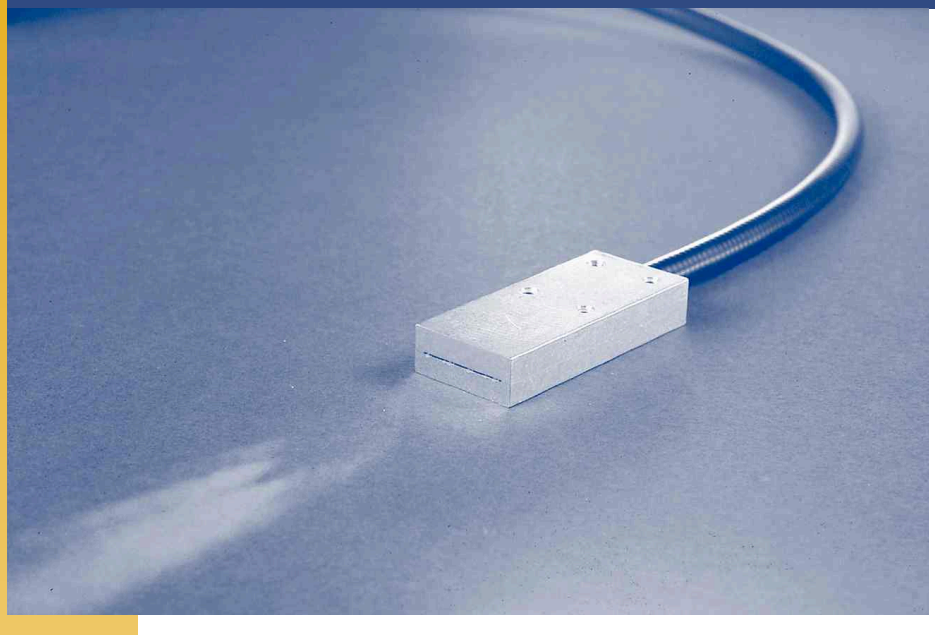
RoMack inc.

V-Groove or Spaced Arrays



APPLICATIONS

- High power fiber-coupled diode laser arrays
- High speed optical switches
- Spatial sensing
- Input for imaging spectrometers

FEATURES

- Multiple fibers precisely positioned.
- NON-cumulative tolerances can locate a fiber to within 10µm (standard) or 5µm (special) of absolute position.
- Sub-micron tolerancing on fiber positioning is available using etched silicon technology.
- Various output configurations including minimized aperture, buffer stripped.
- Perfectly matched pairs for optical switching applications.
- Flexibility and excellent throughput.
- AR coatings available.
- Harsh environments (high temperature, high vacuum etc.).

DESCRIPTION

Precision spaced arrays are simply fiberoptic assemblies comprised of multiple fibers which are located in very exact locations with respect to one another.Typically these devices are used to match laser diode arrays or as optical switch sub-components.

In Laser Diode applications,the arrays are fabricated so that the individual fibers are precisely located to match multi-diode junction bars and arrays.The fibers can be arranged in virtually any linear or two dimensional pattern and AR coatings can be provided as well.

The output side of the fibers can be likewise arranged in virtually any pattern but a common application is a very closely packed circular aperture where the individual fibers have been stripped down to the cladding.This provides the smallest and therefore the highest energy density aperture.

In optical switch applications,again precision is the key.Arrays are usually two dimensional and made in matched pairs so each pair is comprised of two arrays exactly the same.

RoMack's capabilities allow us to respond to your specialty or OEM applications by providing end fittings, housings and ferrules to suit your needs.

V-Groove or Spaced Arrays

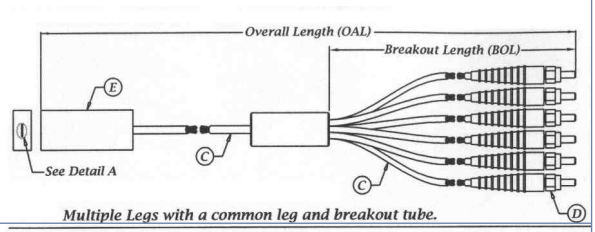
ORDERING/ SPECIFYING INFORMATION

Spaced or V-Groove arrays are usually OEM or custom products. As such specifying information is developed on a project by project basis.

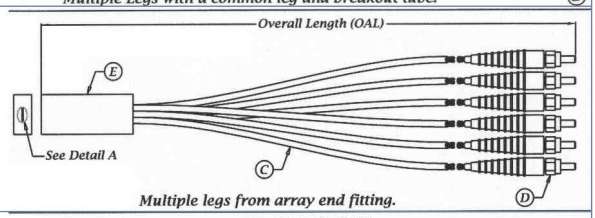
NOTES

Fiber transmission curves and other individual fiber performance details can be provided as required.

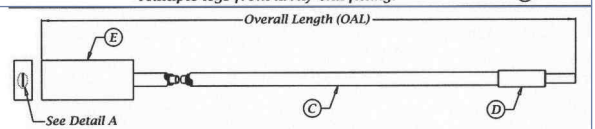
Detailed specifications are developed within the boundary of a given project or requirements mandate and are mutually agreed to prior to acceptance of an order.



Multiple Legs with a common leg and breakout tube.



Multiple legs from array end fitting.



One leg from array end fitting to one connector.

Ⓐ *Fiber Type*

1) Silica/Silica (UV/VIS)
2) Silica/Silica Low Solarization (UV)
3) Silica/Silica (VIS/NIR)
4) Polymer Clad Silica (UV/VIS High NA)
5) Polymer Clad Silica (VIS/NIR High NA)
6) Plastic (PMMA)
7) Other_____

Ⓑ *Fiber Size*

1) 50µm
2) 100µm
3) 200µm
4) 300µm
5) 400µm
6) 500µm
7) 600µm
8) 800µm
9) 1,000µm
10) Other_____

Ⓒ *Jacketing*

1) PVC Tubing
2) PVC/Kevlar Furcation Tubing
3) PVC Monocoil
4) Stainless Steel BX
5) Braided SSTL/PTFE Hose
6) Teflon Tubing
7) Other_____

Ⓓ *Connector*

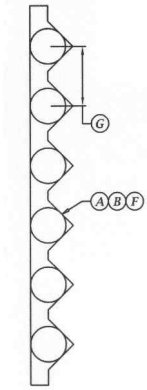
1) SMA-905
2) SMA-906
3) HI-Power SMA
4) O-ring SMA
5) FC
6) ST
7) Biconic
8) Ø0.250" Ferrule
9) Ø10mm Ferrule
10) Other_____

Ⓔ *End Fitting*

1) 0.313"x0.75"x1.5" Housing
2) Ø10mm Ferrule
3) Ø0.250" Ferrule
4) SMA 905
5) Other_____

Ⓕ *Number of Fibers* _____

Ⓖ *Fiber Spacing (Center to Center)*
_____



Detail A

RoMack offers a wide variety of assembly options. Please contact one of our technical sales associates to assist you in defining the configuration that really works in your application.

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