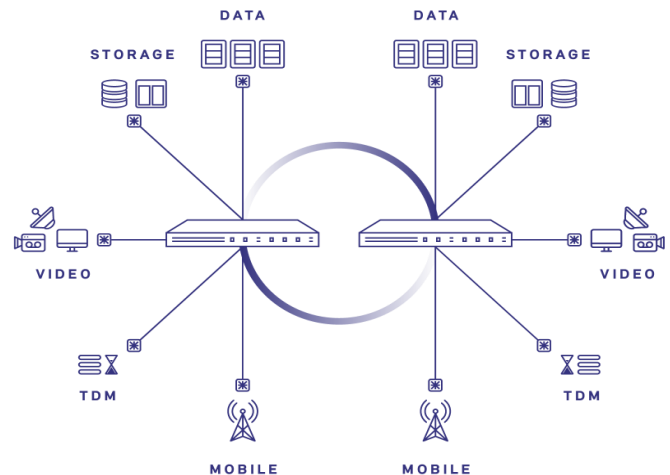
## Optical Infrastructure Solutions

### Overview

The Itectra Optical Infrastructure Solutions builds upon high-density WDM systems, optical transceivers and accessories designed to provide optical network support for high-speed data Ethernet and Fiber Channel communication.

These WDM systems and optical transceivers deliver capacity from 1 Gbps to 800 Gbps per wavelength suitable for datacenter, enterprises, and service provider networks.

In addition to WDM systems and optical transceivers the Itectra portfolio spans across long-haul active DWDM systems, MPO cassettes, inspection and cleaning equipment.



### Product Features

- Active DWDM systems
- Passive CWDM and DWDM systems
- 1/10/25/40/50/100/200/400 GbE transceivers
- 8/16/32Gb FC transceivers
- Direct Attach Cables (DAC)
- Active Optical Cables (AOC)
- MPO cassettes
- Inspection and cleaning equipment

### Applications

- Datacentre
- Enterprise
- Core/Metro/Access
- FTTX
- Mobile Fronthaul

### Supported by leading vendors

The Itectra Optical Infrastructure portfolio includes a variety of today's leading optical network vendors; Infinera, Skylane Optics, EXFO, Corning and Sticklers. Please consult Itectra for further information on specific products and solutions.

### Compatibility

Itectra offers a wide range of compatible solutions allowing full network operational capabilities across the network. All equipment and modules are fully compliant with the relevant standards and recommendations and are manufactured utilizing the highest quality components available.

## CWDM Systems, half-rack width



Chassis: 43 × 432 × 248 mm (H×W×D)  
 Rec.: CWDM (ITU-T G.694.2)  
 Connector: LC  
 Other connectors upon request

Cassette: 43 × 180 × 178 mm (H×W×D)  
 Temp., Operation: -10° – 70°C  
 Temp., Storage: -40° – 85°C  
 Humidity: 5 – 85%

Product	Channels	Link loss (channels)	Link loss (ext)	Remarks	Product Number <sup>1</sup>
<b>Chassis</b>					
Chassis for half-rack cassettes, 2 slots					WDM-CHASSIS
Blindplate					WDM-BLINDPLATE
<b>CWDM MUX/DEMUX</b>					
4ch. CWDM MDU	C27 – C33	~2.6dB per pair	~3.2dB per pair	TFF, Ext port for other channels	CW-MDU5-27-Ly
4ch. CWDM MDU	C35 – C37 / C43 – C45	~2.6dB per pair	~3.2dB per pair	TFF, Ext port for other channels	CW-MDU5-35-Ly
4ch. CWDM MDU	C47 – C53	~2.6dB per pair	~3.2dB per pair	TFF, Ext port for other channels	CW-MDU5-47-Ly
4ch. CWDM MDU	C55 – C61	~2.6dB per pair	~3.2dB per pair	TFF, Ext port for other channels	CW-MDU5-55-Ly
8ch. CWDM MDU	C47 – C61	~3.8dB per pair	~5.6dB per pair	TFF, Ext port (1270-1450)	CW-MDU9-47-Ly
8ch. CWDM MDU	C27 – C37 / C43 – C45	~3.8dB per pair		TFF, Extension module	CW-MDU8-27-EM-Ly
16ch. CWDM MDU	C27 – C37 / C43 – C61	~4.7dB per pair		TFF	CW-MDU16-27-Ly
4ch. CWDM MDU	C27 – C33	~2.4dB per pair	~2.4dB per pair	CCWDM, Ext port for other channels	CCW-MDU5-27-Ly
4ch. CWDM MDU	C35 – C37 / C43 – C45	~2.4dB per pair	~2.4dB per pair	CCWDM, Ext port for other channels	CCW-MDU5-35-Ly
4ch. CWDM MDU	C47 – C53	~2.4dB per pair	~2.4dB per pair	CCWDM, Ext port for other channels	CCW-MDU5-47-Ly
4ch. CWDM MDU	C55 – C61	~2.4dB per pair	~2.4dB per pair	CCWDM, Ext port for other channels	CCW-MDU5-55-Ly
8ch. CWDM MDU	C47 – C61	~3.0dB per pair	~3.0dB per pair	CCWDM, Ext port (1271-1451)	CCW-MDU9-47-Ly
8ch. CWDM MDU	C27 – C45 / C43 – C45	~3.0dB per pair		CCWDM, Extension module	CCW-MDU8-27-EM-Ly
16ch. CWDM MDU	C27 – C37 / C43 – C61	~5.4dB per pair		CCWDM	CCW-MDU16-27-Ly
<b>CWDM OADM</b>					
1ch. CWDM OADM	Cxx	Tx/Rx: 0.8dB each	Transit: 1.0dB	TFF, East + West	CW-OADM1-xx-Ly
2ch. CWDM OADM	Cxx – Cxx+1	Tx/Rx: 1.5dB / 0,8dB	Transit: 1.5dB	TFF, East + West	CW-OADM2-xx-Ly
4ch. CWDM OADM	Cxx – Cxx+3	Tx/Rx: 1.9dB / 0.8dB	Transit: 2.7dB	TFF, East + West	CW-OADM4-xx-Ly

