



# PON MUX of GPON, 10GPON, NG-PON2 and RFoG Coexistence

This module can accommodate 4 different PONs, GPON, 10GPON, NG-PON2 and RFoG, in the same network environment. The unit is made into a rack mountable LGX box, 19in chassis or compact metal box with same footprint and option height for mutli-unit in the same package. The module configuration can be single MUX or expanded up to quadruple MUXes.

All AC Photonics' products are Telcordia qualification tested.

## PERFORMANCE SPECIFICATIONS

## FEATURES

Wide Operating Wavelength Range  
Low Insertion Loss  
High Channel Isolation  
High Stability and Reliability  
Extended Operating Temperature is available

## APPLICATION

WDM System

Data Center

| Parameter                    |                  | Specifications                                                                                                          |                     |
|------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------|
|                              |                  | Downstream                                                                                                              | Upstream            |
| GPON                         | Wavelength Range | 1480 ~ 1500nm                                                                                                           | 1290 ~ 1330nm       |
|                              | Insertion Loss   | ≤ 0.70dB                                                                                                                | ≤ 0.70dB            |
|                              | Isolation        | ≥ 30dB                                                                                                                  | ≥ 30dB              |
| 10GPON<br>(XG- and XGS-PON)  | Wavelength Range | 1575 ~ 1580nm                                                                                                           | 1260 ~ 1280nm       |
|                              | Insertion Loss   | ≤ 0.90dB                                                                                                                | ≤ 0.90dB            |
|                              | Isolation        | ≥ 30dB                                                                                                                  | ≥ 30dB              |
| NG-PON2<br>(TWDM)            | Wavelength Range | 1596.34 ~ 1602.31nm                                                                                                     | 1524.11 ~ 1543.73nm |
|                              | Insertion Loss   | ≤ 1.2dB                                                                                                                 | ≤ 1.2dB             |
|                              | Isolation        | ≥ 30dB                                                                                                                  | ≥ 30dB              |
| RFoG                         | Wavelength Range | 1550 ~ 1560nm                                                                                                           | 1610 ~ 1620nm       |
|                              | Insertion Loss   | ≤ 1.2dB                                                                                                                 | ≤ 1.2dB             |
|                              | Isolation        | ≥ 30dB                                                                                                                  | ≥ 30dB              |
| Passband Ripple              |                  | ≤ 0.30dB                                                                                                                |                     |
| Polarization Dependent Loss  |                  | ≤ 0.10dB                                                                                                                |                     |
| Polarization Mode Dispersion |                  | ≤ 0.10ps                                                                                                                |                     |
| Directivity                  |                  | ≥ 50dB                                                                                                                  |                     |
| Return Loss                  |                  | ≥ 45dB                                                                                                                  |                     |
| Optical Power                |                  | ≤ 300mW                                                                                                                 |                     |
| Operating Temperature        |                  | 0 to +70°C (Extended temperatures are also available upon request)                                                      |                     |
| Storage Temperature          |                  | - 40 to +85°C                                                                                                           |                     |
| Package Dimensions           |                  | F = 96x78x8.0mm for single and duplex<br>G= 96x78x13mm for triplex and quadplex<br>L1= Single LGX (up to 24-Ch with LC) |                     |

All values referenced are without connector.

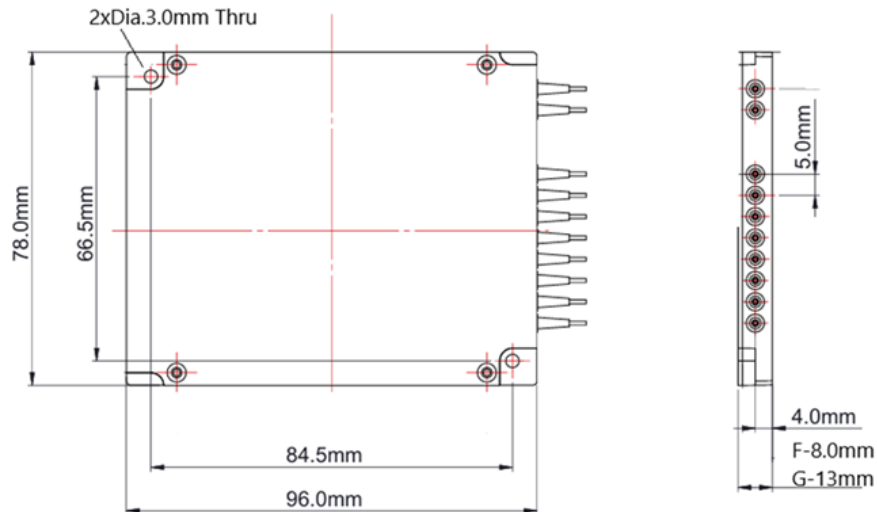
Max. available port numbers for package sizes

| Connector | Single LGX | Double LGX | 1U rack |
|-----------|------------|------------|---------|
| FC        | 12         | 24         | 48      |
| SC        | 12         | 24         | 50      |
| LC        | 24         | 48         | 96      |

