## Fiber Optic Installation

### General Guidelines

The following recommendations are general guidelines only. At minimum, most installations require two strands of fiber, although adding additional strands is recommended.

### Multimode or Single Mode Fiber?

Multimode fibers (OM3 or OM4) have a distance limitation of approximately 1,000 ft. Above this, single mode (OS2) should be considered. Devices may also specify fiber type.

### Connector Type

The equipment in use determines connectors. LC or SC connectors are most common. Connectors must match fiber type, i.e. single mode connectors must be used with single mode fiber.

### Example Part Numbers

Example part numbers are **GENERAL GUIDELINES ONLY**. Always verify installation requirements for jacket and cable rating before choosing a cable type.

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### Fiber Type

- **0 - 1000 ft (300 m): MULTIMODE OM3 / OM4**
- **1000 ft (300 m) and above (typical): SINGLE MODE OS2**

### Sizing Recommendations

- **Minimum:** 2 strands
- **Preferred:** 2 - 4 strands
- **Example:** D50125MOM3R

### Fiber Rack Connections

#### Equipment to Displays/Projectors

- **Minimum:** 2 strands
- **Preferred:** 2 - 4 strands
- **Example:** 4D50125MOM3P

#### Network Switch to Network Switch

- **Minimum:** 2 strands
- **Preferred:** 4 - 12 strands
- **Example:** 12D50125MOM3P

#### Network Switch to Access Point

- **Minimum:** 2 strands
- **Preferred:** 2 - 4 strands
- **Example:** 4D9125SMOS2P-B

#### A/V Rack to A/V Rack

- **Minimum:** 2 strands
- **Preferred:** 4 - 12 strands
- **Example:** 12D9125SMOS2P-B

#### Security Cameras & Media Converters

- **Minimum:** 2 strands
- **Preferred:** 2 - 4 strands
- **Example:** 4D50125MOM3P

#### Service Demarc or Satellite Dish to Cable Distribution

- **Minimum:** 2 strands
- **Example:** D29125SMOSP-B

#### General Prewire (Future Proofing)

- **Minimum:** 2 - 6 strands
- **Example:** 6D50125MOM3P

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**FIBER OPTIC INSTALLATION**

**GENERAL GUIDELINES**

![Diagram of fiber optic connections and sizing recommendations]

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