<sup>1</sup>: y indicates the polishing: A = APC, U = UPC

Please consult Itectra for specific customer requests

Specifications are subject to change without notice.

## CATV + CWDM Systems, half-rack width



Chassis: 43 × 432 × 248 mm (H×W×D)  
 Rec.: CWDM (ITU-T G.694.2)  
 Connector: LC / UPC  
 Other connectors upon request

Cassette: 43 × 180 × 178 mm (H×W×D)  
 Temp., Operation: -10° – 70°C  
 Temp., Storage: -40° – 85°C  
 Humidity: 5 – 85%

Product	Channels	Link loss (channels)	Link loss (ext)	Remarks	Product Number
<b>Chassis</b>					
Chassis for half-rack, 1U, 2 slots					WDM-CHASSIS
Blindplate					WDM-BLINDPLATE
<b>CWDM + CATV MUX/DEMUX</b>					
2ch. CWDM MDU <sup>1</sup>	59/61 + CATV	CWDM: ~2.2dB per pair CATV: ~3.2dB per pair	~2.6dB per pair	TFF, Ext port (1270-1450) LC/APC: line + CATV	CW-MDU4-59- CA-LU
5ch. CWDM MDU <sup>1</sup>	47-53/59/61 + CATV	CWDM: ~3.2dB per pair CATV: ~4.8dB per pair	~4.4dB per pair	TFF, Ext port (1270-1450) LC/APC: line + CATV	CW-MDU7-47- CA-LU
2ch. CWDM MDU <sup>1</sup>	59/61 + CATV	CWDM: ~2.2dB per pair CATV: ~3.2dB per pair	~2.6dB per pair	TFF, Ext port (1270-1450) LC/APC: all connectors	CW-MDU4-59- CA-LA
5ch. CWDM MDU <sup>1</sup>	47-53/59/61 + CATV	CWDM: ~3.2dB per pair CATV: ~4.8dB per pair	~4.4dB per pair	TFF, Ext port (1270-1450) LC/APC: all connectors	CW-MDU7-47- CA-LA
3ch. CWDM MDU <sup>2</sup>	57/59/61 + CATV	CWDM: ~2.6dB per pair CATV: ~3.6dB per pair	~3.2dB per pair	TFF, Ext port (1270-1450) LC/APC: line + CATV	CW-MDU5-57- CN-LU
7ch. CWDM MDU <sup>2</sup>	47-53/57-61 + CATV	CWDM: ~3.2dB per pair CATV: ~4.8dB per pair	~4.4dB per pair	TFF, Ext port (1270-1450) LC/APC: line + CATV	CW-MDU9-47- CN-LU
3ch. CWDM MDU <sup>2</sup>	57/59/61 + CATV	CWDM: ~2.6dB per pair CATV: ~3.6dB per pair	~3.2dB per pair	TFF, Ext port (1270-1450) LC/APC: all connectors	CW-MDU5-57- CN-LA
7ch. CWDM MDU <sup>2</sup>	47-53/57-61 + CATV	CWDM: ~3.2dB per pair CATV: ~4.8dB per pair	~4.4dB per pair	TFF, Ext port (1270-1450) LC/APC: all connectors	CW-MDU9-47- CN-LA
3ch. CCWDM MDU <sup>2</sup>	57/59/61 + CATV	CWDM: ~2.4dB per pair CATV: ~2.4dB per pair	~2.4dB per pair	CCWDM, Ext port (1270-1450) LC/APC: line + CATV	CCW-MDU5-57- CN-LU
7ch. CCWDM MDU <sup>2</sup>	47-53/57-61 + CATV	CWDM: ~3.0dB per pair CATV: ~3.0dB per pair	~3.0dB per pair	CCWDM, Ext port (1270-1450) LC/APC: line + CATV	CCW-MDU9-47- CN-LU
3ch. CCWDM MDU <sup>2</sup>	57/59/61 + CATV	CWDM: ~2.4dB per pair CATV: ~2.4dB per pair	~2.4dB per pair	CCWDM, Ext port (1270-1450) LC/APC: all connectors	CCW-MDU5-57- CN-LA
