

DATASHEET 1.1

DCF-F PPM MODULES

Passive Plug-in Modules

OVERVIEW

The DCP-F-A22 and DCP-F-R22 are both members of the DCP-F family that is designed for maximum configuration flexibility with the active units available as individual modules plugged directly into the standard Smartoptics DCP-2 chassis, each module occupying one slot. The DCP-F-A22 and DCP-F-R22 modules also have two internal expansion slots for optional Passive Plug-in Modules (PPM). There are five versions available:

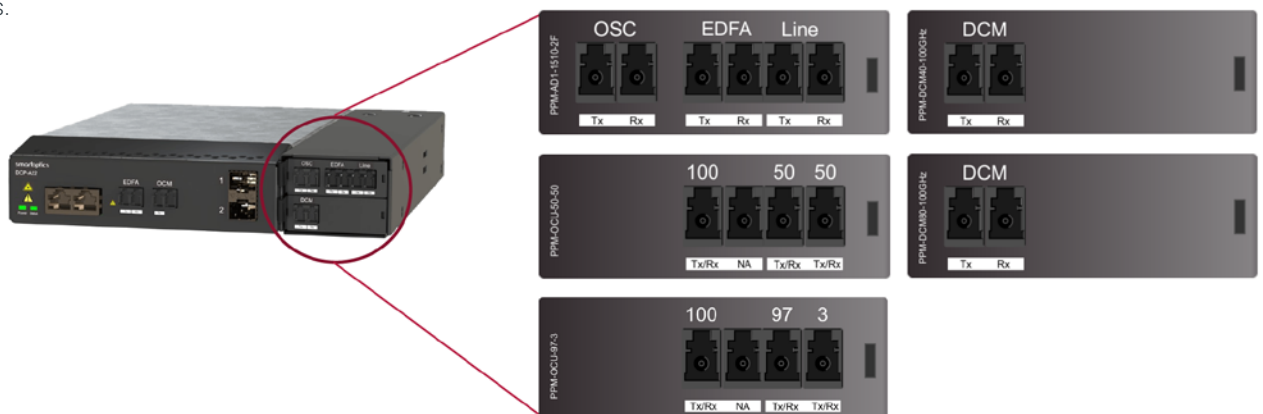
- A 1ch 1510nm Add/drop filter for Optical Supervisory Channels (OSC), PPM-AD1-1510-2F
- A 40km Dispersion Compensation Module (DCM), PPM-DCM40-100GHz
- A 40km Dispersion Compensation Module (DCM), PPM-DCM80-100GHz
- A 50/50 Optical Coupler Unit (OCU), PPM-OCU-50-50
- A 97/3 Optical Coupler Unit (OCU), PPM-OCU-97-3

Each of the modules are further described below.

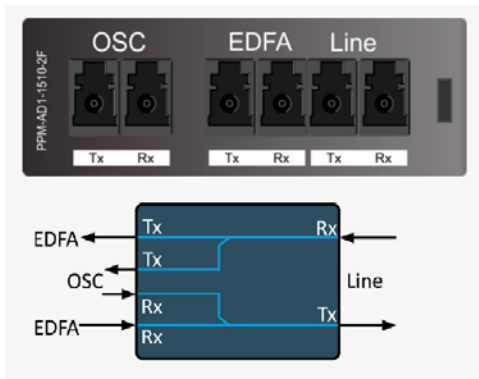
See documentation on DCP-F-A22 and DCP-F-R22 for more information on how these PPM modules are used in different applications.

ORDERING INFORMATION

Part Number	Description
PPM-AD1-1510-2F	Passive Plug-in Module (PPM) OSC add/drop filter 1510nm
PPM-DCM40-100GHz	Passive Plug-in Module (PPM) 40km Dispersion Compensation Module (DCM) 100GHz
PPM-DCM80-100GHz	Passive Plug-in Module (PPM) 80km Dispersion Compensation Module (DCM) 100GHz
PPM-OCU-50-50	Passive Plug-in Module (PPM) 50/50 Optical Coupler (OCU)
PPM-OCU-97-3	Passive Plug-in Module (PPM) 97/3 Optical Coupler (OCU)



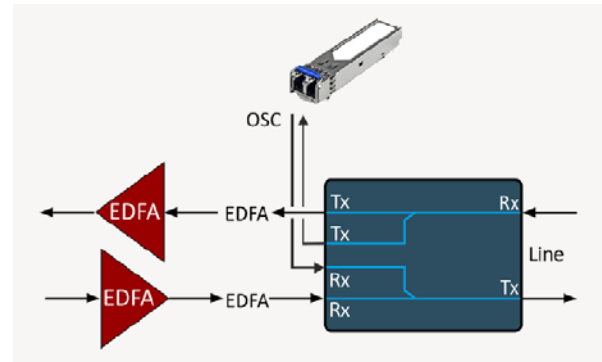
OSC ADD/DROP FILTER (PPM-AD1-1510-2F)



Signals entering the module are denoted "Rx".
Signals exiting the module are denoted "Tx".

