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IRT Eurocard

Type OFM-4268

**8 Channel CWDM Fibre Optic
Multiplexer / Demultiplexer**

Designed and manufactured in Australia

**IRT can be found on the Internet at:
<http://www.irtelectronics.com>**

IRT Eurocard**Type OFM-4269****8 Channel CWDM Fibre Optic
Multiplexer / Demultiplexer****Revision History**

Revision	Date	By	Change Description	Applicable to:
0	30/10/2007	AL	Original Issue.	S/N \geq 0710001
1	16/02/2011	AL	Front and rear panels reduced in size to single width.	S/N \geq 1101001

IRT Eurocard**Type OFM-4268****8 Channel CWDM Fibre Optic
Multiplexer / Demultiplexer****Instruction Book****Table of Contents**

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This instruction book applies to units fitted with S/N \geq 1101001.

Operational Safety:**WARNING**

Operation of electronic equipment involves the use of voltages and currents that may be dangerous to human life. Note that under certain conditions dangerous potentials may exist in some circuits when power controls are in the **OFF** position. Maintenance personnel should observe all safety regulations.

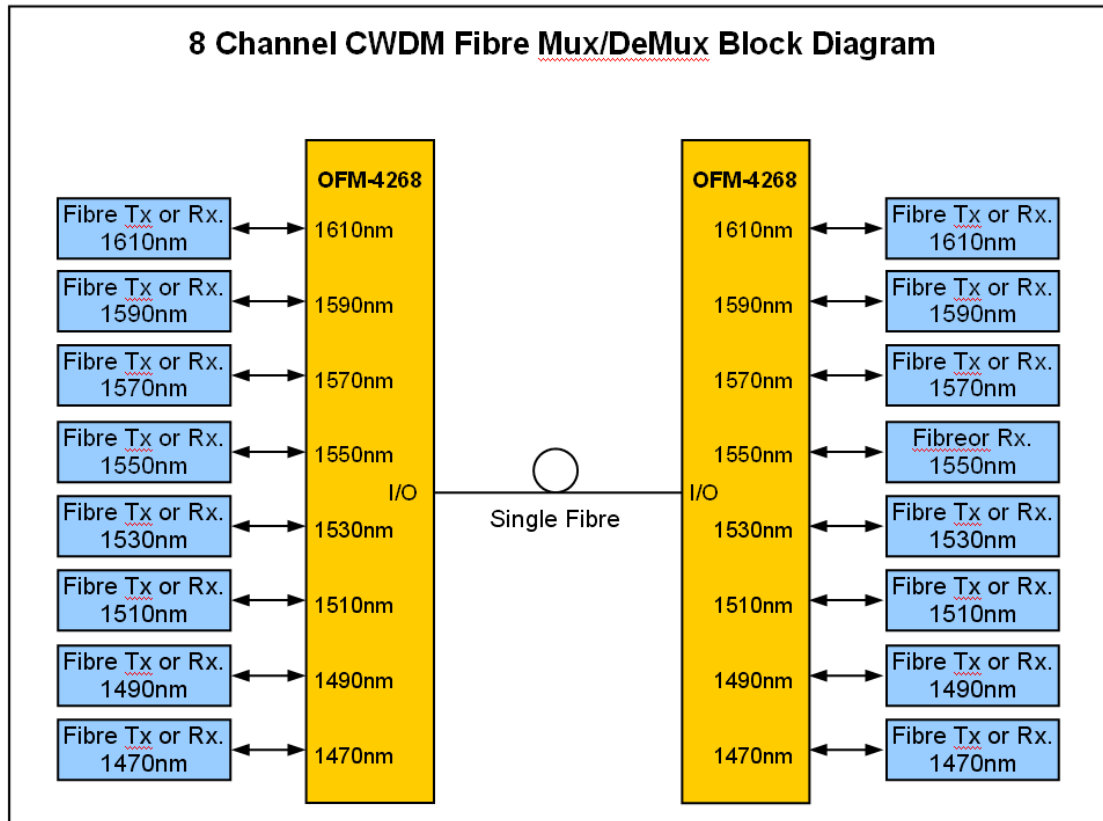
Do not make any adjustments inside equipment with power **ON** unless proper precautions are observed. All internal adjustments should only be made by suitably qualified personnel. All operational adjustments are available externally without the need for removing covers or use of extender cards.