7ch. CCWDM MDU <sup>2</sup>	47-53/57-61 + CATV	CWDM: ~3.0dB per pair CATV: ~3.0dB per pair	~3.0dB per pair	CCWDM, Ext port (1270-1450) LC/APC: all connectors	CCW-MDU9-47- CN-LA
<b>CWDM + CATV OADM</b>					
1ch. CWDM OADM <sup>1</sup>	Cxx + CATV	Tx/Rx: 1.2dB each	Transit: 1.6dB	East + West LC/APC: line + CATV	CW-OADM1-xx-CA-LU
2ch. DWDM OADM <sup>1</sup>	Cxx-Cxx+1 + CATV	Tx/Rx: 1.5dB each	Transit: 2.0dB	East + West LC/APC: line + CATV	CW-OADM2-xx-CA-LU
1ch. CWDM OADM <sup>1</sup>	Cxx + CATV	Tx/Rx: 1.2dB each	Transit: 1.6dB	East + West LC/APC: All connectors	CW-OADM1-xx-CA-LA
2ch. DWDM OADM <sup>1</sup>	Cxx-Cxx+1 + CATV	Tx/Rx: 1.5dB each	Transit: 2.0dB	East + West LC/APC: All connectors	CW-OADM2-xx-CA-LA

<sup>1</sup>: CATV port: 1540 nm – 1560 nm

<sup>2</sup>: CATV port: 1544.5 nm – 1557.5 nm (CWDM channel 1550)

Please consult Itectra for specific customer requests

Specifications are subject to change without notice.

## DWDM Systems, half-rack width



Chassis: 43 × 432 × 248 mm (H×W×D)  
 Rec.: DWDM (ITU-T G.694.1)  
 Connector: LC  
 Other connectors upon request

Cassette: 43 × 180 × 178 mm (H×W×D)  
 Temp., Operation: -10° – 70°C  
 Temp., Storage: -40° – 85°C  
 Humidity: 5 – 85%

Product	Channels	Link loss (channels)	Link loss (ext)	Remarks	Product Number <sup>1</sup>
<b>Chassis</b>					
Chassis for half-rack, 1U, 2 slots					WDM-CHASSIS
Blindplate					WDM-BLINDPLATE
<b>DWDM MUX/DEMUX, 100 GHz spacing, 28 GHz / ±0.11 nm Passband</b>					
8ch. DWDM MDU	D30-37	~4,0dB per pair		Through CWDM 1530nm	DW-MDU8-30-53-Ly
8ch. DWDM MDU	D54-61	~4,0dB per pair		Through CWDM 1551nm port	DW-MDU8-53-53-Ly
8ch. DWDM MDU	D19-26	~4.0dB per pair	~5.4dB per pair	TFF, + ext port	DW-MDU9-19-Ly
8ch. DWDM MDU	D27-34	~4.0dB per pair	~5.4dB per pair	TFF, + ext port	DW-MDU9-27-Ly
8ch. DWDM MDU	D35-42	~4.0dB per pair	~5.4dB per pair	TFF, + ext port	DW-MDU9-35-Ly
8ch. DWDM MDU	D43-50	~4.0dB per pair	~5.4dB per pair	TFF, + ext port	DW-MDU9-43-Ly
8ch. DWDM MDU	D51-58	~4.0dB per pair	~5.4dB per pair	TFF, + ext port	DW-MDU9-51-Ly
16ch. DWDM MDU	D20-35	~5.6dB per pair		TFF	DW-MDU16-20-Ly
16ch. DWDM MDU	D36-51	~5.6dB per pair		TFF	DW-MDU16-36-Ly
32ch. DWDM MDU	D20-51	~6.0dB per pair		TFF	DW-MDU32-20-Ly
44ch. DWDM MDU	Dxx-xx	~7.0dB per pair		TFF	DW-MDU44-19-Ly
32ch. DWDM MDU	D20-51	~9.0dB per pair		AWG	DWA-MDU32-20-Ly
44ch. DWDM MDU	Dxx-xx	~9.6dB per pair		AWG	DWA-MDU44-19-Ly
8ch. DWDM MDU <sup>2</sup>	D51-58	~4,2dB per pair	~2.0dB per pair	TFF, 1×40G/100G port	DW-MDU9-51-EP-Ly
16ch. DWDM MDU <sup>2</sup>	D43-58	~5.6dB per pair	~2.4dB per pair	TFF, 1×40G/100G port	DW-MDU17-43-EP-Ly
40ch. DWDM MDU <sup>2</sup>	D19-58	~12dB per pair	~4,6dB per pair	TFF, 1×40G/100G port	DW-MDU41-19-EP-Ly

