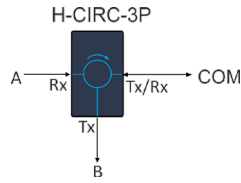
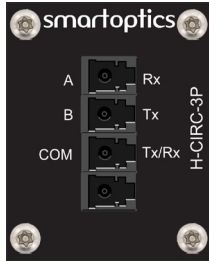


# H-CIRC-3P

## 3-port 1550nm Optical Circulator



### OVERVIEW

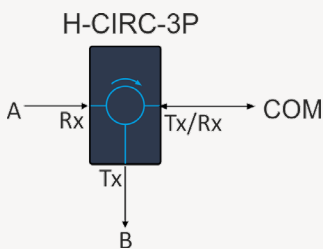
The H-CIRC-3P is an optical circulator that allows light to travel through in only one direction. A wavelength entering port A will only propagate to port COM. A signal entering port COM will only propagate to port B. The typical application is to enable single-fiber operation using the same wavelength to provide a bi-directional link. The normal technique is to use two different wavelengths to avoid interference between up- and down-link.



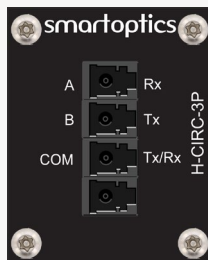
The optical circulator can be used in combination with e.g. the Smartoptics DCP-M systems to provide a multi-channel DWDM solution over a single-fiber configuration.

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".

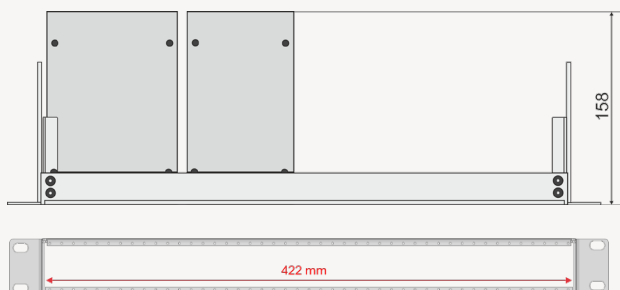


A Rx
B Tx
COM Tx/Rx
NC

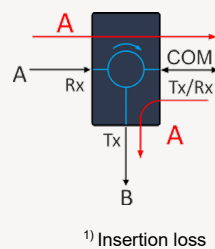
## TECHNICAL SPECIFICATIONS

Parameter	Min	Max
Operating wavelength range $\lambda_1$	1530nm	1570nm
Operating wavelength range $\lambda_2$	1490nm	1530nm
Insertion loss (A) for wavelength range $\lambda_1$		0.9dB <sup>1)</sup> 1.1dB <sup>2)</sup>
Insertion loss (A) wavelength range $\lambda_2$		1.3dB <sup>1)</sup> 1.4dB <sup>2)</sup>
Isolation; COM Tx/Rx $\Rightarrow$ A Rx / B Tx $\Rightarrow$ COM Tx/Rx for $\lambda_1$	40dB @ 23°C	
Isolation; COM Tx/Rx $\Rightarrow$ A Rx / B Tx $\Rightarrow$ COM Tx/Rx for $\lambda_2$	34dB @ 23°C	
Ripple; A Rx $\Rightarrow$ COM Tx/Rx / COM Tx/Rx $\Rightarrow$ B Tx for $\lambda_1$ & $\lambda_2$		0.4dB
Directivity	45dB	
Return loss	40dB	
Polarization dependent loss		0.2dB
Polarization mode dispersion		0.20ps
Connector type		LC/UPC
Module width		35 mm
Operating temperature range C	0°C	+70°C
Operating temperature range I	-40°C	+85°C
Storage temperature	-40°C	+85°C
Mounting bracket	H-Chassi-1RU (19"), 422 mm slot width	
Mounting depth (flush mount)	158 mm	

<sup>1)</sup> Value if operating temperature is within C-range  
<sup>2)</sup> Value if operating temperature is within I-range



Mounting bracket dimensions with two example filters.



## ORDER INFORMATION

The table below shows part number and a short description.

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