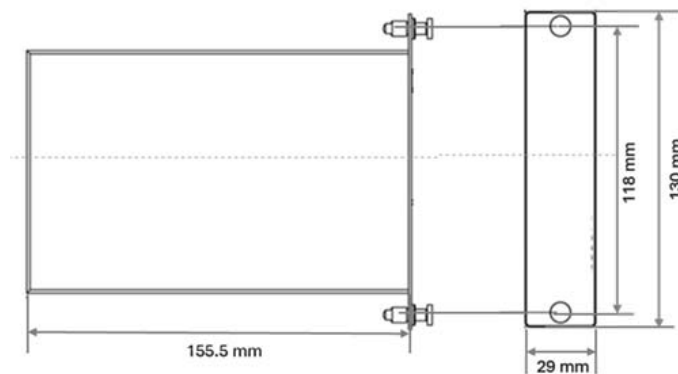
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### MECHANICAL DIMENSIONS

F and G package



LGX



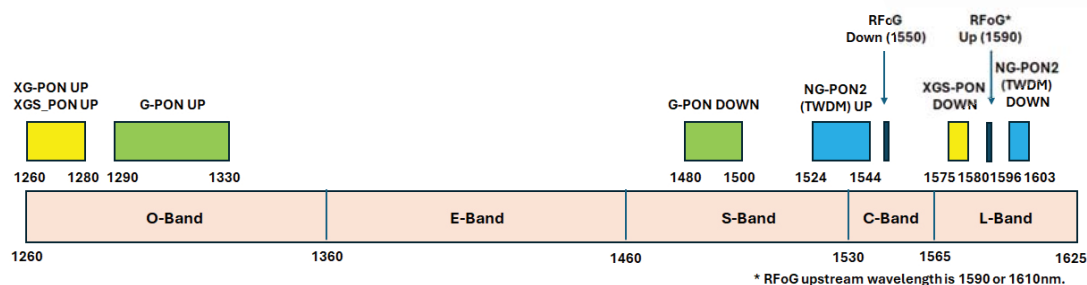
### CHANNEL CONFIGURATIONS





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### UPSTREAM AND DOWNSTREAM WAVELENGTH PLAN FOR PON MUX



### ORDERING INFORMATION

| PONMUX | Configuration | Port    | Package       | Fiber Type*                | Pigtail Style           | Fiber Length** | In Connector | Out Connector |
|--------|---------------|---------|---------------|----------------------------|-------------------------|----------------|--------------|---------------|
|        | S=Single      | 104=1x4 | F=F package   | 2=SMF-28 Ultra             | None= for Lx,R1 package | 05=0.5m        | 0= None      | 0= None       |
|        | D=Duplex      |         | G=G package   | (G.657.A1)                 |                         | 10=1.0m        | 1= FC/APC    | 1= FC/APC     |
|        | T=Triplex     |         | L1=Single LGX | 3=ClearCurve ZBL(G.657.B3) | 1=Bare fiber            | .              | 2= FC/PC     | 2= FC/PC      |
|        | Q=Quadplex    |         |               |                            | 2=900um loose tube      | .              | 3= SC/APC    | 3= SC/APC     |
|        |               |         |               |                            |                         | 20=2.0m        | 4= SC/PC     | 4= SC/PC      |
|        |               |         |               |                            |                         |                | 5= ST        | 5= ST         |
|        |               |         |               |                            |                         |                | 6= LC/UPC    | 6= LC/UPC     |
|        |               |         |               |                            |                         |                | 7= LC/APC    | 7= LC/APC     |

\*1=SMF-28(G.652) is available upon request.

\*\* Other length is available upon request, However, 900µm loose tube is only up to 2m.

### RELATED PRODUCTS

[PON MUX of GPON, 10GPON and RFoG Coexistence](#) <sup>NEW</sup>

[NG-PON2 \(TWDM\) MUX](#) <sup>NEW</sup>

[PON WDM](#) <sup>NEW</sup>

[PLC Splitter Module and Rack](#)