

**BENEFITS**

- .no temperature control required
- .optical plug and play

**FEATURES**

- .passively athermal
- .small footprint
- .high isolation
- .low insertion loss
- .PM option available
- .Telcordia GR-1209 and GR-1221 compliant
- .rack packaging available

**APPLICATIONS**

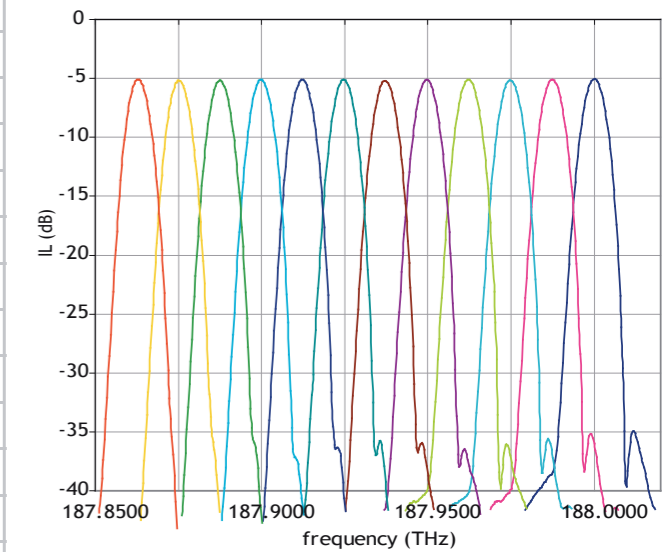
- .replacement of TFF / AWG
- .increasing existing network capacity
- .DWDM PON
- .OADM
- .submarine networks
- .ultra dense networks

mics is an athermal DWDM mux/demux. The product line covers all bands, all numbers of channels and all spacings, even the non-ITU ones. Since 1998 Mics is deployed on the field by sytem vendors, for metro, long haul and submarine networks.

| parameter               | unit | gaussian      |        |        |               |        |        | flat top      |        |        |               |        |        |       |
|-------------------------|------|---------------|--------|--------|---------------|--------|--------|---------------|--------|--------|---------------|--------|--------|-------|
|                         |      | < 16 channels |        |        | < 48 channels |        |        | < 16 channels |        |        | < 32 channels |        |        |       |
| spacing                 | GHz  | 50            | 100    | 200    | 50            | 100    | 200    | 50            | 100    | 200    | 50            | 100    | 200    |       |
| insertion loss          | dB   | guaranted     | 4.0    | 3.5    | 4.0           | 5.0    | 5.0    | 6.0           | 6.5    | 6.0    | 6.5           | 7.5    | 7.0    | 8.0   |
|                         |      | typical       | 2.5    | 2.5    | 3.0           | 3.0    | 2.5    | 4.5           | 5.5    | 5.0    | 5.5           | 6.0    | 5.5    | 6.5   |
| IL uniformity           | dB   | 1.0           | 1.0    | 1.0    | 1.5           | 1.5    | 1.5    | 1.0           | 1.0    | 1.0    | 1.5           | 1.5    | 1.5    |       |
| PDL                     | dB   | 0.3           | 0.3    | 0.3    | 0.4           | 0.4    | 0.4    | 0.3           | 0.3    | 0.3    | 0.4           | 0.4    | 0.4    |       |
| channel center accuracy | GHz  | guaranted     | ± 2.5  | ± 3.75 | ± 6.25        | ± 3.12 | ± 6.25 | ± 7.5         | ± 2.5  | ± 3.75 | ± 6.25        | ± 3.12 | ± 6.25 | ± 7.5 |
|                         |      | typical       | ± 1.25 | ± 1.25 | ± 3.12        | ± 2    | ± 3.75 | ± 4           | ± 1.25 | ± 1.25 | ± 3.12        | ± 2    | ± 3.75 | ± 4   |
| bandwidth @-1dB         | GHz  | > 14          | > 28   | > 56   | > 14          | > 28   | > 56   | > 23          | > 46   | > 92   | > 21          | > 42   | > 84   |       |
| bandwidth @-3dB         | GHz  | > 24          | > 48   | > 96   | > 24          | > 48   | > 96   |               |        |        |               |        |        |       |
| ITU passband            | GHz  | ± 6.25        | ± 12.5 | ± 25   | ± 6.25        | ± 12.5 | ± 25   | ± 6.25        | ± 12.5 | ± 25   | ± 6.25        | ± 12.5 | ± 25   |       |
| adjacent crosstalk      | dB   | 30            | 30     | 30     | 30            | 30     | 30     | 25            | 25     | 25     | 25            | 25     | 25     |       |
| non-adjacent crosstalk  | dB   | 40            | 40     | 40     | 40            | 40     | 40     | 40            | 40     | 40     | 40            | 40     | 40     |       |
| cumulative crosstalk    | dB   | 25            | 25     | 25     | 22            | 22     | 22     | 23            | 23     | 23     | 21            | 21     | 21     |       |

mics features the narrowest spacings (down to 12.5 GHz) available on the market, while remaining athermal without compromising on performances. Flat Top version available.