<b>DWDM MUX/DEMUX, 200 GHz spacing, 112.5 GHz / ±0.9 nm Passband</b>					
8ch. DWDM MDU	D14-28	~4,0dB per pair		TFF, + ext port	DW2-MDU9-14-Ly
8ch. DWDM MDU	D30-44	~4,0dB per pair		TFF, + ext port	DW2-MDU9-30-Ly
8ch. DWDM MDU	D46-60	~4.0dB per pair	~5.4dB per pair	TFF	DW2-MDU8-46-Ly

<b>DWDM MUX/DEMUX, 100 GHz spacing, 28 GHz / ±0.11 nm Passband</b>					
1ch. DWDM OADM	Dxx	Tx/Rx: 1.0dB each	Transit: 1.0dB	East + West	DW-OADM1-xx-Ly
2ch. DWDM OADM	Dxx-Dxx+1	Tx/Rx: 1.4dB each	Transit: 1.8dB	East + West	DW-OADM2-xx-Ly
4ch. DWDM OADM	Dxx-Dxx+3	Tx/Rx: 2.2dB each	Transit: 3.2dB	East + West	DW-OADM4-xx-Ly

<sup>1</sup>: y indicates the polishing: A = APC, U = UPC

<sup>2</sup>: 40GbE/100GbE port: 1270 nm – 1330 nm

Please consult Itectra for specific customer requests

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## CWDM Systems, LGX



Chassis:	43 × 432 × 248 mm (H×W×D)	Cassette (L×W×H):	129 × 29 (front)
Rec.:	CWDM (ITU-T G.694.2)		127×99.6×26.8 mm (body)
	DWDM (ITU-T G.694.1)	Temp., Operation:	-10 – 70°C
Connector:	LC	Temp., Storage:	-40 – 85°C
		Humidity:	5 – 85%

Product	Channels	Link loss (channels)	Link loss (ext)	Remarks	Product Number <sup>1</sup>
<b>Chassis</b>					
Chassis for LGX, 3 slots				1 RU high	LWD-CHASSIS-1RU-03
Chassis for LGX, 14 slots				3 RU high	LWD-CHASSIS-3RU-14
Blindplate for LGX slots					LWD-BLINDPLATE
<b>CWDM MUX/DEMUX</b>					
1ch CWDM OADM, West	C61	~0.8 dB	~0.8 dB	C27 – C59 transit	LCW-OADM1-61w-Ly
1ch CWDM OADM	C61	~0.8 dB	~0.8 dB	C27 – C59 transit	LCW-OADM1-61-Ly
4ch. CWDM MDU	C55 – C61	~2.4 dB per pair	~2.4 dB per pair	CCWDM, Ext port for other CWDM channels	LCW-MDU5-55-Ly
4ch. CWDM MDU	C47 – C53	~2.4 dB per pair	~2.4 dB per pair	CCWDM, Ext port for other CWDM channels	LCW-MDU5-47-Ly
4ch. CWDM MDU <sup>2</sup>	C35 – C37 / C43 – C45	~2.4 dB per pair	~2.4 dB per pair	CCWDM, Ext port for other CWDM channels	LCW-MDU5-35-Ly
4ch. CWDM MDU	C27 – C33	~2.4 dB per pair	~2.4 dB per pair	CCWDM, Ext port for other CWDM channels	LCW-MDU5-27-Ly
4ch. CWDM MDU	C47 – C49 / C59 – C61	~3 dB per pair	~2.4 dB per pair	CCWDM, Ext port for lower CWDM channels Ext port for DWDM channels	LCW-MDU6-47-Ly
8ch. CWDM MDU	C47 – C61	~3 dB per pair		CCWDM	LCW-MDU8-47-Ly
8ch. CWDM MDU <sup>2</sup>	C27 – C37 / C43 – C45	~3 dB per pair		CCWDM	LCW-MDU8-27-Ly
8ch. CWDM MDU	C47 – C61	~3 dB per pair	~2.4 dB per pair	CCWDM, Ext port for lower CWDM channels	LCW-MDU9-47-Ly
8ch. CWDM MDU <sup>2</sup>	C27 – C37 / C43 – C45	~3 dB per pair	~2.4 dB per pair	CCWDM, Ext port for higher CWDM channels	LCW-MDU9-27-Ly

