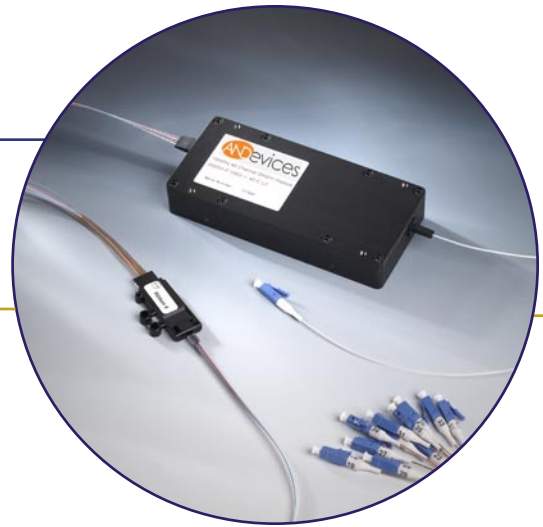


Planar Waveguide Components

50GHz AWG MULTIPLEXER/DEMULTIPLEXER (APMUX1050/APDMX1050)



APMUX1050 and APDMX1050 are arrayed-waveguide grating (AWG) wavelength division multiplexers and demultiplexers at 50GHz channel spacing based on ANDevices' patent-pending CVD process. These silica-on-silicon waveguides exhibit exceptional material uniformity. Complemented with our automated robust packaging, ANDevices' planar lightwave circuits are well suited for demanding telecom applications such as DWDM, long-haul, and metro transmission systems. The AWG offers low insertion loss, accurate channel alignment, very low crosstalk and high channel-to-channel uniformity. This product family complies with Telcordia GR-1221-CORE requirements.

Features

- Low Insertion Loss
- Extremely Low Crosstalk
- Low PDL
- Low Chromatic Dispersion
- Telcordia GR-1221-CORE Qualified

Applications

- DWDM Transmission
- Wavelength Routing
- Optical Add/Drop

Options

- Channel Count: 16, 24, 32, 40, 80 or Custom
- Channel Spacing: 100GHz, 200GHz available
- Wavelength Plan: ITU Grid in C or L-Band
- Custom Packaging Available
- RTD/Thermistor Temperature Sensor
- Fully Programmable Internal Temperature Control Option

Optical Performance

| Parameter | Specification | | Units | Comments |
|-----------------------------|-------------------------------------------------------------------------------------|-------------|-------|------------------------------------|
| | Gaussian | Flat-top | | |
| Channel Spacing | 50 | | GHz | |
| Number of Channels | Up to 80 | | Ch | |
| Wavelength Accuracy | $\leq \pm 0.04$ (80Ch) $\leq \pm 0.03$ (32 ~ 40Ch) $\leq \pm 0.02$ (8 ~ 24Ch) | | nm | |
| ITU Band | ± 6.25 | | GHz | Centered at each ITU frequency |
| Insertion Loss | ≤ 4.0 | ≤ 6.0 | dB | Max in ITU band, all polarizations |
| Loss Uniformity | ≤ 1.5 (80Ch) ≤ 1.2 (32 ~ 40Ch) ≤ 1.0 (8 ~ 24Ch) | | dB | Loss variation across all channels |
| Polarization Dependent Loss | ≤ 0.5 | | dB | Maximum ITU band |
| 1 dB Passband | ≥ 0.10 | ≥ 0.20 | nm | Passband width 1dB below peak |
| 3 dB Passband | ≥ 0.20 | ≥ 0.28 | nm | Passband width 3dB below peak |
| Adjacent Channel Crosstalk | ≤ -25 | | dB | |
| Non-Adjacent Crosstalk | ≤ -35 | | dB | |
| Total Crosstalk | ≤ -20 (80Ch), ≤ -23 (8 ~ 40Ch) | | dB | Cumulative sum of all AX and NX |
| Return Loss | > 45 | | dB | |
| Power Consumption | < 5 | | W | |

Corporate Office

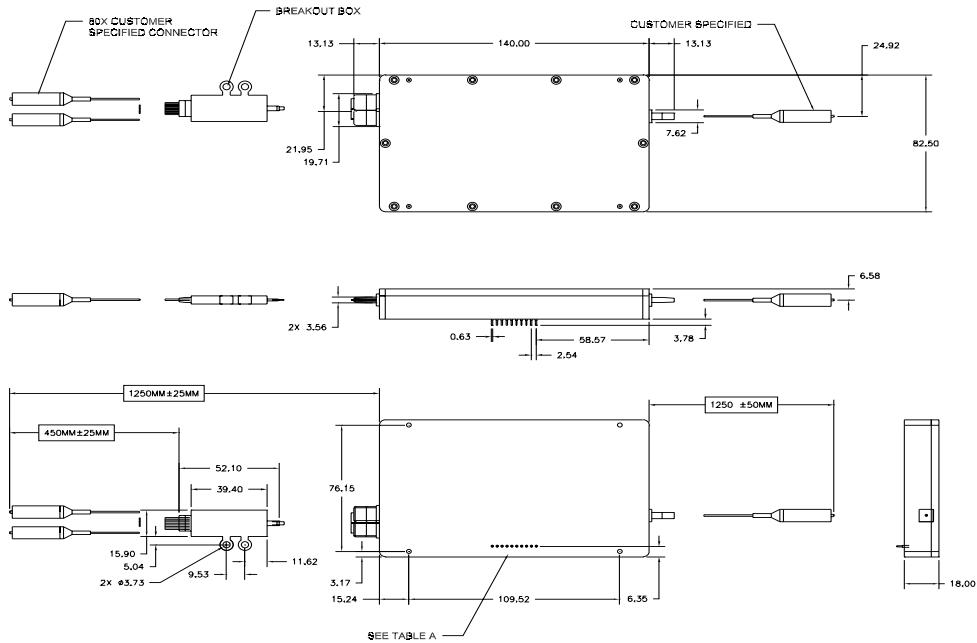
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Physical Dimensions and Mechanical Specifications

Packaging Options: Many different packaging options are available to meet your requirements. Please inquire about our various packaging options including Compact Internal Temperature Controller.

Standard 80-Channel Package (units:mm)



AWG Pin-Outs

| Pin | RTD | Thermistor | ITC |
|-----|----------|-------------|----------------|
| 1 | Heater + | Heater + | N.C. |
| 2 | Heater - | Heater - | +5V |
| 3 | RTD1 B1 | N.C. | +5V |
| 4 | RTD1 B2 | Thermistor1 | Ready |
| 5 | RTD 1 A | Thermistor1 | Error / Alarm |
| 6 | N.C. | N.C. | Reset / Enable |
| 7 | RTD2 A | Thermistor2 | TX |
| 8 | RTD2 B1 | Thermistor2 | GND |
| 9 | RTD2 B2 | N.C. | RX |
| 10 | N.C. | N.C. | GND |

Ordering Information

For more information on this product or other products now available from ANDevices, please contact us at sales@andevices.com