

Optical Passives (ISP)

NP31F08

Octal RFoG/PON Filter

FEATURES

- Enables deployments of RFPON (RFoG with GEPON) applications when used with OR3144H receivers
- Eight PON filters in a single high density module
- One module supports two OR3144H receivers
- 3-port filters to combine or separate PON signals from RFoG wavelengths
- LC/APC connectors provide high density and performance
- Low insertion loss
- Totally passive module
- Simplifies RFPON installation and reduces rack space requirements
- Occupies one half-depth slot in CH3000
- LGX chassis-compatible
- Replaces OP3168P and OP3178P



PRODUCT OVERVIEW

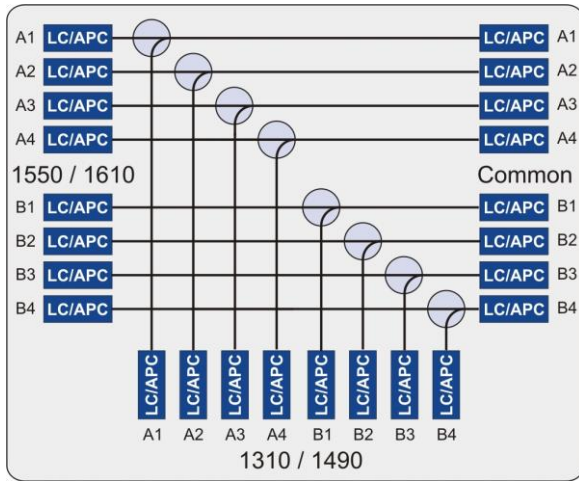
The ARRIS NP31F08S07 Octal PON filter module provides eight 3-port combiner/separator filters that combine (or separate) PON signals from RFoG wavelengths. The module is designed to complement two OR3144H RFoG Diplexer/Return Receiver modules (versions supporting a 1610nm return wavelength, model number OR3144H-85-01-02-AL) to readily support up to eight RFPON (RFoG with GEPON) optical network segments. Having the PON filters in a separate passive module allows the network operator to initially deploy RFoG only using a 1610 nm return, while providing a simple migration path to later add PON filters for RFPON support.

High density packaging enables network operators to install up to nine “groups” (each comprising a single NP31F08S07 Filter side-by-side with two OR3144H modules) in a single 3RU chassis, and thus providing support for up to 72 RFPON network segments per chassis. Assuming 32 CPEs per network segment, a single chassis can thus support deployments to over 2,300 residences.

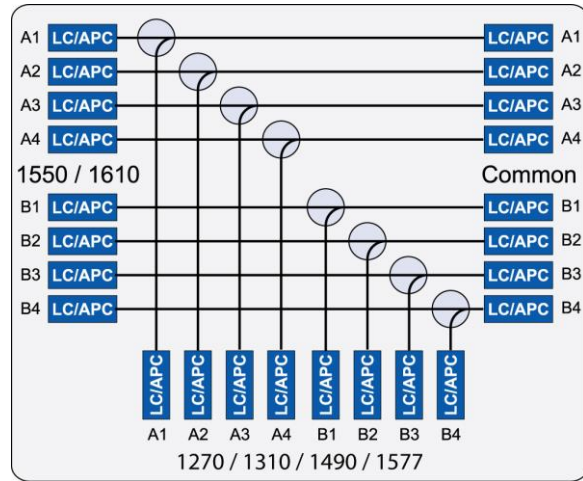
The filter is packaged in an LGX compatible module and can be mounted in the CH3000 chassis, occupying one half-depth slot. The compact design minimizes rack space requirements in headends or hubs and enhances deployment of fiber-to-the-home (FTTH) networks. Additionally, the compact single-width module design can be plugged in either the front or rear of the CH3000 3RU chassis to optimize equipment installation and operating conditions. It is designed to be used in controlled indoor environments within a temperature range of -20° to $+65^{\circ}\text{C}$.