<sup>1</sup>: y indicates the polishing: A = APC, U = UPC

<sup>2</sup>: Waterpeak channels (1390nm, 1410nm) excluded

Please consult Itectra for specific customer requests

Specifications are subject to change without notice.

## CWDM Systems, Mini package



Rec.:	CWDM (ITU-T G.694.2)	Fibre Length:	2 meter
Package:	42.6 × 25 × 6.2 mm (L×W×H)	Fibre Diameter:	250 μm
Connector:	Open-ended	Temp., Operation:	-10° – 70°C
Other connectors and/or packages upon request		Temp., Storage:	-40° – 85°C
Fibre colours according to industrial standard		Humidity:	5 – 85%

Product	Channels	Link loss (channels)	Link loss (ext)	Remarks	Product Number
<b>CWDM MUX</b>					
4ch. CWDM Mux	C27 – C33	~2 dB per pair		CCWDM	MCCW-04027S020
4ch. CWDM Mux <sup>1</sup>	C35 – C37 / C43 – C45	~2 dB per pair		CCWDM	MCCW-04035S020
4ch. CWDM Mux	C47 – C53	~2 dB per pair		CCWDM	MCCW-04047S020
4ch. CWDM Mux	C55 – C61	~2 dB per pair		CCWDM	MCCW-04055S020
8ch. CWDM Mux <sup>1</sup>	C27 – C37 / C43 – C45	~3 dB per pair		CCWDM	MCCW-08027S020
8ch. CWDM Mux	C47 – C61	~3 dB per pair		CCWDM	MCCW-08047S020
8ch. CWDM Mux <sup>1</sup>	C27 – C37 / C43 – C45	~3 dB per pair	~2.4 dB per pair	CCWDM, Ext port for other channels	MCCW-08127S020
8ch. CWDM Mux	C47 – C61	~3 dB per pair	~2.4 dB per pair	CCWDM, Ext port for other channels	MCCW-08147S020
18ch. CWDM Mux	C27 – C61	~3.0 dB per pair		CCWDM	MCCW-180273020

Package: 50 × 50 × 6.0 mm

<sup>1</sup>: Waterpeak channels (1390nm, 1410nm) excluded

Please consult Itectra for specific customer requests

Specifications are subject to change without notice.

## About Ipectra

Since 2008 Ipectra has designed, delivered, and serviced business-critical IT infrastructure for Danish datacentres, public companies, enterprises, and service provider networks. Ipectra is specialized in the optical domain with focus on delivery of optical components, WDM systems and consultancy based on a solid knowledge of optical networks, physical optical behaviour, and future evolution of the optical market.

Ipectra has gained the Danish Børsen Gazelle Award in three continuous years (2016 – 2018) and has successively been Bisnode Triple-A rated since 2014.

This success is founded in a close cooperation with our customers and a deep professional understanding of their infrastructure challenges and needs. We follow the technology closely and ensure that our customers benefit from the latest technologies with the most suitable solution.

## Quality in all aspects

Ipectra aims for the highest quality in all aspects from optical network design to the selection of vendors and components to each specific project. All Ipectras vendors are carefully selected among the leaders in the optical world and have all the same clear view on “Quality in all aspects” as Ipectra.

## Service and Support

Ipectra offers a selection of service and support options to secure operational efficiency and resolve critical problems smoothly and with minimum impact on the operational infrastructure. To accommodate this Ipectra offers different services from Advanced Hardware Replacement to four hours SLA and Professional Deployment Services from selected vendors.

## Contacts

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