| parameter               | unit | gaussian      |        |               |        |        |
|-------------------------|------|---------------|--------|---------------|--------|--------|
|                         |      | < 16 channels |        | < 48 channels |        |        |
| spacing                 | GHz  | 12.5          | 25     | 12.5          | 25     |        |
| insertion loss          | dB   | guaranted     | 6.5    | 5.0           | 7.5    | 6.0    |
|                         |      | typical       | 5.5    | 4.0           | 6.5    | 5.0    |
| IL uniformity           | dB   | 1.0           | 1.0    | 1.5           | 1.5    |        |
| PDL                     | dB   | 0.3           | 0.3    | 0.4           | 0.4    |        |
| channel center accuracy | GHz  | guaranted     | ± 1.25 | ± 2.5         | ± 1.75 | ± 3.12 |
|                         |      | typical       | ± 0.75 | ± 1.25        | ± 1    | ± 2    |
| bandwidth @-1dB         | GHz  | > 3.5         | > 7    | > 3.5         | > 7    |        |
| bandwidth @-3dB         | GHz  | > 6           | > 12   | > 6           | > 12   |        |
| ITU passband            | GHz  | ± 1.56        | ± 3.12 | ± 1.56        | ± 3.12 |        |
| adjacent crosstalk      | dB   | 28            | 28     | 28            | 28     |        |
| non-adjacent crosstalk  | dB   | 40            | 40     | 40            | 40     |        |
| cumulative crosstalk    | dB   | 24            | 24     | 22            | 22     |        |

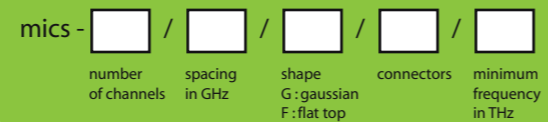


12.5 GHz mux/demux typical response

**general specifications**

|                               |                            |
|-------------------------------|----------------------------|
| fibre type for SMF            | Coreguide SMF-28           |
| fibre type for PMF            | PM Panda                   |
| cable type                    | 900µm                      |
| frequency band                | S+C+L (1460 to 1610nm)     |
| PMD                           | < 0.2 ps                   |
| directivity                   | 50 dB                      |
| chromatic dispersion          | ± 10 ps/nm                 |
| return loss                   | 30 dB (40 db typ.)         |
| operating temperature range   | -5°C to +70°C              |
| IL thermal stability over OTR | ± 0.5 dB                   |
| wavelength thermal stability  | < 1 pm/°C (100GHz spacing) |
| storage temperature range     | -40°C to +85°C             |
| tested to TELCORDIA           | GR-1209 and GR-1221        |

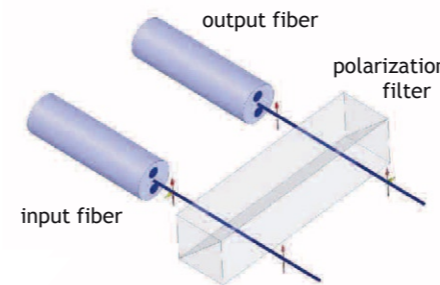
**ordering information**



PM option is available for each product of KYLIA mux/demux range. PM mics exhibits the highest PER on the market (19dB).

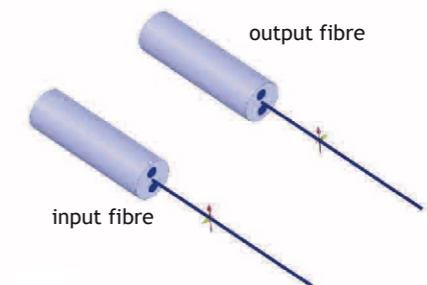
**19dB PER configuration**

Using a polarization filter, KYLIA guarantees a PER > 19dB. In this configuration, the mux/demux can only be used with input beam polarization oriented along the slow axis.



**15dB PER configuration**

Without polarization filter, KYLIA guarantees a PER > 15dB. In this configuration, the mux/demux can be used with input beam polarization oriented along both axis, or even as a SM mux/demux.



**ordering information**