IRT Eurocard

Type OFM-4268

8 Channel CWDM Fibre Optic Multiplexer / Demultiplexer

General Description



The OFM-4268 is coarse wave division optical wavelength division multiplexer / demultiplexer (CWDM) for combining and separating up to eight optical signals of 1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm and 1610nm wavelengths for either uni-directional or bi-directional transmission on the one fibre.

With the high cost of hiring or installing additional dark fibre it makes economical sense to maximise the use of existing infrastructure.

Used in combination with IRT's extensive range of fibre transmitters / receivers and interface modules, a myriad of different signals types can be sent down the one fibre. With IRT's four channel fibre multiplexer/demultiplexer modules, for example, up to thirty two SDI signals can be sent down a single fibre. Or up to one hundred and twenty eight ASI signals can be sent when also used with IRT's ASI multiplexer/demultiplexer modules.

The OFM-4268 is designed to fit IRT's standard 1RU and 4000 series 3RU Eurocard frames.

Standard features:

- Eight set CWDM optical wavelength inputs and outputs
- Uni-directional or bi-directional operation
- Low insertion loss
- SC/PC type of optical connectors

Technical Specifications

IRT Eurocard module Type OFM-4268

Type	8 Channel CWDM multiplexer.
Wavelengths	1470 nm, 1490 nm, 1510 nm, 1530 nm, 1550 nm, 1570 nm, 1590nm and 1610nm.
Fibre	Single mode.
Connector Type	SC/PC.
Maximum Power Handling	300 mW.
Channel Passband	> 13 nm (typically 15nm).
Insertion loss	< 2.5 dB (< 2.0 dB typically).
Passband Ripple	< 0.5 dB (typically 0.3 dB).
Uniformity	< 1.5 dB.
Return Loss	> 45 dB (typically 50 dB).
Directivity	> 55 dB.
Channel Isolation	> 30 dB (typically 40 dB).
Non Adjacent Channel Isolation	> 45 dB (typically 50 dB).
Polarization Dependent Loss	< 0.2 dB.

Other

Temperature range	-10 - 70° C ambient
Mechanical	Suitable for mounting in IRT's 19" 4000 series 3RU rack frame with input and output connections on the rear panel
Finish	Front panel Rear assembly
Dimensions	Grey background, black lettering & red IRT logo Common connection mounted on bracket from main PCB 6 HP x 6 U x 220 mm IRT Eurocard

Due to our policy of continuing development, these specifications are subject to change without notice.

Installation

Pre-installation:

Handling:

This equipment may contain or be connected to static sensitive devices and proper static free handling precautions should be observed.

Where individual circuit cards are stored, they should be placed in antistatic bags. Proper antistatic procedures should be followed when inserting or removing cards from these bags.

Power:

AC mains supply: Ensure that operating voltage of unit and local supply voltage match and that correct rating fuse is installed for local supply.

DC supply: Ensure that the correct polarity is observed and that DC supply voltage is maintained within the operating range specified.

Earthing:

The earth path is dependent on the type of frame selected. In every case particular care should be taken to ensure that the frame is connected to earth for safety reasons. See frame manual for details.

Signal earth: For safety reasons a connection is made between signal earth and chassis earth. No attempt should be made to break this connection.

Installation in frame or chassis:

The OFM-4268 will only mount within an IRT 1RU or 4000 series 3RU frame. There is no separate rear assembly on the OFM-4268 card.

Slide the unit through the front of the frame on the frame's inside runners. Screw in the front panel mounting screws to lock into place.

