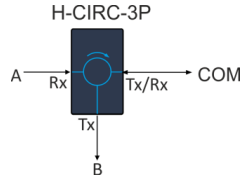
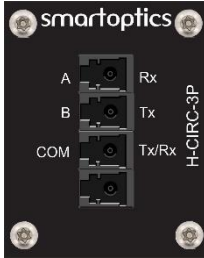


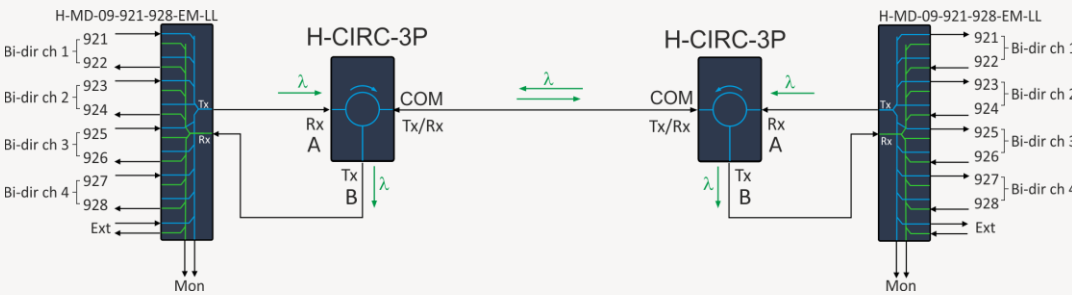
H-CIRC-3P

3-port 1550nm Optical Circulator



OVERVIEW

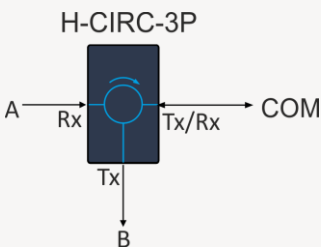
The H-CIRC-3P is an optical circulator that allows light to travel through in only one direction. A wavelength entering port A will only propagate to port COM. A signal entering port COM will only propagate to port B. The typical application is to enable single-fiber operation using filters for fiber-pair configurations. Due to reflections in connectors and splices, one must use different channels in up- and down-link to avoid interference.



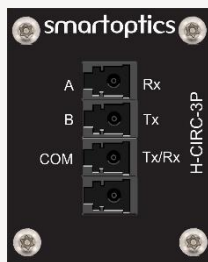
The optical circulator can be used in combination with e.g. the Smartoptics DCP-M systems to provide a multi-channel DWDM solution over a single-fiber configuration.

The H-CIRC-3P supports the Industrial temperature range of -40°C to +85°C. If the temperature range is kept at the Commercial temperature range of 0°C to +70°C, the performance is improved. Values for both ranges are provided. H-CIRC-3P can be mounted in the H-Series 1 RU mounting bracket solution together with other filter modules.

FUNCTIONAL OVERVIEW AND PORT DESCRIPTION



Signals entering the filter is denoted "Rx".
Signals exiting the filter is denoted "Tx".

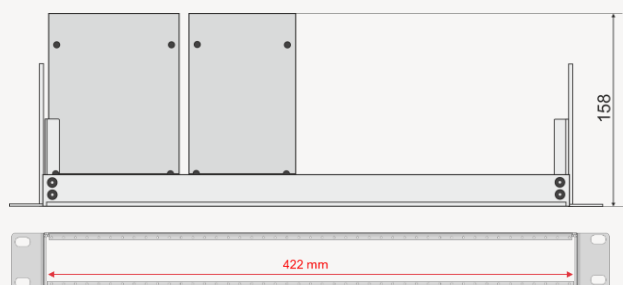


A	Rx
B	Tx
COM	Tx/Rx
	NC

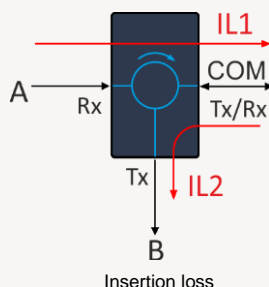
TECHNICAL SPECIFICATIONS

Parameter	C-temp conditions	I-temp Conditions
Operating wavelength range λ_1	1530nm to 1570nm (190.95THz – 195.95THz) ¹⁾	⇐
Operating wavelength range λ_2	1490nm to 1530nm (195.95THz – 201.20THz)	⇐
Insertion loss A Rx \Rightarrow COM Tx/Rx (IL1) for wavelength range λ_1	Max 0.9dB	Max 1.1dB
Insertion loss COM Tx/Rx \Rightarrow B Tx (IL2) for wavelength range λ_1	Max 0.9dB	Max 1.1dB
Insertion loss A Rx \Rightarrow COM Tx/Rx (IL1) for wavelength range λ_2	Max 1.3dB	Max 1.4dB
Insertion loss COM Tx/Rx \Rightarrow B Tx (IL2) for wavelength range λ_2	Max 1.3dB	Max 1.4dB
Isolation; COM Tx/Rx \Rightarrow A Rx / B Tx \Rightarrow COM Tx/Rx for λ_1	40dB @ 23°C	⇐
Isolation; COM Tx/Rx \Rightarrow A Rx / B Tx \Rightarrow COM Tx/Rx for λ_2	34dB @ 23°C	⇐
Ripple; A Rx \Rightarrow COM Tx/Rx / COM Tx/Rx \Rightarrow B Tx for λ_1 & λ_2	Max 0.4dB	⇐
Directivity	Min 45dB	⇐
Return loss	Min 40dB	⇐
Polarization dependent loss	Max 0.2dB for range λ_1 Max 0.3dB for range λ_2	⇐
Polarization mode dispersion	Max 0.20ps	⇐
Connector type	LC/UPC	⇐
Module width	35 mm	⇐
Operating temperature	0°C to +70°C	-40°C to +85°C
Storage temperature	-40°C to +85°C	⇐
Max optical power	Max 500mW	⇐

¹⁾ Typical 40ch DWDM channel plan is from 192.10THz to 196.00THz



Mounting bracket dimensions with two example filters.



ORDER INFORMATION

Part number	Description
H-CIRC-3P	H-Series: Optical circulator 3-port 1490-1570nm, 35mm, LC/UPC

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