7090

Optical Switch Cards

Use with 7001 and 7002 scanner mainframes.

The Model 7090 Optical Switch Cards are the first Keithley optical switching products and the latest additions to Keithley's line of switch cards designed for the Model 7001 and 7002 Switch Mainframes. These cards simplify making accurate connections from one input fiber channel to either four, eight, or sixteen output fiber channels. When combined with existing Series 7001/7002 switch cards, these optical switches allow for hybrid switching combinations of optical, RF, and DC switching within a single switch mainframe, extending the automated testing environment.

Combine Optical, DC, and RF Switching in One Instrument

The Model 7090 cards are compatible with all other Series 7001/7002 switch cards, so they can be used in conjunction with DC switch cards to control an L-I-V test system, as well as for RF switching needs. All of the switches can be used in one mainframe with a single GPIB address.

Meets a Range of Test Requirements

Model 7090 cards offer a number of options to ensure the compatibility of the switch with the test setup. Each switch card has one input fiber aligned to one of four, eight, or sixteen output fibers. Depending on the card chosen, the fiber is either a $9\mu m$ single-mode fiber or $62.5\mu m$ multimode fiber. The input and output fiber channels are available with several connection options, including FC/SPC, FC/APC, a one-meter fiber pigtail with a connector, and a bulkhead option (for 1×4 switches). For a complete list of available features, see the Physical Properties Guide.
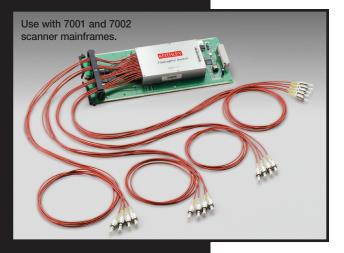
- **Perform multiple tests on a single device without changing test setup**
- **Test multiple devices with a single instrument**
- **1x4, 1x8, and 1x16 optical switching cards**
- **Single-mode or multimode fiber**
- **Very low insertion loss, 0.6dB typ.**
- **0.03dB repeatability**
- **FC/SPC and FC/APC connectors**
- **Bulkhead options available**

Faster Test Development

Several built-in features of the Model 7001 and 7002 mainframes simplify system setup, operation, and modifications. All aspects of the instrument can be programmed from either the mainframe's front panel or over the IEEE bus. Both mainframes offer Trigger Link interfaces to ensure tight control over the test system and eliminate IEEE bus command overhead.

APPLICATIONS

Production testing of:

- Laser diode modules
- Chip on submount laser diodes
- Laser diode bars
- LEDs and OLEDs
- Passive optical components
- VCSEL arrays
- Optical add/drop multiplexer (OADM)

Ordering Information

7090-4-1 1x4 Single-Mode with FC/APC Fiber Pigtail

7090-4-2BH 1x4 Single-Mode with FC/SPC Bulkhead

7090-8-3 1x8 Single-Mode with FC/APC Fiber Pigtail

7090-8-4 1x8 Multimode with FC/SPC Fiber Pigtail

7090-8-5 1x8 Single-Mode with FC/SPC Fiber Pigtail

7090-16-6 1x16 Single-Mode with FC/SPC Fiber Pigtail

7090-16-7 1x16 Single-Mode with FC/APC Fiber Pigtail

Accessories Supplied
User's Manual

PHYSICAL PROPERTIES

CONFIGURATION: Single channel, 1×N non-blocking switch.

Model Number	No. of Channels	Fiber Type	Wavelength (nm)	Connector	Fiber Length
7090-4-1	1×4	Single-mode fiber (SMF-28) 9/125 each ch.	1290-1650	FC/APC	1m
7090-4-2BH[1]	1×4	Single-mode fiber (SMF-28) 9/125 each ch.	1290-1650	FC/SPC	Bulkhead Connector
7090-8-3	1×8	Single-mode fiber (SMF-28) 9/125 each ch.	1290-1650	FC/APC	1m
7090-8-4	1×8	Multimode fiber 62.5/125 each ch.	780-1350	FC/SPC	1m
7090-8-5	1×8	Single-mode fiber (SMF-28) 9/125 each ch.	1290-1650	FC/SPC	1m
7090-16-6	1×16	Single-mode fiber (SMF-28) 9/125 each ch.	1290-1650	FC/SPC	1m
7090-16-7	1×16	Single-mode fiber (SMF-28) 9/125 each ch.	1290-1650	FC/APC	1m

1 This model contains a back plate with 5 FC/PC mating sleeve adapters. The fiber length is not appllicable compared with the other models that are fiber pigtailed. Additional insertion loss due to the mating sleeve adapter not accounted for in the referenced switch specification.

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