Fibre Connections:

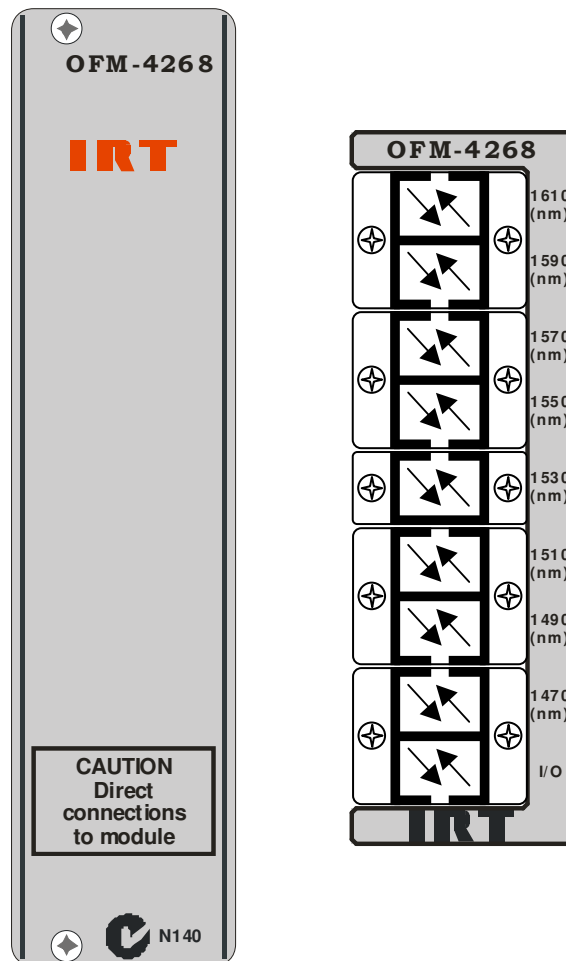
The OFM-4268 card comes standard with SC/PC female types of connectors for connection with single mode fibre fitted with the corresponding mating male connectors.

There are eight inputs/outputs labelled 1470nm, 1490nm, 1510nm, 1530nm, 1550nm, 1570nm, 1590nm and 1610nm. Each of these inputs/outputs must mate with the same corresponding wavelength of a dFB (CWDM) type of laser transmitter/receiver. Transmitters may be any type of IRT laser transmitter such as ASI/SDI, L-Band etc. just so long as they are fitted with a dFB laser at the appropriate wavelength. Receiver modules are not wavelength sensitive and will work with any of the input wavelengths.

The output of the OFM-4268 is the multiplexed version of the combined inputs. This feeds into the input of a second OFM-4268 receiving unit.

Front & rear panel connector diagrams

The following front panel and rear assembly drawings are not to scale and are intended to show connection order and approximate layout only.



Maintenance & Storage

Maintenance:

No regular maintenance is required.

Care however should be taken to ensure that all connectors are kept clean and free from contamination of any kind. This is especially important in fibre optic equipment where cleanliness of optical connections is critical to performance.

Storage:

If the equipment is not to be used for an extended period, it is recommended the whole unit be placed in a sealed plastic bag to prevent dust contamination. In areas of high humidity a suitably sized bag of silica gel should be included to deter corrosion.

Where individual circuit cards are stored, they should be placed in antistatic bags. Proper antistatic procedures should be followed when inserting or removing cards from these bags.

Warranty & Service

Equipment is covered by a limited warranty period of three years from date of first delivery unless contrary conditions apply under a particular contract of supply. For situations when “No **Fault Found**” for repairs, a minimum charge of 1 hour’s labour, at IRT’s current labour charge rate, will apply, whether the equipment is within the warranty period or not.

Equipment warranty is limited to faults attributable to defects in original design or manufacture. Warranty on components shall be extended by IRT only to the extent obtainable from the component supplier.

Equipment return:

Before arranging service, ensure that the fault is in the unit to be serviced and not in associated equipment. If possible, confirm this by substitution.

Before returning equipment contact should be made with IRT or your local agent to determine whether the equipment can be serviced in the field or should be returned for repair.

The equipment should be properly packed for return observing antistatic procedures.

The following information should accompany the unit to be returned:

1. A fault report should be included indicating the nature of the fault
2. The operating conditions under which the fault initially occurred.
3. Any additional information, which may be of assistance in fault location and remedy.
4. A contact name and telephone and fax numbers.
5. Details of payment method for items not covered by warranty.
6. Full return address.
7. For situations when “No **Fault Found**” for repairs, a minimum charge of 1 hour’s labour will apply, whether the equipment is within the warranty period or not. Contact IRT for current hourly rate.

Please note that all freight charges are the responsibility of the customer.

The equipment should be returned **to the agent who originally supplied the equipment** or, where this is not possible, to IRT direct as follows.

Equipment Service
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