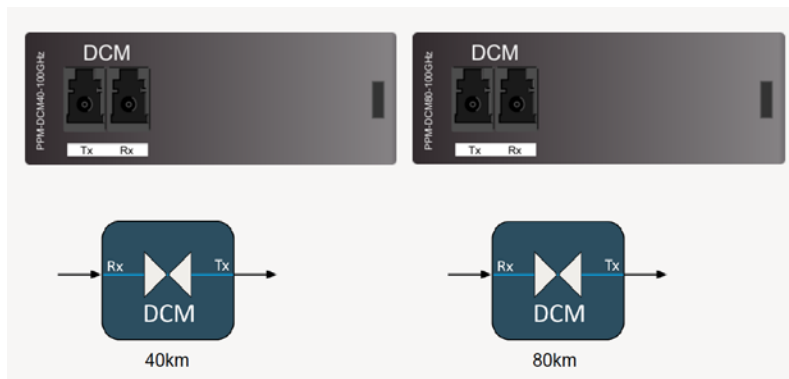
The OSC Add/drop filter is intended to enable insertion of an OSC channel between the optical amplifier (EDFA) and the line fiber.

The AD-filter operates at the CWDM channel 1511nm.



Parameter	Min	Max
Operating range EDFA ↔ Line	1260nm	1620nm
Add/drop channel		1511nm
Channel passband		ITU±6.5nm
Add/drop loss, OSC ↔ Line (Pass band)		0.7dB
Through-loss, EDFA ↔ Line (Reflection band)		0.5dB
Pass Band Isolation	30dB	
Reflection Band Isolation	12dB	
Ripple, passband		0.3dB
Directivity	50dB	
Return loss	45dB	
Max optical power		500mW
Connector type		LC/UPC
Operating temperature	0°C	+70°C
Storage temperature	-40°C	+85°C

DCM MODULES (PPM-DCM40-100GHZ & PPM-DCM80-100GHZ)



The OCM modules contain a channelized Fiber Bragg Grating (FBG) dispersion compensating component that provides the opposite dispersion of a 40km and 80km SM-fiber length, respectively.

Signals entering the module are denoted "Rx". Signals exiting the module are denoted "Tx".

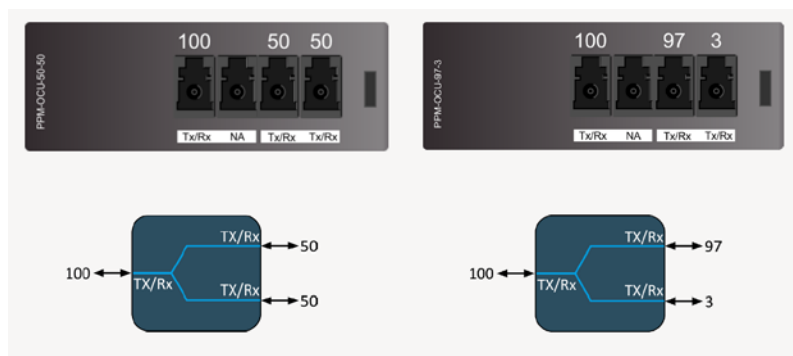
PPM-DCM40-100GHZ

Parameter	Min	Max
Operating range	191.3THz	196.0THz
Compensating length		40km
Channel spacing		100GHz
Operation bandwidth		72GHz
Dispersion level 196.0 THz		-625 ps/nm
Dispersion level 192.0 THz		
Insertion loss Rx ↔ Tx		3dB
Connector type		LC/UPC
Operating temperature	0°C	+55°C
Storage temperature	-40°C	+85°C

PPM-DCM80-100GHZ

Parameter	Min	Max
Operating range	191.3THz	196.0THz
Compensating length		80km
Channel spacing		100GHz
Operation bandwidth		72GHz
Dispersion level 196.0 THz		-1249 ps/nm
Dispersion level 192.0 THz		-1397 ps/nm
Insertion loss Rx ↔ Tx		3dB
Connector type		LC/UPC
Operating temperature	0°C	+55°C
Storage temperature	-40°C	+85°C

OCU MODULES (PPM-OCU-50-50 & PPM-OCU-97-3)



The OCU modules are C-band optical couplers where the signal is split or combined with the ratio 50% - 50% and 97% - 3%, respectively.

The 97/3-coupler is intended for cases where a smaller portion of the optical signal is to be connected to e.g. an Optical Channel Monitoring (OCM) function.

PPM- OCU-50-50

Parameter	Min	Max
Passband	1526nm	1570nm
Coupling ratio		50/50
Insertion loss, 100 → 50		3.4dB
Connector type		LC/UPC
Operating temperature	0°C	+70°C
Storage temperature	-40°C	+85°C

PPM- OCU-97-3

Parameter	Min	Max
Passband	1526nm	1570nm
Coupling ratio		97/3
Insertion loss, 100 → 97		0.3dB
Insertion loss, 100 → 3		16.6dB
Connector type		LC/UPC
Operating temperature	0°C	+70°C
Storage temperature	-40°C	+85°C

Smartoptics makes no warranties or representations, expressed or implied, of any kind relative to the information or any portion thereof contained in this document or its adaptation or use, and assumes no responsibility or liability of any kind, including, but not limited to, indirect, special, consequential or incidental damages, for any errors or inaccuracies contained in the information or arising from the adaptation or use of the information or any portion thereof. The information in this document is subject to change without notice