

TAWG card

Product Description

TAWG: Thermal Arrayed-Waveguide Grating mainly is used in DWDM system. It transmits signal by making different ITU-T DWDM wavelength signals multiplex to single fiber in receiving terminal. It decomposes composite signal into different ITU-T DWDM wavelength signal. The product has a low insertion loss, high channel insertion loss consistency, Need external power supply.

Product features

- Low insertion loss
- High consistency channel insertion loss
- Low polarization dependent loss
- High channel isolation
- Excellent environmental reliability
- High level of integration by plug-in design



Performance index

| Parameters | Notes | Specifications | | Units |
|----------------------------|---|----------------|----------|-------|
| | | Min | Max | |
| Channels | | 40 | | Ch |
| Channel Spacing | | 100 | | GHz |
| Reference Pass-band | Relative to ITU Grid | ± 0.1 | | nm |
| ITU Frequency | On ITU grid in C-band Even | 196.00 | 192.10 | THz |
| ITU Wavelength | On ITU grid in C-band Even | 1529.553 | 1560.606 | nm |
| ITU Frequency | On ITU grid in C-band ODD | 196.05 | 192.15 | THz |
| ITU Wavelength | On ITU grid in C-band ODD | 1529.163 | 1560.200 | nm |
| Center Frequency Accuracy | Maximum of the absolute deviation of the 3 dB center wavelength from ITU grid over all channels | -0.05 | +0.05 | nm |
| Insertion Loss | Maximum of the insertion loss across the ITU pass-band over all channels | | 6.2 | dB |
| Insertion Loss Uniformity | Maximum insertion loss variance across all channels | | 1.3 | dB |
| Ripple | Maximum of the loss variance across the ITU pass-band over all channels | | 0.5 | dB |
| 0.5 dB Bandwidth | 0.5 dB from min Insertion Loss, full width, worst case polarization | 0.2 | | nm |
| 1dB Bandwidth | 1dB from min Insertion Loss, full width, average polarization | 0.4 | | nm |
| 3dB Bandwidth | 3 dB from min Insertion Loss, full width, average polarization | 0.55 | | nm |
| 20 dB bandwidth | 20 dB from min Insertion Loss, full width, average polarization | | 1.2 | nm |
| Adjacent Channel Isolation | Ratio of peak transmission to the maximum transmission over both adjacent pass-bands | 25 | | dB |



| | | | | |
|--------------------------------|---|----|-----|----|
| Non-Adjacent Channel Isolation | Ratio of peak transmission in channel pass-bands to maximum transmission over all non-adjacent pass-bands | 30 | | dB |
| Total Crosstalk | Ratio of power in channel to power in all other pass-bands | 21 | | dB |
| Polarization Dependent Loss | Maximum ratio of transmissions over all polarization states, over the ITU pass-band | | 0.5 | dB |



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|-------------------------------|---|-----|-----|-------|
| Return Loss | | 40 | | dB |
| Polarization Mode Delay (PMD) | In Reference Passband over all channels | | 0.5 | ps |
| Chromatic Dispersion | In Reference Passband over all channels | -15 | 15 | ps/nm |
| Consumption | | | 3 | W |