



Gooch & Housego



Near Infrared WDM

The Near Infrared WDM enables the low loss combining or splitting of a pair of wavelengths within the 700nm to 1199nm region. G&H can rapidly produce such custom WDMs, with typical minimum wavelength separation of 50nm.

Designed for applications in fibre laser, sensing, biomedical, military and avionics the WDM utilises G&H's low loss fused fibre technology. No light leaves the fibre and therefore no alignment is required. Furthermore the output fibre pigtailed may be directly integrated into beam delivery systems.

Specific applications could include combining two sensor wavelengths onto one fibre, splitting laser harmonics, or combining wavelengths in fibre lasers.

For components which split optical signals of the same wavelength within the near infrared region please refer to the datasheet 'Near Infrared Coupler'.

Key Features:

- 700 to 1199nm operation
- Custom wavelength capability
- 50nm minimum wavelength spacing (<50nm channel spacing available on request)
- Low loss
- High power handling
- Custom product

Applications:

- Fibre lasers
- Sensors
- Biomedical equipment
- Avionics
- Military
- Research

Optical Specifications

| Channel Spacing | Available Housing | Max Insertion Loss _{1,2,3} | Min Isolation ₃ |
|-----------------|-------------------|-------------------------------------|----------------------------|
| 100 – 50nm | 3,4,5 | 0.5dB | 12dB |
| >100nm | 3,4,5 | 0.4dB | 14dB |

1. In 2x2 components insertion loss is not specified for launch through second input port P4 (coloured blue)
2. Maximum insertion loss at operating wavelength. Not including TDL, PDL or connector losses.
3. Improved specifications may be available- contact Sales Department.

| Parameter | Specification | Unit |
|--|--|------|
| Operating Wavelength | Specified wavelength within the range 700-1199nm | nm |
| Optical Power Handling _{2,3} | 4 | W |
| Operating / Storage Temperature Range ₁ | -40 to +75 / -40 to + 85 | °C |
| Pigtail Tensile Load | 5 | N |
| Fibre Type | Speciality singlemode fibre | |

1. For connectorised component, operating temperature range is –5 to +75°C.
2. For operation at powers of greater than 4W the component housing and fibre must be adequately heat-sunk (for additional information contact G&H Sales). Components intended for high power operation are only available in the 2x2 configuration. Component performance and reliability under high power must be determined within the customer system.
3. The performance and reliability of optical connectors is not guaranteed for optical powers of greater than 1W.

Housing Option

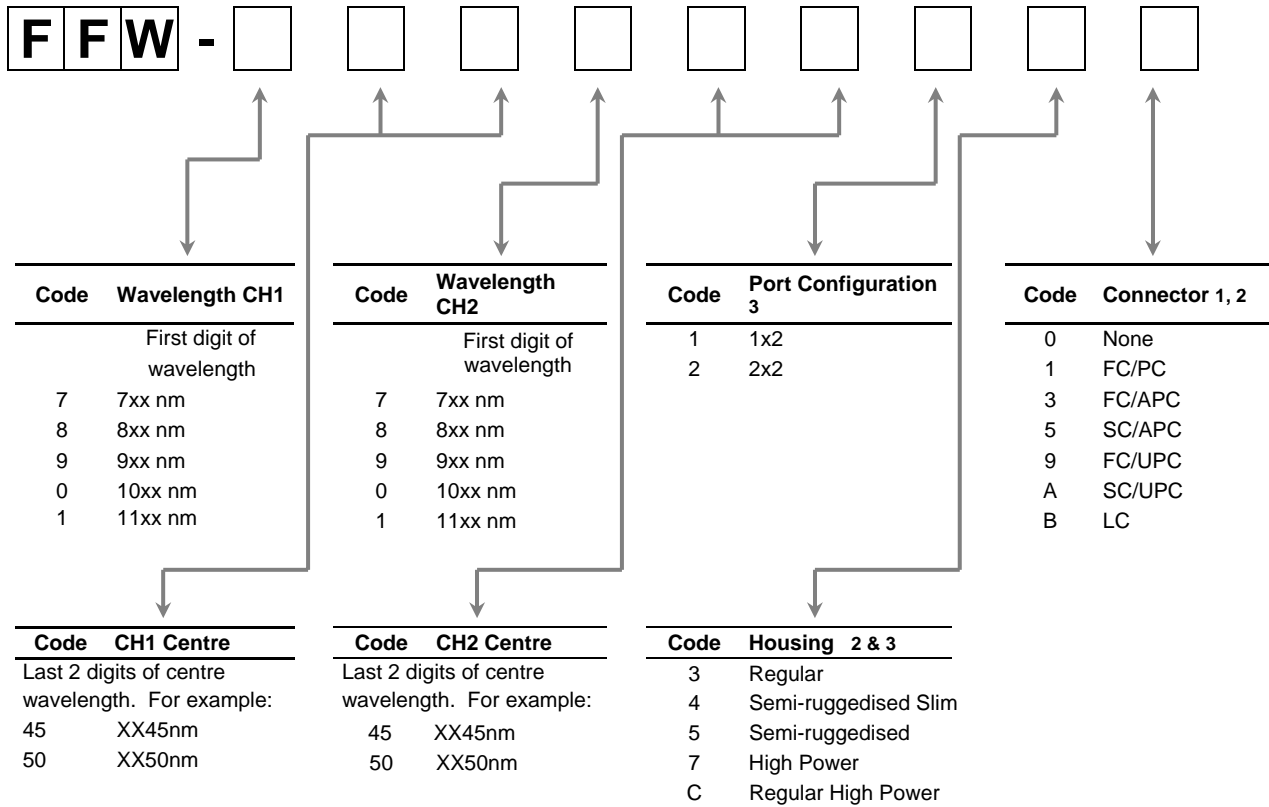
| Housing Code | Description | 1x2, 2x2 Dimensions (mm) | Pigtail |
|--------------|----------------------|--------------------------|----------------------|
| 3 | Regular | 3.0 (Ø) x 60 (L) | Primary-coated fibre |
| 4 | Semi-Ruggedised Slim | 3.0 (Ø) x 70 (L) | Ø 0.9mm loose-tube |
| 5 | Semi-Ruggedised | 5.0 (Ø) x 85 (L) | Ø 0.9 mm loose-tube |
| 7 | High Power Housing | 5 (W) x 5 (H) x 85 (L) | Primary-coated fibre |
| C | Regular High Power | 3.0 (Ø) x 60 (L) | Primary-coated fibre |

Configuration



Ordering Code Information

FFW-780060130 (Fused Fibre WDM, 780/1060, 1x2, Regular Housing, 1m pigtails, No connectors)



- 1m pigtail length as standard. Further pigtail lengths available on request from G&H Sales. Where connectorised, pigtail length is to connector end face.
- Connectors may be fitted to housing types 4 & 5. For connectorisation of other housings please contact G&H Sales. Note that insertion loss stated does not include connector losses.
- 7 & C not available in 1x2 Port Configuration. For more information contact G&H Sales.