



8 Channel Mux/Demux with low-loss express; 100GHz Channels

Bookham offers a high performance 8 channel multiplexer or demultiplexer solution for 100 GHz channels. This product uses Bookham proprietary AED thin film deposition technology for superior performance.

The Bookham 8 channel solutions offer an ideal combination of fully passive operation, low loss, compact size, wide channel pass bands and an upgrade path to 40 channels. Insertion loss of 3.5 dB is achieved in the uniform loss version of the product. Matched mux-demux pairs are offered with a typical back-to-back insertion loss of 4 dB. Ribbon connector options are available for easy interconnection to the rest of the system. Thin film technology provides a flat-topped pass band design that allows for less stringent control of the laser wavelength over the system lifetime.

These flexible upgrade modules use the Bookham 8-skip-0 banded upgrade port. The 8-skip-0 filter passes eight 100GHz spaced channels to the ITU channel filters. The same filter reflects all remaining channels onto the express port with very low loss. Modules can be cascaded to form 16, 24, 32 or 40 channel filter solutions. The 8-skip-0 banded port also allows optical add drop multiplexing (OADM) functionality for this module.



Features

- Passive operation
- Flexible upgrade path to 40 channels
- Flat pass band design
- Low loss express using 8-skip-0 filter
- 27.5 GHz clear pass band
- Low loss (<3.5dB)
- High adjacent channel isolation
- -5 to 70°C operating temperature
- Compact Size (120x80x8mm)

Options

- Ribbon connectors
- Uniform loss or matched mux/demux loss
- Optical monitor ports
- OADM function
- Without 8-skip-0 filter
- Rack mount (1-RU shelf unit) or LGX enclosure (single width)

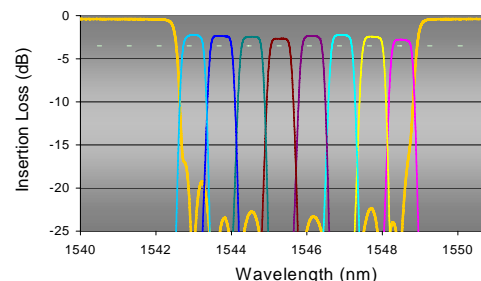
Applications

- Metro and long-haul mux/demux
- OADM nodes
- Subsystem building block

Compliance

- Telcordia GR-1221 qualified
- RoHS compliant (5/6)

Example Performance



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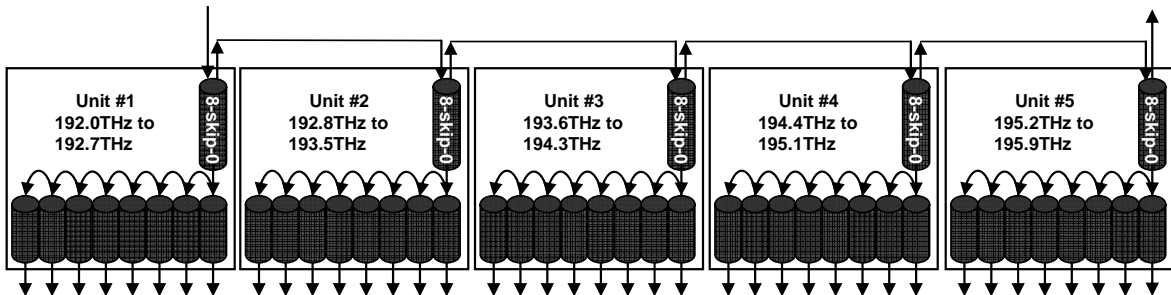
Specifications (valid over operating temperature)

Parameter	Region	Measured from => to	Specification	Unit
Channel Number			8	
Channel Spacing			100	GHz
Band Plan Options	20		192.0 to 192.7	THz
	28		192.8 to 193.5	
	36		193.6 to 194.3	
	44		194.4 to 195.2	
	52		195.2 to 195.9	
Passband Region			ITU ± 13.75	GHz
Insertion Loss ^a	Passbands	Common => Ports 1-8	3.5	max dB
		Common => Express	0.6	max dB
IL Variation	Passbands	Common => Ports 1-8	0.4	max dB
Channel to Channel Variation	Passbands	Common => Ports 1-8	1.0	max dB
Isolation		Adj Ch Common => Ports 1-8	25	min dB
		Non-Adj Ch Common => Ports 1-8	40	min dB
		Add/Drop Common => Express	13	min dB
Return Loss			45	min dB
Polarization Dependent Loss			0.25	max dB
Polarization Mode Dispersion			0.15	max dB
Power Handling			300	min mW
Operating Temperature			-5 to 70	°C
Storage Temperature			-40 to 85	°C
Fiber Length			1.0 ± 0.1	m
Dimensions			120x80x8	mm
Fiber Type			900µm tight buffer options available	
Connector Type			options available	

^a Losses include connectors

Typical Application

Cascade of five 8 channel modules for 40 channel coverage. Modules can be added in any order of cascade.





Ordering Information

8ch Mux/Demux part numbers:

MD1C08XX0289

<u>Band (THz)</u>	<u>XX</u>
192.0 to 192.7	20
192.8 to 193.5	28
193.6 to 194.3	36
194.4 to 195.1	44
195.2 to 195.9	52

Part numbers may change depending on optional configurations chosen including connectors, packaging, pigtails, tap ports and final optical function.

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