SPECIFICATIONS

Characteristics	Specification	
Physical		
Dimensions	6.5" D x 4.3" H x 1.0" W (3RU) (16.5 cm x 11 cm x 2.5 cm)	
Weight	1.5 lbs (0.68 kg)	
Environmental		
Operating temperature range	-20° to $+65^{\circ}\text{C}$ (-4° to $+149^{\circ}\text{F}$)	
Storage temperature range	-40° to $+85^{\circ}\text{C}$ (-40° to $+185^{\circ}\text{F}$)	
Humidity	5% to 95% non-condensing	
General		
	NPF08S07	NPF08S08
Nominal wavelengths	<ul style="list-style-type: none"> Broadcast pass-through: 1550 nm (via 1550/1610 ports) PON downstream: 1490 nm (via 1310/1490 ports) PON upstream: 1310 nm (via Common ports) RFoG upstream: 1610 nm (via Common ports) 	<ul style="list-style-type: none"> Broadcast passthrough: 1550 nm (via 1550/1610 ports) PON downstream: 1490/1577 nm (via 1310/1490 ports) PON upstream: 1270/1310 nm (via Common ports) RFoG upstream: 1610 ± 10 nm (via Common ports)
Optical		
	NPF08S07	NPF08S08
RFoG ports to Common ports	<ul style="list-style-type: none"> Passband: 1530–1620 nm Insertion loss, max: 1.3 dB Isolation of 1550 nm to 1310/1490 port, min: 50 dB Isolation of 1610 nm to 1310/1490 port, min: 15 dB 	<ul style="list-style-type: none"> Passband: 1525–1565 nm and 1600-1620 nm Insertion loss, max: 1 dB Isolation of 1550 nm to 1310/1490 port, min: 50 dB Isolation of 1610 nm to 1310/1490 port, min: 15 dB
PON ports to Common ports	<ul style="list-style-type: none"> Passband: 1260–1510 nm Insertion loss, max: 1.2 dB Isolation of 1310 nm to 1550/1610 port, min: 30 dB Isolation of 1490 nm to 1550/1610 port, min: 50 dB 	<ul style="list-style-type: none"> Passband: 1260–1500 nm or 1575-1580 Insertion loss, max: 0.9 dB Isolation of 1270/1310 nm to 1550/1610 port, min: 25 dB Isolation of 1490/1577 nm to 1550/1610 port, min: 50 dB
Return loss, min	45 dB	
Power handling, max (any input port)	21.8 dBm	
Connectors		
	NPF08S07	NPF08S08
Total 24 LC/APC connectors	<ul style="list-style-type: none"> 8 Common for Access Network (ports A1-A4 and B1-B4) 8 1550/1610 (for BC/RFoG, ports A1-A4 and B1-B4) 8 1310/1490 (for PON OLT, ports A1-A4 and B1-B4) 	<ul style="list-style-type: none"> 8 Common for Access Network (ports A1-A4 and B1-B4) 8 1550/1610 (for BC/RFoG, ports A1-A4 and B1-B4) 8 1270/1310/1490/1577 (for PON OLT, ports A1-A4 and B1-B4)



NPF08S07



NPF08S08

ORDERING INFORMATION

Part Number	Description
NP31F08S07A0S-0LA-AL	Eight PON filters in a passive module (configured with 8 1550/1610 RFoG input/output ports, 8 OLT-facing 1490-fwd and 1310-rtn PON I/O ports, and 8 Access Network I/O ports, all with LC/APC connectors)
NP31F08S08A0S-0LA-AL	Eight PON filters in a passive module (configured with 8 1550/1610 RFoG input/output ports, 8 OLT-facing 1490/1577-fwd and 1270/1310-rtn PON I/O ports, and 8 Access Network I/O ports, all with LC/APC connectors)

RELATED PRODUCTS

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Optical Transmitters	Optical Passives
HPON™	Installation Services
PF3000	

Customer Care

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